

Affiliated to Mahatma Gandhi University, Kottayam, Kerala

6.5.3 Quality assurance initiatives of the institution include:

- 1. Regular meeting of Internal Quality Assurance Cell (IQAC); Feedback collected, analysed and used for improvements
- 2. Collaborative quality initiatives with other institution(s)
- 3. Participation in NIRF
- 4. Any other quality audit recognized by state, national or international agencies (ISO Certification, NBA)

REPORTS OF THE QUALITY ASSURANCE INITIATIVES







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Conferences, Seminars, Workshops on quality conducted

2018-19

ST. THOMAS COLLEGE, PALAI

Arunapuram P.O., Kottayam - 686 574, Kerala, India College with Potential for Excellence (CPE) recognized by UGC NAAC Accredited (3rd Cycle) with A Grade (CGPA: 3.30) in 2015 www. stcp.ac.in; 04822-212317

Three Day National Workshop

On

INTELLECTUAL PROPERTY RIGHTS AND INDUSTRY-ACADEMIA INTERFACE

(UGC-CPE Sponsored)

Organized by

Internal Quality Assurance Cell (IQAC) St. Thomas College, Palai



On 26, 27 & 28 March 2019 Venue: St. Joseph's Hall



Dear Sir/Madam,

The IQAC of St. Thomas College, Palai is organizing a Three Day National Workshop on *Intellectual Property Rights (IPR) and Industry-Academia Interface* during 26-28 March 2019. You are most welcome to the event.

Teachers, scholars and industrial experts are invited to present papers on the theme of the workshop. The papers are to be typed in English, MS Word, Font - Times New Roman, Size -12 and Spacing -1.5.

- Last date for submission of abstracts (Maximum 250 words): 22 March 2019.
- Email notification of selected abstracts: 23 March 2019.
- Last date for submission of full papers (Maximum 1500 words): 25 March 2019.

Registration Fee: Rs. 500/- (Including food and seminar kit). Scholars who wish to present papers are to pay Rs. 100/- in addition for a copy of the proceedings.

Accommodation can be arranged on payment.

For Registration and Paper Submission, contact:

Dr. Sunil C Mathew, Co-ordinator, IQAC

Mob: 8921883008, Email: iqac1stcp@gmail.com

Resource Persons

Prof. Dr. Sabu Thomas

(Hon. Professor in Charge of Vice Chancellor, Mahatma Gandhi University, Kottayam)

Prof. Dr. K C Sunny

(Hon. Vice Chancellor, NUALS, Kochi)

Prof. Dr. Feroz Ali

(IPR Chair Professor, IIT Madras)

Prof. Dr. Bismi Gopalakrishnan

(Member Syndicate, Dean Faculty of Law, Mahatma Gandhi University Kottayam)

Mr. Manoj K Das

(Resident Editor (Kerala), Times of India)

Prof. Dr. Shaji Varkey

(Dean of Social Sciences & Professor of Political Science, University of Kerala, Trivandrum)

Dr. V A Joseph

(Former Chairman, Managing Director & CEO of South Indian Bank)

Adv. S. Venugopalan Nair

(Senior Intellectual Property Attorney)

Adv. Benoy K Kadavan

(Partner, Kadavans Legal Offices & Visiting Faculty, NUALS, Kochi.)

Dr. Joby PP

(Professor & Head, Department of Computer Science & Engineering, SJCET Palai)

Organizing Committee

Rev. Dr. James John

(Principal)

Dr. Sunny Kuriakose

(Vice Principal)

Rev. Fr. Mathew Kurian

(Bursar)

Dr. Sunil C Mathew

(Co-ordinator, IQAC)

Mr. Bobby Simon

(Organizing Secretary)

Dr. Ison V Vanchipurackal

Dr. Ratheesh M

Dr. Babu Jose

Mr. Augustine J Edakkara

Mr. Jishnu Venugopal

Ms. Shilpa Mathew

Miss. Tinchu P James

Mr. Gibin Raja George

Mr. Roberse Thomas

Three Day National Workshop (UGC-CPE Sponsored) On

Intellectual Property Rights (IPR) and Industry-Academia Interface

Organized by

IQAC, St. Thomas College PalaiOn

26, 27 & 28 March 2019.

Report of the Workshop

The three day national workshop on IPR and industry academia interface was organized by IQAC of St. Thomas College Palai from 26 March 2019 to 28 March 2019. The workshop was started with almighty's blessings. The guests were welcomed by Rev. Dr. James John, Principal, St. Thomas College Palai and he gave a note on IPR. The presidential address was given by Msgr. Sebastian Vethanath, Syncellus, Eparchy of Palai. It was his first visit after becoming syncellus. He expanded the history of IPR.





Welcome Speech

Presidential Address

The workshop was inaugurated by Prof. Dr. K. C. Sunny by lighting the lamp. He addressed the audience about IPR. Prof. Dr. Feroz Ali, IPR Chair Professor, IIT Madras gave the felicitation. Rev. Fr. Mathew Kurian, Bursar, St. Thomas College Palai expressed his sincere gratitude to all the guests for their presence.





Inauguration

Inaugural Address

The first technical session was lead by Prof. Dr. Feroz Ali, IPR Chair Professor, IIT Madras. He detailed about IPR technically. He introduced IPR as an egg shell which protects the fruits of creative labour. He added about the different forms along with different application levels of IPR. He went on detailing patents and its procedure. The session was concluded by giving an open forum for questions.





Technical Session - I

Technical Session - II

The second technical session was headed by Mr. Manoj K. Das, Resident Editor (Kerala), Times of India. Being an experienced journalist, he extended his talk beyond the session's topic. He just gave an overview on various instances including the life incidents of singers Ilayaraja and cartoonist Toms which shows the relationship between IPR and Mass Media. The session was chaired by Dr. Tejil Thomas, Assist Professor of Commerce of the College. This session was more focused on question - answer session.

The second day was started by third technical session. It was on "Neoliberal Global order and IPR" and was lead by Prof. Dr. Shaji Varkey, Dean of Social Sciences, Professor of Political Science, University of Kerala. Trivandrum. Dr. Stany Thomas of Political science

department chaired the session. He had a sceptical point of view for IPR and stated that IPR has a definite relationship with neoliberal global order .The session was concluded by providing a forum for question answer session.





Technical Session - III

Technical Session - IV

The fourth technical session on "Legal aspects of IPR; challenges and opportunities" was headed by Adv. Benoy K Kadavan, Partner, Kadavans legal offices of visiting faculty, NU-ALS, Kochi. He provided the basics of IPR. He included various laws and enactments, copyright, trademark etc. He detailed about patents and also discussed about various challenges and opportunities of IPR. Question answer session was followed after the session.

The fifth technical session on "IPR vis a vis industry and academia: challenges and opportunities for innovation practice" which was guided by Prof. Dr. Bismi Gopalakrishnan, member syndicate, Dean faculty of Law, Professor and Director school of legal thoughts, MG university Kottayam. She gave a brief idea regarding IPR and mentioned about the advantages of IPR. She also stated that IPR does not exclude the principles of social justice. It was concluded by having a question answer session.

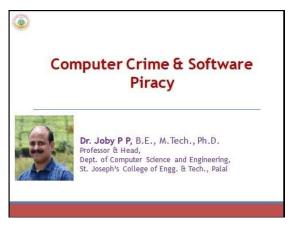






Technical Session - VI

The final day of workshop started by sixth technical session. The sixth technical session on 'Human Rights Violations in IPR" was lead by Adv. S Venugopalan Nair, senior Intellectual Property Attorney. He started the session with a seven minutes video presentation on India needs innovation and discussed about IPR. He showcased many cases and instances which shows human rights violations in IPR. The session was concluded by an open discussion.



Technical Session - VII

The seventh technical session on "Computer Crime and Software Piracy" was headed by Prof. Dr. Joby P.P., Professor and Head, Department of Computer Science & Engineering, SJCET Palai. He discussed about security threats and cyber crimes and also added about software and various software piracies. The session was concluded by providing a forum for question answer session.







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National Seminar

On

Teaching, Learning and Evaluation: Shifting Protocols in Pedagogical Dynamics

Sponsored by

National Assessment and Accreditation Council (NAAC)



Organized by

Internal Quality Assurance Cell (IQAC)
St. Thomas College, Palai



On

7 & 8 February 2019 Venue: Executive Seminar Hall



Dear Sir/Madam.

The IQAC of St. Thomas College, Palai is organizing a NAAC sponsored National Seminar titled *Teaching Learning and Evaluation: Shifting Protocols in Pedagogical Dynamics* on 7 & 8 February 2019. You are most welcome to the event.

The seminar brings together academic administrators, IQAC coordinators/ members, faculty and teacher trainees under one roof to exchange views and ideas about the recent trends in teaching, learning and evaluation process. This academic exercise is intended to assist the participants to becoming more effective, creative and productive in their endeavors. Integrating technology in teaching shall certainly lead to a qualitative change in our attitude towards education. Prof. Ved Prakash, Former Chairman, University Grants Commission has kindly consented to inaugurate the seminar and deliver the keynote address. The inaugural function will be presided over by His Excellency Mar Jacob Muricken, Manager of the College and Auxiliary Bishop of Palai.

The motto of IQAC, St. Thomas College, Palai is Learn from the Masters. Accordingly, we are privileged to have experts like Prof. Dr. Sabu Thomas, Hon. Vice Chancellor in charge, Mahatma Gandhi University Kottayam, Dr. Vimal Rarh, Project Head & Joint Director, GAD-TLC, MHRD & Coordinator, NRCC, MHRD, Dr. Selvam Jesiah, Professor and Vice Principal, Faculty of Management, SRIHER, Chennai and Dr. Gabriel Simon Thattil, Professor of Commerce and Director IQAC, University of Kerala engaging different sessions.

Teachers, teacher trainees and educational experts are invited to present papers during the seminar. Selected papers will be published in the proceedings of the seminar. The papers are to be in English, MS Word, Font - Times New Roman, Size -12 and Spacing -1.5.

- Last date for submission of abstracts (maximum 250 words): 29 January 2019.
- Notification of selected abstracts in the College website: 31 January 2019.
- Last date for submission of full papers (maximum 1500 words): 04 February 2019.

Registration Fee: Students: Rs. 300/-, Others: Rs. 500/- (including food and seminar kit). Scholars who wish to present papers are to pay an additional sum of Rs. 100/- for a copy of the proceedings. Accommodation can be arranged on payment.

Dr. Ison V. Vanchipurackal Organizing Secretary Dr. Sunil C Mathew
Coordinator, IQAC
Rev. Dr. James John
Principal

07-01-2019

For Registration and paper submission, contact:
Dr. Sunil C Mathew, Mob: 8921883008, Email: iqac1stcp@gmail.com
For detailed schedule: www.stcp.ac.in/College Events



NAAC Sponsored National Seminar on Teaching Learning and Evaluation: Shifting Protocols in Pedagogical Dynamics Organized by

IQAC, St. Thomas College, Palai on 7 & 8 February 2019.

PROGRAMME

07 February 2019, Thursday

9.00 - 9.45 am : Registration 09.45 am -11.15 am : Inauguration

Prayer :

Presidential Address

Welcome : Rev. Dr. James John

Principal, St. Thomas College Palai
: H.E. Mar Jacob Muricken
Manager, St. Thomas College Palai

Inauguration and : Prof. Ved Prakash

Keynote address Former Chairman, University Grants Commission

Vice Chancellor's Message : Prof. Dr. Sabu Thomas

Hon. Vice Chancellor in Charge, Mahatma Gandhi University, Kottayam

Vote of Thanks : Rev. Fr. Mathew Kurian

Bursar, St. Thomas College Palai

11.15 am -11.45 am : Tea

11.45 am - 01.00 pm : Technical Session - I

Higher Education in India: Issues and Concerns

Prof. Ved Prakash

Former Chairman, University Grants Commission

01.00 pm - 02.00 pm

02.00 pm - 03.00 pm : Technical Session - II

E-Learning and MOOCs in Higher Education

Dr. Vimal Rarh

Project Head & Joint Director, GAD-TLC of MHRD & Coordinator, National Resource Centre

of Chemistry of MHRD

03.00 pm - 3.15 pm : T

NAAC Sponsored National Seminar on Teaching, Learning and Evaluation: Shifting Protocols in Pedagogical Dynamics

Organized by

IQAC, St. Thomas College Palai

on

7 & 8 February 2019.

REPORT OF THE SEMINAR

A Two-day National Seminar titled **Teaching, Learning and Evaluation: Shifting Protocols in Pedagogical Dynamics** was organized by the Internal Quality Assurance Cell (IQAC), St. Thomas College, Palai on 7 & 8 February 2019 under the sponsorship of National Assessment and Accreditation Council (NAAC). The seminar brought together academic administrators, IQAC coordinators and faculty to exchange their views and ideas about the recent trends in teaching, learning and evaluation process. It was indeed an academic exercise intended to assist the participants to become more effective, creative and productive in their endeavours. The highlight of the programme was integrating technology in teaching which in turn led to a qualitative change in our attitude towards education.







Welcome Speech : Rev. Dr. James John

Registration was open till 9.45am on the first day. 173 delegates from various parts of the country participated in the seminar. It started with an invocation to God Almighty which was followed by a Welcome Speech by Rev. Dr. James John, Principal, St. Thomas College,

Palai. The function was presided over by His Excellency Mar Jacob Muricken, Manager of the College and Auxiliary Bishop of Palai.





Presidential Address: H. E. Mar Jacob Muricken

Inauguration

Prof. Ved Prakash, Former Chairman, University Grants Commission inaugurated the seminar and delivered the keynote address. Felicitation Speech was delivered by Dr. Vimal Rarh, Project Head & Joint Director, GAD-TLC, MHRD and Coordinator, NRCC, MHRD. Bursar of the college, Rev. Fr. Mathew Kurian proposed the Vote of Thanks.

The first Technical Session was led by Prof. Ved Prakash and was chaired by Dr. K. K. Jose, an erudite scholar and former Principal, St. Thomas College, Palai. Prof. Ved Prakash gave the audience an insight into the issues and concerns of higher education in India.



Keynote Address : Dr. Ved Prakash



Felicitation: Dr. (Mrs.) Vimal Rarh

The post-lunch Technical Sessions discussed **E-learning and MOOCs in Higher Education** and was led by Dr. Vimal Rarh. Prof. Jogy Alex, Associate Professor, Dept. of Chemistry, St. Thomas College, Palai was the chairperson. Participants raised questions

and had their doubts cleared by Dr. Rarh. It was indeed a useful session.





Technical Session I : Dr. Ved Prakash

Technical Session II & III: Dr. (Mrs.) Vimal Rarh

Day One of the Seminar concluded with paper presentations from 7 learned scholars and the sessions were conducted in two venues concurrently.

The Second Day of the Seminar commenced with paper presentations at 9.30am and followed by fruitful discussions on the 6 presentations scheduled for the day.

The first Technical Session of the day was addressed by Dr. Selvam Jessiah, Professor and Vice Principal, Faculty of Management, Sri Ramachandra Institute of Higher Education and Research, Chennai. The topic of his talk was Teaching, Learning and Evaluation: Evolving an Integrated Approach for Quality Enhancement in Higher Education. Dr. Siby James, Associate Professor, Dept. of English, St. Thomas College, Palai chaired the session. The talk was indeed productive and participants thoroughly enjoyed the interactive session and commented it as truly rewarding.





Technical Session IV & V : Dr. Selvam Jessiah

Technical Session VI & VII: Dr. Gabriel Simon Thattil

The afternoon session was led by Dr. Gabriel Simon Thattil, Professor of Commerce and Director, IQAC, University of Kerala. He talked on **Imparting Quality in Teaching**, **Learning and Evaluation - A Systems Approach**. Dr. Joy Jacob, Former Principal, Deva Matha College, Kuravilangad chaired the session. Participants spoke about their limitations and time restraints for not being able to create an effective learner-oriented classroom ambience due to the semester system.

The two-day National Seminar finally came to an end with an informal feedback session. Rev. Dr. James John, Principal, St. Thomas College, Palai presided the concluding session. The Seminar co-ordinators, Dr. Ison V. Vanchipurackal and Dr. Sunil C. Mathew were also invited to be seated on the dais, while the delegates expressed their happiness for being able to participate in the seminar and also gave feedback regarding each Technical Session and the quality and proficiency of the speakers. Finally, Principal thanked the Convenors for their competence and perseverance for organising such a seminar, and the delegates for their participation and support. He also congratulated the unseen heroes behind the success of the program- the teachers of various departments of St. Thomas College, Palai who were the organisers of different committees whose ideal execution of their duties made the Seminar possible





Vote of Thanks: Rev. Fr. Mathew Kurian

OUTCOME OF THE SEMINAR

There were 173 participants from all over the country, including Academic administrators, IQAC co-ordinators, IQAC members and faculty members in the seminar. The resource persons and other guests shared their views and ideas about the recent trends in teaching. learning and evaluation process. The keynote address and the first technical session briefed the issues, concerns and challenges in the present day education system. The second and third technical sessions familiarized the Govt. of India's MOOCs digital initiatives in education. It provided a clear understanding of the importance, possibilities and challenges in MOOCs related areas. The urgent role of teachers in developing MOOCs was highlighted. The requirement of a professional development in the new-age-ICT-enabled pedagogy was also discussed. Developing an "integrated approach" for quality enhancement in higher education was the theme of the fourth and fifth technical sessions. The sessions were useful in understanding the necessity of flexibility to face the challenges in a global contest. The sixth and seventh sessions were on "systems approach" that helped the participants in understanding the strategies in higher education institutions of excellence. The participants were motivated for a professional change in their attitude towards education by integrating technology in their initiatives. The seminar also gave the participants a clear understanding of how the students learn in the post-modern era.

Follow up Actions

- The college has decided to develop strategies for developing new MOOCs.
- Discussions on starting a new centre of e-learning in association with GAD-TLC of MHRD are going on.
- Proposal for suggesting suitable e-learning courses to advanced learners is planned.
- More seminars of this kind have to be arranged.
- Introduction of "systems approach" in Teaching, Learning and Evaluation.

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State Level Two Day Training Programme for

PFMS-EAT & DBT Module

Organized by

Internal Quality Assurance Cell (IQAC)
St. Thomas College, Palai



On 16 & 17 May 2019 Venue: Computer Centre



Dear Sir/Madam,

The IQAC of St. Thomas College, Palai is organizing a State Level Two Day Training Programme for PFMS-EAT & DBT Module during 16-17 May 2019. You are most welcome to the event.

Registration Fee: Rs. 500/- (Including food and seminar kit). Accommodation can be arranged on payment.

For Registration, contact:

Dr. Sunil C Mathew, Co-ordinator, IQAC

Mob: 8921883008, Email: iqaclstcp@gmail.com

Organizing Committee

Rev. Dr. James John (Principal)

Dr. Sunny Kuriakose (Vice Principal)

Rev.Fr. Mathew Kurian (Bursar)

Dr. Sunil C Mathew (Co-ordinator, IQAC)

Mr. Libin Kuriakose (Organizing Secretary)

Dr. Ison V Vanchipurackal

Dr. Babu Jose

Dr. Tejil Thomas

Mr. Augustine J Edakkara

Mr. Jishnu Venugopal

Mr. Gibin Raja George

Mr. Vivek S

Resource Persons

Mr. A RAJESH.

Mr. ROY M N

(Sr. Accounts Officer, PFMS, SPMU, Kerala) (Operation Manager, PFMS, SPMU, Kerala)

Programme

16/05/2019:

9.00 am: Registration

9.30 am: Inaugural Ceremony

10.00 am - 11.15 am:

Introduction to PFMS EAT module -

Mr. A RAJESH

11.15 am - 11.30 am: Tea Break

11.30 am - 01.00 pm:

Expenditure Module - Mr. ROY M N

01.00 pm - 02.00 pm: Lunch Break

02.00 pm - 03.15 pm:

Advance Module - Mr. A RAJESH

03.15 pm - 03.30 pm: Tea Break

03.30 pm - 05.00 pm:

Hands on Training on EAT Module – Mr. A RAJESH & Mr. ROY M N

17/05/2019:

9.30 am -11.00 am:

Transfer module - Mr. ROY M N

11.00 am - 11. 15 am: Tea Break

11. 15 am - 12.30 am:

Introduction to DBT module -

Mr. A RAJESH

12.30 am - 01.30 pm: Lunch Break

01.30 pm - 03.00 pm:

Hands on Training on EAT Module -

Mr. A RAJESH & Mr. ROY M N

03.00 pm - 03.15 pm: Tea Break

03.15 pm - 04.30 pm:

Hands on Training on EAT Module – Mr. A RAJESH & Mr. ROY M N

04.30 pm - Valedictory Session &

Distribution of Certificates.

State Level Two Day Training Programme For PFMS – EAT & DBT Module

Organised by

IQAC, St. Thomas College Palai on 16 May 2019 & 17 May 2019

A Brief Report

A State Level Two Day Training Programme for PFMS – EAT & DBT Module, was organized by IQAC, ST. Thomas College Palai, on 16 May, 2019 & 17 May, 2019. The programme was sponsored by the college management. It was intended to equip faculty in charge of PFMS and administrative staffs of different colleges to effectively manage central government and associated agencies funds management and tracking system better known as "Public Fund Management System (PFMS)". The resource persons for the two-day training programme were Mr. A Rajesh, Sr. Accounts Officer and Mr. Roy M N, Operation Manager, PFMS, SPMU, Kerala. There were 23 participants from different colleges, of which 11 were faculty members and 12 were administrative staffs.





The inaugural function for the training programme started at 10 am on 16 May, 2019 at computer centre, St. Thomas College Palai with a silent prayer. Dr. Sunny Kuriakose, Vice Principal welcomed the gathering. He pointed out the need for expertise in PFMS, since it will be the lone fund transaction portal for all central or associated agencies assisted financial managements. The function presided over by Rev. Dr. James John, Principal and during his presidential address, he emphasized the fact that PFMS will bring the transparency and digitalization for all financial transaction of all institutions, which are having aid from central or state government / agencies. The programme was inaugurated by Mr. A Rajesh, Sr. Accounts Officer, PFMS, SPMU, Kerala. He explained that, how the office of Controller General of Accounts, Ministry of Finance, Government of India, implemented the system. Mr. Roy M N, Operation Manager, PFMS, SPMU, Kerala, addressed the gathering. Mr. Libin Kuriakose, Assistant Professor and Programme coordinator proposed the vote of thanks.



The programme was organized in such a way that there were enough time slots for hands on training with demo portal of the PFMS. Two-day training programme covered the PFMS modules such as EAT and DBT in detail. On the first day, Mr. A Rajesh handled sessions on general introduction to PFMS and Advance module. Mr. Roy M N discussed the Expenditure Module. They jointly managed the hands on training session. On the second day of the programme, there were sessions on Transfer module and Direct Benefit Transfer module, handled by Mr. Roy M N and Mr. A Rajesh respectively, followed by the hands on training sessions.

The participants, mentioned that, the hands of training sessions were very fruitful, since it provided the them to get acquainted with PFMS and to rectify the issues faced by them.



Local hospitality was extended to all participants. The certificate of participation was distributed to all participants during the valedictory session. All the participants appreciated the well-arrangement of the training programme, sincerity as well as dedications of resource persons and organizing committee.

TWO DAY TRAINING PROGRAMME on PFMS EAT and DBT MODULE ORGANISED by IQAC, ST. THOMAS COLLEGE, PALAI.

Attendance Sheet

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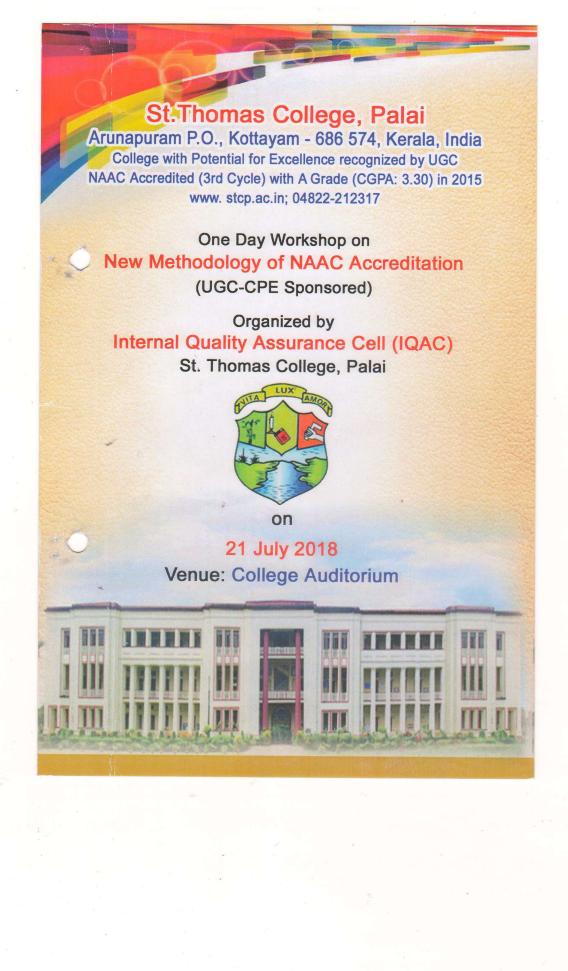
TWO DAY TRAINING PROGRAMME on PFMS EAT and DBT MODULE, ORGANISED bylQAC, ST. THOMAS COLLEGE, PALAI.

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+	Dr. Maya George, Asst. Pref. Alphonsa college Pala	9747755179	mayarosegeerge@	Mayedery.

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One Day Workshop on New Methodology of NAAC Accreditation

Aim and Scope

The National Assessment and Accreditation Council (NAAC) has brought in new spirit into its process of assessment and accreditation which is being adopted from July 2017. The revised process is more robust, objective, transparent and scalable as well as ICT enabled reducing the duration of accreditation process. In their quest for excellence, all the stakeholders, especially the Principals, IQAC Coordinators and Governing/Managing Council Members of every HEI are to be thoroughly aware of the Revised Accreditation Framework (RAF). This workshop organized by the Internal Quality Assurance Cell (IQAC) of St. Thomas College Palai aims to acquaint the participants with the NAAC's revised Quality Indicator Framework (QIF) for Affiliated Colleges.

The motto of IQAC of St. Thomas College Palai is Learn from the Masters. Accordingly, we are privileged to have an eminent expert for the day,

Mr. B. S. Ponmudiraj

Deputy Adviser, National Assessment and Accreditation Council (NAAC).

We cordially invite the Managers, Principals, IQAC Co-ordinators/Members of affiliated Arts and Science Colleges to attend the workshop.

Registration Fee: Rs. 300/-

PROGRAMME: (On 21/07/2018)

9.00-9.30 am :

: Registration

9.30 am

Inauguration

H.E. Mar Jacob Muricken

(Manager, St. Thomas College Palai)

10.00-11.15 am

Technical session I
Tea/Coffee break

11.15-11.45 am

Technical session II

11.45 am-1.00 pm

Lunch

2.00 pm – 3.30 pm :

Interactive session

Tea/Coffee

Dr. Ison V. Vanchipurackal

Organizing Secretary Mob: 9446126926 E-mail: isonv@rediffmail.com

Dr. Sunil C. Mathew

Co-ordinator, IQAC Mob: 9495109316 E-mail: sunilcmathew@gmail.com

Rev. Dr. James John

Principal

Palai, 09-07-2018. Note: (i) Those who wish to participate may kindly register their names with the IQAC Co-ordinator/ Organizing Secretary on or before 18-07-2018.

(ii) Accommodation may be arranged on payment basis.

Women's Forum

MISS ST. THOMAS

Miss St. Thomas contest was organized by the Women's Forum on 25th March 2019 and Sinimol Antony (II MA Politics), Linet Maria K (II PG Malayalam) and Punya M(I PG Malayalam) secured first, second and third prizes respectively.



FEMINIST RESEARCH METHODOLOGY

INVITED TALK

An invited talk on "Feminist Research Methodology" was delivered by Dr. Mini Sukumar, HOD, Dept of Women's Studies, University of Calicut on 22nd March 2019.



NATIONAL STATISTICS DAY CELEBRATIONS



National Statistics Day celebrated on 29 June 2018. Mrs. Sibil Jose, Assistant professor, St George College Aruvithura was the chief guest.

International Workshop on Design and Statistical Analysis of Clinical Studies



As part of the diamond jubilee celebrations of the Department, an international workshop on Design and Statistical Analysis of Clinical Studies was conducted during 7-11 January 2019. The goal of this workshop was to provide a thorough review of

statistical issues related to the design, management and statistical analysis of clinical studies. Ionut Bebu and Barbara Braffett, of the Department of Epidemiology and Biostatistics, George Washington University, USA were the resource persons.





2017-18

REPORT

KSCSTE Sponsored Two Days National Seminar on Emerging Trends in

Nanocomposites

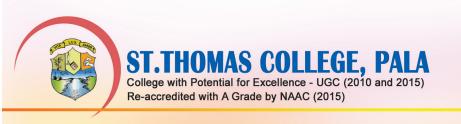
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The two days National Seminar on 'Emerging Trends in Nanocomposites' was conducted by Research and Postgraduate Department of Chemistry, St. Thomas College, Palai on 12th and 13th October 2017. There were four lecture sections, a keynote address, paper presentation session, and poster presentation session during this seminar. The resource persons of this seminar were Dr. Kuruvilla Joseph (Dept. of Chemistry, Indian Institute of Space Science and Technology, Thiruvanathapuram), Dr. S Abraham John (Dept. of Chemistry, Gandhigram Rural Institute and Deemed University, Dindigul, Tamilnadu), Dr. Jinu Jacob George (Dept. of Polymer Science and Rubber Technology, CUSAT) and Dr. Josmin P Jose (Dept. of Chemistry, Mar Thoma College, Thiruvalla). There were 160 participants including teachers, research scholars and students from various institutions attended the programme. The two day National seminar was inaugurated by Dr. Kuruvilla Joseph, Head of Chemistry division and Dean, Indian Institute of Space Science and Technology, Thiruvanathapuram.

The paper and poster presentation sessions were conducted. The citation certificates and cash awards for the first and second positions for the best paper and poster presentations were given to the winners.







National Seminar on 'Emerging Trends in Nanocomposites'



Dr. Kuruvilla Joseph inaugurates the national seminar

A National Seminar on 'Emerging Trends in Nanocomposites' was organised by the Department of Chemistry, on 12 and 13 October 2017. There were four lecture sessions, a keynote address, a paper presentation session, and a poster presentation session during this seminar. The resource persons of this seminar were Dr. Kuruvilla Joseph (Dept. of Chemistry, Indian Institute of Space Science and Technology, Thiruvanathapuram), Dr. S. Abraham John (Dept. of Chemistry, Gandhigram Rural Institute and Deemed University, Dindigul, Tamil Nadu), Dr. Jinu Jacob George (Dept. of Polymer Science and Rubber Technology, CUSAT) and Dr. Josmin P. Jose (Dept. of Chemistry, Mar Thoma College, Thiruvalla). There were 160 participants including teachers, research scholars and students from various institutions who attended the programme. The two-day National Seminar was inaugurated by Dr. Kuruvilla Joseph,

Head of Chemistry Department and Dean, Indian Institute of Space Science and Technology, Thiruvanathapuram, at a meeting presided over by H. E. Mar Joseph Muricken, Auxiliary Bishop of Palai and Manager of the College.

Paper and poster presentation sessions were also conducted. Citation certificates and cash awards for the first and second positions for the best paper and poster presentations were presented to the winners. Dr. Sajeev Martin George, Asst. Professor, Department of Chemistry, was the Co-ordinator of the national seminar.

Dr. Sajeev Martin George Co-ordinator

National Workshop on 'High Performance Statistical Computing Using R'



Dr. A. K. Singh, Scientist, DST, Govt. of India, inaugurates the workshop

A national workshop on 'High Performance Statistical Computing Using R' was organized by the Department of Statistics during 6-7 January 2018. The workshop was inaugurated by Dr. A. K. Singh, Scientist, Department of Science and Technology (DST), Govt. of In-

dia. There were 43 participants from various institutions. Dr. George Ostrouchov (University of Tennessee, USA), Dr. Nagaraj Neerchal (University of Maryland) and Dr. Andrew Raim (Census Bureau, USA) were the resource persons.







Dr. George Ostrouchov, Dr. Nagaraj Neerchal and Dr. Andrew Raim lead the national workshop

Workshop on Official Statistics and Opportunity in Government Sector

A one-day workshop on 'Official Statistics and Opportunity in Government Sector', sponsored by Ministry of Statistics and Program Implementation (MoSPI), Govt. of India, was organised by the Department of Statistics on 16 February 2018. Mr. Saji George I.S.S. and Mr. Vikash Kumar Dubey I.S.S were the resource persons.





Mr. Saji George ISS and Mr. V. K. Dubey ISS speaks at the workshop

2016-17

Second International Conference on Materials Science and Technology-ICMST 2016

Department of Physics organized Second International Conference on Materials Science and Technology (ICMST 2016) on 05-08 June 2016. ICMST 2016 provided a platform for academicians, scientists and researchers to exchange and share their experiences and research findings in various areas of Materials science, and to discuss the practical challenges encountered and solutions adopted.

The aim of the 2016 International Conference on Materials science and Nanotechnology (ICMST 2016) was to bring together National and International communities (students, scientists, engineers and stake holders from academia, government laboratories, industry and other organizations) working in the field of Materials science and technology to discuss new and exciting advances in the field.

The conference was inaugurated by Prof. P J Kurien, the Honourable Deputy Chairman of Rajyasabha in the presence of Nobel Laureates Prof. Ada E Yonath and Prof. Klaus von Klitzing, His Excellency Mar. Joseph Kallarangattu, Dr. Sunny Joseph, Dr. Michael Augustine, Dr. Ginson P Joseph and Prof. Augustine J Edakkara.



Prof. PJ Kurien, Deputy Chairman of Rajya Sabha lights the ceremonial lamp at the inaugural function of ICMST-2016

Technical Sessions of the conference started at 5 PM on 5-6-2016 Sunday, with the public lecture of Prof. Ravi Subrahmanyan (Director, Raman Research Institute Bangalore) on "Cosmic Dawn at the end of the Dark Ages"



Prof. Ravi Subrahmanyan (Director, Raman Research Institute Bangalore)

It was for the first time in the history of St Thomas college Palai that two Nobel laureates visiting the institution. Prof. Ada E Yonath(Nobel laureate, Weizmann institute, Rohovot, Israel) and Prof. Klaus von Klitzing (Nobel laureate, Max Planck Institute, Fur Festkorperforshung, Germany) showered their experience as well as expertise in the field of Materials science research through their plenary lectures as well as interaction sessions with the students.



Prof. Ada E Yonath(Nobel laureate, Weizmann institute, Rohovot, Israel)



Prof. Klaus von Klitzing (Nobel laureate, Max Planck Institute, Fur Festkorperforshung, Germany)

Along with the lectures of Nobel laureates and public lecture, ICMST 2016 witnessed the plenary talks of Prof. Norbert Kroo (Presidential Advisor, Hungarian Academy of Sciences, Hungary), Prof. Dr. Katharina Al-Shamery (Carl von Ossietzky University, Oldenburg, Germany), Dr. John Philip (Head, SMARTS&RTS, Metallurgy and Materials Group, IGCAR-Kalpakkom, India), Prof. Spiros H Anastasiadis (Director, Institute of Electronic Structure and Laser, Greece), Prof. Dr. Peter Baeuerle (Director, Institute of Organic Chemistry II and Advanced Materials, Ulm University, Germany) Prof. Reji Philip (Light and Matter Physics Group, RRI- Bangalore, India), Prof. Alison Downard (Mac Diarmid Institute for Advanced Materials and Nanotechnology, University of Canterbury, New Zealand) and Prof. Manuel Filipe Pereira da Cunha Martins Costa (University of Minho, Portugal).

PLENARY SPEAKERS



Prof. Alison Downard



Prof. Norbert Kroo



Prof. Dr. Katharina Al-Shamery



Prof. Reji Philip



Prof. Spiros H Anastasiadis



Dr. John Philip



Prof. Dr. Peter Baeuerle

The keynote lectures were delivered by Dr. Reji John (Head, Materials Engineering Division DRDO, NPOL,India), Dr. Lisa George (Madison Area Technical College, Madison, USA), Dr. Radhakrishna Prabhu (Robert Gordon University Aberdeen, United Kingdom), Prof. Krish Bharuth-Ram(University of KwaZulu-Natal Durban, South Africa), Dr. PK Panda(CSIR National Aerospace Laboratories Bangalore, India), Dr. Sandeep Kumar (Raman Research Institute Bangalore), Prof.Manickam Mahendran (Thiagarajar College of Engineering, Madurai, India), Prof. Dr. Mohd Kamarulzaki Mustafa (Deputy Dean of R&D, Universiti Tun Hussein Onn, Malaysia), Prof. M Padmanabhan (Amrita University Kerala, India), Dr. CV Tomy (Head, Dept. of Physics, IIT Bombay) and Prof. Constantinos Simserides (Dept. of Solid State Physics, National and Kapodistrian University of Athens, Greece).

The invited speakers were Dr. Pratap Kollu (University of Cambridge, United Kingdom), Dr. Sukhendu Mandl (IISER-Trivandrum, India), Dr.N.Vijayan (National Physical Laboratory -New Delhi, India), Dr.Bonige.Kishore Babu(Andhra University Andhra

Pradesh, India), Dr. Amal Kumar Das (Department of Physics, IIT Kharagpur, India), Prof. Dr. Sanjay Dhole (University of Pune, India), Dr. Jai Singh(Dr.H.S.Gour Central University, Sagar,M.P, India), Dr. Madhavan Jacob (Loyola College Chennai, India), Prof. Rajan Jose (Faculty of Industrial Sciences & Technology, Universiti Malaysia Pahang, Malaysia), Dr. Diby Paul (Dept. of Environmental Engineering, Konkuk University, SEOUL, South Korea) Dr. Kishore Sridharan (NIT- Karnataka) and Dr. Ajayan Vinu (Professor of Nanomaterials, University of South Australia).

There were ten plenary lectures, twelve keynote lectures, Eight invited talks, two hundred oral presentations and two hundred and sixty poster presentations in this event.

Participants include scientists from world renowned research centers, university and college professors and research scholars.



Audience observing a plenary talk- A close look of the Auditorium



Poster presentation

ICMST-2016 provided exposure to a wide spectrum of areas of research in Nanoscience, Thin film technology, Crystallography, smart materials, polymer and rubber technology, energy storage devices and superconductivity. The conference was a global meet of young researchers working in various fields of Materials science. The conference also provided a non pareil platform for the young scientists and researchers in India to interact with leading international experts. It has provided an excellent opportunity for the participants to involve themselves in extremely fruitful interpersonal exchange of ideas, perspectives and outlooks. Department of Science and Technology (DST), University Grants Commission (UGC), CSIR, DRDO, BRNS, MNRE, INSA, KSCSTE and ISRO were the sponsors of the event.

Dr. Michael Augustine- Head of the Physics Department, Dr. Ginson P Joseph,-Convener of ICMST-2016, Dr. Sunny Mathew and Prof.Augustine J Edakkara-Co-conveners, other teachers of the department and students welcomed the participants with high enthusiasm and entertained them with warm hospitality and dazzling array of cultural programs.



COLLEGE WITH POTENTIAL FOR EXCELLENCE - UGC (2010 and 2015)



Newsletter

VOL. XIX NO.1 JUNE 2017

2016 - 2017

Principal's Message No Solitaire, Only Teamplay



Every eventful academic year is an important milestone in the annals of the academia. The year 2016-17 stands out with its glittering academic performance and infrastructural development. We have witnessed a quantum leap in respect of augmentation in infrastructural facilities with the inauguration of the Integrated Sports Complex. It includes a vast auditorium that seats over a thousand people. Construction of an air-conditioned conference hall/assembly room in the ground floor of the sports complex is well underway.

The greatest academic event of the year, that has taken centre stage among activities of the year, was the International Conference on Materials Science and Technology organised by the Dept. of Physics. St. Thomas College was really blessed with the esteemed presence of two Nobel laureates in Physics Prof. Klaus von Klitzing (Germany) and Prof. Ada E. Yonath (Israel), both of them highly distinguished in their fields of research. We are, as reported, the first college in the state to have the rare privilege of having two Nobel laureates as resource persons for the same event. The conference was also attended by eminent scientists and technocrats from abroad alongside experts from various Indian universities and colleges. Members of the Physics faculty of our college, especially Dr. Michael Augustine, HoD and Dr. Ginson P. Joseph, convener of the conference, deserve special commendation

The performance of our students in academics and sports this year has been really creditable. There was a general blossoming out in studies, sports and extra curricular activities as evidenced by the ranks, grades, prizes and trophies won by our students. Everything went fair, there was no bad blood, no gravitation toward rude behaviour or chicanery, and the peace and harmony that prevailed in the campus enabled us to reap a good harvest in the academic field. I thank the teachers for their wholehearted support and committed teaching, the non-teaching staff for their co-operation and devoted work, the students for their diligence and participation, the parents for their caring and concern and the management, university, the UGC and the Government for their guidance and patronage. Our patron H. E. Mar Joseph Kallarangatt, Bishop of Palai and our Manager H. E. Mar Jacob Murickan, Auxiliary Bishop of Palai have been pillars of strength and beacons of hope for this institution. Our academic and other achievements bear witness to Almighty God's infinite mercy. Right from the moment of conceiving the idea of establishing an institution of higher learning by our founding fathers, God has showered his choicest blessings upon us, all through these academic decades.

I take this opportunity to thank everyone for their unstinting support and co-operation in the administration of this mighty institution. The responsibilities I shoulder in his institution are exciting, enriching and also challenging. Let us rise in the academic heavens as one, as a single entity endowed with a sense of solidarity and purpose.

I wish all success to our great institution and each one of its stakeholders. God bless you!

Dr. Joy George

Second International Conference on Materials Science and Technology (ICMST 2016) Conducted

Nobel Laureates Prof. Ada E. Yonath and Prof. Klaus von Klitzing deliver plenary talks

As a sequel to the first International Conference on Materials Science and Technology (ICMST 2012), the Department of Physics conducted the second ICMST from 5 to 8 June 2016 with the participation of around 550 scholars and delegates from 20 countries. The conference opened with a public lecture by Prof. Ravi Subramanian, Director of Raman Research Institute, Bangalore, on 5 June 2016. The formal inauguration of ICMST 2016 was conducted on 6 June 2016 by Prof. P. J. Kurian, Honourable Deputy Chairman of the Rajya Sabha, in the presence of the Nobel laureates Prof. Ada E. Yonath (Israel) and Prof. Klaus von Klitzing (Germany). H. E. Mar Joseph Kallarangatt, Bishop of Palai and Patron of the College, presided over the inaugural function. Principal Dr. Sunny Joseph felicitated. Dr. Michael Augustine (Head, Dept. of Physics) welcomed the gathering and Dr. Ginson P. Joseph (Convener)



Prof. P. J. Kurian, Hon'ble Deputy Chairman of the Rajya Sabha, inaugurates ICMST 2016

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Newsletter_{2016-'17}

SEMINARS, CONFERENCES, WORKSHOPS AND LECTURES

National Seminar on Translation



Principal Dr. Sunny Joseph inaugurates the national seminar

As part of Hindi Translation and Documentation Programme, a one-day National Seminar was organised by the Department of Hindi on the topic 'The Prospects of Translation in Multimedia' on 22 February 2017. The chief resource persons were Dr. Seema Chandran, Assistant Professor, Central University, Kasaragode and Dr. Herman P.G., Assistant Professor, Calicut University. The purpose of the seminar was to inculcate research aptitude and employability skills among the students.

National Workshop on Experimental Physics

A national level workshop on 'Experimental Physics' for college teachers was organized by the Department of Physics from 29 June to 2 July 2016. 36 teachers from all over the country participated in the programme. The theoretical framework of the experiments was discussed on the first day of the workshop, followed by their hands-on training on the remaining 3 days. The workshop was conducted in association with the Academy of Physics Teachers Kerala and co-sponsored by Mahatma Gandhi University, Kottayam. Dr. Ison V. Vanchipurackal was the resource person and organizing secretary of the workshop.



College Physics teachers who attended the workshop

2015-16

METHODOLOGY

It would be delivered through combination of:

- 1. Interactive Lectures& Discussions
- 2. Case studies / exercises/Hands-on Practice

RESOURCE PERSONS

Dr. Daniel Lazar [Pondicherry University]

Dr. Simon Thattil [Kerala University]

Dr.R.Kasilingam [Pondicherry University]

Dr. Sunil Paul [Madras School of Economics]

Dr. Anand B [Central University of Rajastan]

Dr. Joji Alex [Rajagiri School of Business Studies]

Dr. Santhosh Kumar S [St. Peter's College Kolenchery]

WHO SHOULD ATTEND?

Faculty Members & Research Scholars in the areas of Commerce, Management & Economics and M.Com, MBA, M.A. Economics Students who are interested in research and teaching.

[Participants are requested to bring their own Laptops, if possible]

CERTIFICATE OF PARTICIPATION

The participants will be issued a "Certificate of Participation" on the conclusion of the program.

REGISTRATION

Only 60 seats are available. Registration shall be made on "first come, first served" basis. Please note that no refund of fees shall be made later on. The registration form duly filled in along with participation fee should reach the convener by 20th August 2015.

PARTICIPATION FEES

The workshop is being conducted on non-residential basis. The fee for research scholar/faculty is Rs. 750/- and for M.Com or MBA or MA Economics Student, it is Rs. 250/- which include Course kit, Lunch, Tea and Snacks. Participation fee should be paid by DD drawn in favour of "HOD, Dept. of Commerce, St. Thomas College, Pala" payable at Pala. It can also be paid in cash.

ORGANIZING COMMITTEE

H.E. MAR. Jacob Muricken [Manager] Msgr Dr. Joseph Kollamparambil [Pro-Manager]

Dr. Sunny Joseph [Principal]

Rev. Dr. James John [Vice Principal]

Rev. Fr. Mathew Kurian Kavanadimalayil [Bursar]

Prof. K.V. John [Head of the Department]

Prof. Bobby Simon [Asst. Professor]

Prof. Tejil Thomas [Asst. Professor]

Prof. Binoy Chacko [Asst. Professor]
Prof. James Varghese [Asst. Professor]

Prof. Jinu Mathew [Asst. Professor]



For Commerce, Management & Economics
Sponsored by UCC

Organised by

DEPARTMENT OF COMMERCE
ST. THOMAS COLLEGE, PALA
Reaccredited by NAAC with A Grade (CGPA 3.30)
KOTTAYAM DIST, KERALA -686574



16-18 September 2015

Convener

Dr.Babu Jose Assistant Professor, Dept.of Commerce St. Thomas College. Pala, Arunapuram P.O. Kottayam (Dt), Kerala - 686574 Mob: 9446680107, Email: babujoset@gmail.com commercestcp@gmail.com

VENUE
LIBRARY HALL, ST. THOMAS COLLEGE PALA

ABOUT THE COLLEGE

Founded in 1950 by H.E. Mar Sebastian Vayalil, the first Bishop of Catholic Eparchy of Palai, St. Thomas College journeys on to be a Centre of Excellence through the formation of young people empowered to create a bright future for themselves and others, irrespective of caste, creed, religion or language through dissemination of knowledge, skills and noble values. Being a pioneer in the higher education scenario of Kerala, it has to its credit decades of distinguished service in the field of advanced education, sending out many under graduate and postgraduate maxima cum laude to carve out their destinies in diverse spheres. UGC - NAAC has accredited the college at A level with commendable index point in 2015. Currently the college expands its wings of knowledge through twenty one Departments out of which ten are well established research centres.

DEPT. OF COMMERCE

Being an unbeatable pool of resources in the arena of business education, the Research and Postgraduate Department of Commerce has an impressive and dynamic history of more than five decades which were solely dedicated 'to be a centre of excellence in business studies by upholding moral and ethical values'. Apart from offering Certificate,

Diploma, Undergraduate and Postgraduate programmes in commerce and allied subjects, the department excels among other research centres in Arts and Science colleges of the state of Kerala with a good number of doctoral degrees produced under the supervision of six research guides with remarkable experience and more than three dozens of research scholars. Active involvement of its teaching fraternity in research and the dissemination of know-how is commended splendidly and it is currently noted for its efforts for promoting genuine research.

NEED OF THIS WORKSHOP

The workshop aims to explore the basic dimensions of research and the need for scholars to rethink the assumptions that underline historic paradigms of research in the field of Commerce, Management and Economics. It is designed to provide participants with hands-on approach to conduct research. On completion of the workshop, participants would develop the skills to review the literature, develop hypotheses, frame research design, identify sampling techniques and comprehend the role and relevance of the tools for data collection and analysis. The three- day workshop will be exposing the participants to theoretical input on qualitative research techniques. It is a platform which will give the young researchers an opportunity to meet many dynamic researchers from different Universities.

PROGRAMME COVERAGE

DATE	16.09.2015	(WEDNESDAY)	
TIME	SESSION	TOPIC	
08.00 am - 09.00 am	Reg	gistration	RESOURCE PERSON
09.30 am - 10.15 am	Ina	uguration	
10.15 am - 10.30 am	Pre-sess	sion Tea Break	
10.30 am - 12.00 pm	Technical Session - I	Research: Basics	Dr. Simon Thattil University of Kerala
12.00 pm - 01.30 pm	Technical Session - II	Research Trends in Commerce & Management	Dr. Joji Alex RCBS- Kochi
01.30 pm - 02.00 pm		Lunch Break	
02.00 pm - 03.30 pm	Technical session - III	Review of Literature and Identification of Research Gap	Dr. Daniel Lazar
03.30 pm - 05.00 pm	Technical Session - IV	Formulation of Hypothesis and Testing of Hypothesis including Goodness of fit	Pondicherry University

DATE	17.09.2015	(THURSDAY)	RESOURCE PERSON
TIME	SESSION	TOPIC	RESOURCE PERSON
09.00 am - 10.30am	Technical Session - V		Dr. Santhosh Kumar S. St. Peter's College Kolenchery
10.30am - 01.30pm	Technical Session - VI	Identification of Models to be tested and deciding the conceptual framework	Dr. R. Kasilingam Pondicherry University
01.30pm - 02.00pm	Lunch Break		
02.00pm - 03.30pm	Technical Session -VII	Preparation and validation of Questionnaire (SPSS)	Dr. R. Kasilingam
03.30pm - 05.00pm	Technical Session -VIII	Analysis of Primary Data: Univariate and Multivariate (SPSS)	Pondicherry University

DATE	18.09.2015	(FRIDAY)	RESOURCE PERSON
TIME	SESSION	TOPIC	NESOUNCE PENSON
09.00 am - 10.30am	Technical Session - IX	Introduction to Time Series Data	Dr. Sunil Paul Madras School of Economics
10.30am - 12.00pm	Technical Session - X	Analysis of Time Series Data with E-views	Dr. Anand B Central University of Rajasthan
12.00pm – 01.30pm	Technical Session - XI	Analysis of Panel Data	Dr. Sunil Paul Madras School of Economics
01.30pm - 02.00pm		Lunch Break	
02.00pm - 03.30pm	Technical Session -XII	Analysis of Cross Sectional Data	Dr. Anand B Central University of Rajasthan
03.30pm - 05.00pm	Valedictory Session		

Research Methodology Workshop (Sponsored by UGC)

(For Commerce, Management & Economics)



By

Department of Commerce St. Thomas College, Pala Kottayam Dist, Kerala -686574

16th – 18th September 2015

Three Day UGC Sponsored National Workshop on Research Methodology for Commerce, Management and Economics

16-18 September 2015, Department of Commerce, St. Thomas College, Pala

Three Day UGC Sponsored National Workshop on Research Methodology for Commerce, Management and Economics was a very effective and goal oriented programme. The organizing committee was formed four months before and it functioned effectively. The programme was organized in eight sessions which contained Inauguration and Valedictory functions. Six technical sessions were handled by experts from outside and inside Kerala. The programme was inaugurated by Dr. Sheena Shukur, Honorable Pro- Vice chancellor, Mahatma Gandhi University, Kottayam and the session was presided over by the college Principal, Dr.

Sunny Joseph. First Day sessions were handled by Dr. Gabriel Simon Thattle, Professor in Commerce, Kerala University, on the basis of research and he inspired the research scholars and teachers to do genuine research with apt methodology. He spent around two hours and this session was so valuable for the participants. Dr. Joji Alex, Associate professor in Management from Rajagiri Centre for Business Studies, Kochi handled the second session on the basics and importance of business and management research. It was really another dimension of the first session which helped the participants to get clarity on many aspects especially on commerce and management area. Dr. Daniel Lazar, Associate professor in Finance, Pondicherry University was the resource person for the third session on review of literature, research gap and collection of data. This session was so useful to the beginners and participants really appreciated the session. On the second day, the fourth session was handled by Dr. Santhosh Kumar, Associate professor in Commerce, St. Peters College, Kolencherry, Kerala on the topic sample design and data collection. He made a lot of practical example with learner centered approach. After that the entire day was handled by Dr. Kasilingam, Associate Professor in Management, Pondicherry University on the analysis of the primary data by using SPSS. It was really an enterprising session, and the researchers got enough time to clarify their doubts and the practical sessions enabled them to handle the software and managing primary data. On the last day, Dr. Sunil Paul, from Madras School of Economics and Dr. Anand from Central University of Rajasthan, experts in secondary data and econometrics handled the sessions. Those were so advanced sessions and the participants got a time to think on these sophisticated steps in research area of Commerce, Management and Economics. Dr. K.K. Jose, Professor in Statistics, Central University of Rajasthan was the chief guest for the valedictory session of the programme.

The college and the Department had a good opportunity to make a common platform to the great researchers, Academicians, teachers and students to share their views and knowledge in various aspects of research. Standard workshop materials, conference kit, timing of the sessions, quality of the resource persons, food and accommodation, Travelling facility, technological ambiance in the training sessions etc were effectively undertaken by the Department. Among the 83 participants, 64 were out station participants. 3 researchers were from outside Kerala, among them two gents from Tamil Nadu and One lady from Hyderabad. Among those 64 participants 61 were teachers cum researchers and 3 were students. Among the 19 participants from the college, 10 were post graduate students and 9 were teachers. The outside participants were provided with free of cost accommodation, travelling and other facilities. This programme was really successful both academically and non- academically. The evaluation of the entire sessions and overall rating of the programme were included in the workshop proceedings. Each session was evaluated by the participants and their comments were taken as serious suggestion for improvement in future programme. Each participant was given duty leave sanctioned by the Director, College Development Council, Mahatma Gandhi University, Kottayam.

UGC-sponsored Workshop on Research Methodology



Dr. Sheena Shukkur, Hon'ble Pro Vice Chancellor, Mahatma Gandhi University, inaugurates the workshop.

A three-day UGC- sponsored Workshop on Research Methodology for Commerce, Management and Economics streams was organised by the Department of Commerce during 16-18 September 2015. The workshop was aimed at exploring the basic dimensions of research and the need for scholars to rethink the assumptions that underline historic paradigm of research in these fields. The workshop was inaugurated by Dr. Sheena Shukkur, Hon'ble Pro-Vice Chancellor, Mahatma Gandhi University, Kottayam at a meeting presided over by Dr. Sunny Joseph, Principal. Dr. Gabriel Simon Thattil (Professor, University of Kerala) and Dr. Daniel Lazar (Associate Professor, Pondicherry University) offered felicitations. Prof. K.V. John, Head of the Department, welcomed the gathering and Dr. Babu Jose, Convener, proposed the vote of thanks.

National Workshop on Statistics

A two-day National Workshop on 'The Role of Official Statistics in National Development and Career Opportunities in Statistics' was organised by the Department of Statistics on 21 & 22 August 2015. Dr. T. C. A. Anant, Chief Statistician of India cum Secretary to the Ministry of Statistics and Programme Implementation, Govt. of India, and Shri. G. S. N. Murthy, Deputy Director General, National Statistical Systems Training Academy (NSSTA) were the resource persons. This year's winners of National Statistics Day 2015 essay writing competition were felicitated on the occasion.



Dr. T.C.A. Anant, Chief Statistician of India cum Secretary to the Ministry of Statistics and Programme Implementation, speaks at the workshop

COLLEGE WITH POTENTIAL FOR EXCELLENCE - UGC (2010 and 2015

Workshop on the Use of Technology in Teaching and Administration

A one-day workshop on the 'Efficient Use of Technology in Teaching and Administration' was organized by the Internal Quality Assurance Cell (IQAC) of the College on 3 June 2015. Dr. Babu Sebastian, Hon'ble Vice Chancellor, Mahatma Gandhi University, Kottayam, inaugurated the workshop and delivered the key-note address. He spoke about the '5 waves' of information technology which are sweeping across the world and affecting our daily lives. Dr. Ison V. Vanchipurackal, Assistant Professor, Department of Physics, presented a PowerPoint on the topic 'ICT Facilities at St. Thomas College, Pala: Resources, Opportunities and Challenges'.



Dr. Babu Sebastian, Hon'ble Vice Chancellor, Mahatma Gandhi University, inaugurates the workshop

Rev. Dr. Mathew Maleparampil Memorial Lecture

The Principals' Council of Kerala has instituted a Memorial Lecture in honour of late Rev. Dr. Mathew Maleparampil, who served as the Principal of St. Thomas College, Pala (2001-2006) and the General Secretary of All Kerala Private College Managements Association. The inaugural lecture was delivered by Dr. Babu Sebastian, Hon'ble Vice Chancellor, Mahatma Gandhi University, Kottayam, on the topic 'Values in Education' on 13 October 2015. The programme was attended by functionaries of the Principals' Council, and All Kerala Private College Managements Association, and teachers of the College.



Dr. Babu Sebastian, Hon'ble Vice Chancellor, Mahatma Gandhi University, delivers the memorial lecture

Workshop on Financial Education

A workshop on 'Financial Education for Young Investors' was organised by the Dept. of Economics on 17 June 2015. Dr. Sunny Joseph, Principal, inaugurated the workshop and Sri. Amod Mathew, Certified Trainer, SEBI, was the chief resource person. Prof. Joji Jacob welcomed the gathering and Sri. Emil Mathew Binny proposed the vote of thanks.



Principal Dr. Sunny Joseph inaugurates the workshop

Invited Talk on 'Hindi Language: Challenges and Opportunities'

For long, it is a healthy practice of the Department of Hindi to invite eminent persons from North India to deliver speeches on relevant and contemporary topics. The major aim of this venture is to provide first hand information to the postgraduate students regarding the slang, accentual features etc. of the people from the Hindi belt. In accordance with the said practice, Dr. R. B. Singh, noted Hindi scholar from Ayodhya, U.P. was invited to the Department on 29 February 2016 to deliver a talk on 'Hindi Language: Challenges and Opportunities'. In his speech Dr. R. B. Singh exhorted the teaching as well as the student community to be ready to take extra pains to propagate Hindi in the age of globalization, in order to maintain the unity and integrity of the nation. Dr. V.V. Georgekutty Vattoth, Head of the Department, welcomed the gathering and Dr. P.D. George proposed the vote of thanks.



Dr. R.B. Singh delivers the invited talk

National Workshop on Biostatistical Methods in **Clinical Research**

A National Workshop on Biostatistical Methods in Clinical Research was organised by the Department of Biostatistics on 26 and 27 February 2016 in collaboration with ISMS. The resource persons were Dr. Anil C. Mathew, Professor of Biostatistics at PSG Institute of Medical Sciences and Research, Coimbatore and Dr. B. Anilkumar, Asst. Professor of Biostatistics at NIMHANS, Bangalore.

Workshop on R Programming and SAS

A Workshop on R Programming and SAS was organised by the Department of Biostatistics on 25 and 26 January 2016. Dr. Tomy Sebastian, Asst. Professor of Biostatistics, CMC, Vellore and Mr. Binil M. George, Senior Programmer, TCS, Bangalore, were the resource persons.

INVITED LECTURES DELIVERED **EXPERTS**

DEPARTMENT OF POLITICS

1. Dr. T. V. Muralivallabhan, former Principal, SVR NSS College, Vazhoor, delivered an invited talk on the topic "Importance of Enviornmental Protection" on 5 June 2015.



Dr. T. V. Muralivallabhan delivers the lecture

2. Dr. T. V. Paul, McGill University, Montreal, Canada, delivered the Erudite Lecture of the Kerala State Higher Education Council on the topic 'How to Achieve Stable Peace in South Asia'.



Dr. T. V. Paul delivers the lecture

DEPARTMENT OF **BIOTECHNOLOGY AND APPLIED MICROBIOLOGY**

Dr. Jose Sebastian, Stanford University, USA, delivered an invited lecture on 'CRISPR Gene Editing Technique and its Importance in Plants' on 23 March 2016.



Dr. Jose Sebastian delivers the lecture

DEPARTMENT OF STATISTICS

Dr. Jom Jacob, Deputy Director, Statistics and Planning Division, Rubber Board, gave a talk on 'Understanding Commodity Market Dynamics' on 21 January 2016.



Dr. Jom Jacob delivers the lecture

DEPARTMENT OF ENGLISH

- 1. Dr. Rangarajan Gopalakrishnan, Rajagiri School of Business Studies, delivered an invited lecture on 'Globalization and Honing of Indian Language Skills' on 19 October 2015.
- 2. Dr. Krishnan Unni P., Delhi University, delivered an invited talk on the topic 'Derrida and Deleuze' on 19 November 2015.



Dr. Rangarajan Gopalakrishnan delivers the lecture

3. Dr. C.C. Thomas, former Professor, St. Berchmans College, Changanassery, delivered an invited lecture on 'Shakespeare: Yesterday, Today and Tomorrow' on 26 November 2015.

DEPARTMENT OF BIOSTATISTICS

Dr. T. C. A. Anant, Chief Statistician of India cum Secretary, Ministry of Statistics and Programme Implementation, Govt. of India, delivered an invited lecture on 'Indian Statistical System' on 22 August 2015.

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	Resource Persons:		
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WORKSHOP ON THE EFFECTIVE USE OF TECHNOLOGY IN TEACHING & ADMINISTRATION

Organized by
Internal Quality Assurance Cell

on 3rd June 2015

Venue: Library Hall

Programme



St. Thomas College Palai

WORKSHOP ON THE EFFECTIVE USE OF TECHNOLOGY IN TEACHING & ADMINISTRATION

Organized by
Internal Quality Assurance Cell

on 3rd June 2015

Venue: Library Hall

Programme

Prayer Song

Prof. Tejil Thomas

Welcome

Dr. Sunny Joseph

Principal

St. Thomas College Palai

Keynote Address

Dr. Babu Sebastian

Hon'ble Vice Chancellor

Mahatma Gandhi University, Kottayam

Open Discussion and Interaction

Presentation

ICT----Resources, Opportunities and Challenges

Dr. Ison V. Vanchipurackal System Administrator

St. Thomas College Palai

Vote of Thanks

Rev. Dr. James John Mangalathu

Vice Principal

St. Thomas College Palai

WORKSHOP ON THE EFFECTIVE USE OF TECHNOLOGY IN TEACHING & ADMINISTRATION

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Internal Quality Assurance Cell

3rd June 2015

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4	Dr. Sr. Grigims o M. G. Vice Principal Alphonsa Collège Pala	Chip why
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6	Dr. Anjanoderi . J.P Dept. of Biotechnology 81. Thomas College Pala	mondun
• 7	Praveena George, Dept of Biotechnolog St. Themas Cellege, Pala	Pa b
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WORKSHOP ON THE EFFECTIVE USE OF TECHNOLOGY IN TEACHING & ADMINISTRATION

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Organized by
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WORKSHOP ON THE EFFECTIVE USE OF TECHNOLOGY IN TEACHING & ADMINISTRATION

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WORKSHOP ON THE EFFECTIVE USE OF TECHNOLOGY IN TEACHING & ADMINISTRATION

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THE EFFECTIVE USE OF TECHNOLOGY IN **FEACHING & ADMINISTRATION** WORKSHOP ON

3 June 2015

Organized by

Internal Quality Assurance Cell

CERTIFICATE

Certified that Mr./Ms./Dr.

participated in the Workshop on "The Effective Use of Technology in Teaching & Administration" held at St. Thomas College, Palai on 3rd June 2015.

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Palai 03/06/2015

Dr. Sunil C. Mathew Co-ordinator, IQAC

Dr. Sunny Joseph Principal

2014-15





ST. THOMAS COLLEGE, PALA COLLEGE WITH POTENTIAL FOR EXCELLENCE - UGC (2010)

VOL. XVII NO.1 **JUNE 2015**

Principal's Message Came, Saw and Concurred



The academic year 2014-15 has been a momentous one in the history of the college. Our institution has been adjudged one of the best in its category with 'A' grade by the National Assessment and Accreditation Council (NAAC). The contributions of many dedicated persons - those at the helm of affairs, those in the employ of the college, students, their parents, the alumni - our extended St. Thomas community, and other well-wishers of our college - have gone into this historic achievement. On this occasion, first of all, I would like to thank Almighty God for making our long-cherished dream come true. I also thank each and every person for their valuable share of work towards this goal.

The academic profile of the college has been strengthened by the introduction of new PG, UG and diploma programmes. MA History programme, B.Voc. Sustainable Agriculture and B.Voc. Food Processing Technology and Diploma in Computer

Hardware and Networking and Diploma in Renewable Energy have been started. Our college is all set to expand and promote aspiring students with a faculty ready to galvanize leading-edge spheres of knowledge and develop programmes that can bring about changes in the community in a highly positive way.

A large number of seminars, conferences, workshops and invited talks have been conducted in the academic year. In science and humanities we have been home to brilliant people tunnelling away in the field of research, teaching and extension activities. All such programmes were organized with a vision in mind that progress occurs when institutions bring creative minds together. From the enthusiastic participation of our students and research scholars in these programmes we infer that our young minds reflect an intelligent lineage that extends back over generations. In fact the legacy of our luminaries is in the promise of our rising stars.

It is our dream to raise St. Thomas College to a position to take the lead in research oriented projects beneficial for the community at large. The campus with an environment dedicated to both instruction and inspiration is like an experimental laboratory where creative risk-taking is a way of life. Nine new research projects sponsored by the UGC have been sanctioned to our teachers this year. Also seven such projects sanctioned earlier have been completed successfully. Two major research projects (with amounts near one million rupees and above) have also been completed this year.

Many members of our faculty, in their professional capacity, have been called upon to set the direction for larger institutions like universities. Dr. Babu Sebastian, Associate Professor, Dept. of Malayalam, has been appointed as the Vice Chancellor of Mahatma Gandhi University. A scholar and expert in diverse fields of academic and administrative activity, Dr. Babu Sebastian blends theory and practice harmoniously in his professional life. I congratulate my colleague and wish him all success and God's blessings on assumption of this exalted office.

To make academic life on the campus vibrant by guiding students through a process of intellectual enquiry and self-discovery and to rededicate ourselves to better positioning St. Thomas College as a 21st century institution of higher learning that is bound to scale new heights in academic and co-curricular activities, various programmes were organized

We have a track record of 'firsts' in sports and games. This year also we are champions in volleyball, swimming, cross-country race, body building etc. and runners up in athletics at university level. I thank all the department and other associations and forums in the college for making this academic year a fruitful one.

Principal Rev. Fr. N.V. Joseph Njarakkattil along with seven other members of the faculty retired from service in 2014-15. They include two vice principals. Dr. V.T. Thomas and Prof. Tommy Cherian Vadakkekunnel. Three members of the non-teaching staff also retired from service this year. With a deep sense of appreciation and gratitude I remember all my retired colleagues and wish them happy retired life.

This year we have lost one of our luminaries whose legacy will illuminate the campus forever. Our former principal Rev. Dr. Mathew Maleparambil was called to eternal rest on 22 March 2015. He had set clearly defined goals, modelled successful academic and administrative behaviour and empowered the college community to think creatively and act responsibly. He worked on multiple fronts to transform the higher education sector in the state enabling generations of students to flourish and create a future for themselves. We trust we have gained an angel in heaven that watches over us.

In near future our campus will be renewed for the 21st century with a state of the art sports complex and swimming pool facility, smart class rooms and student spaces infused with modern technology that supports teaching, learning and physical and mental fitness. We have begun a new century, nay a new millennium and we would help each other to rise to the challenges of tomorrow, for which we have to bank on the breadth and depth of our knowledge and skills. As I take over as principal of this great institution. I request your whole-hearted cooperation in making it lead others by example. We must strive to see our students succeed in their lives both as students here and as citizens after they leave us. I wish all of you all the best in

Dr. Sunny Joseph Panjikunnel

St. Thomas College Re-accredited with A Grade by NAAC

The College was re-accredited with A Grade (GPA 3.30) in the NAAC Assessment (3rd cycle) conducted during 23-25 February 2015. The NAAC Peer Team consisted of Prof. Arunoday Saha (Chairman), Prof. Ramana Rao Kamaraju (Member) and Prof. G.K. Karanth (Member Co-ordinator).

St. Thomas College, Pala had been assessed and accredited by NAAC with 4 Star Grade in February 2000 and with B++ Grade in February 2007. The report of the NAAC Peer Team who visited the College during 21-23 February 2007 was an eye-opener to the entire college community. This has contributed significantly to our march towards enhancement of quality in all areas. The College has been successful in evaluating its strengths and weaknesses and making up for the weaknesses during the last 8 years. We have implemented all the recommendations of the last Peer Team and made significant improvements in all areas and identified new domains in our guest for excellence. The initial steps for the NAAC re-accreditation process were taken by



Prof. Arunoday Saha hands over the report of the NAAC Peer Team to the Principal Rev. Fr. N.V. Joseph Njarakkattil at the Exit Meeting

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SEMINARS, CONFERENCES, WORKSHOPS AND LECTURES

NANOCHEMBIO 2014 - National Seminar on Nanochemistry and Nanobiotechnology



Prof. V.N. Rajasekharan Pillai inaugurates NANOCHEMBIO - 2014

The Department of Chemistry, has organised a two-day National Seminar on Nanochemistry and Nanobiotechnology (NANOCHEMBIO-2014) on 8 & 9 October 2014. About 100 delegates including teachers, research scholars, industrialists, NGOs and students participated. The seminar was inaugurated by Prof. V. N. Rajasekharan Pillai (Executive Vice President, KSCSTE & Principal Secretary to Govt. of Kerala). Mar Jacob Muricken (Auxiliary Bishop of Palai) delivered the benedictory speech and Principal Rev. Fr. N.V. Joseph Njarakkattil presided over the function. Prof. V.T. Thomas (HoD of Chemistry) and Dr. Sunny Kuriakose (Convenor, NANOCHEMBIO – 2014) delivered the welcome speech and vote of thanks respectively.

The keynote address was delivered by Prof. V. N. Rajasekharan Pillai. Eight technical sessions led by Prof. (Dr.) Sabu Thomas

(Director, IIUCNN, M. G. University), Dr. Edamana Prasad (IIT, Madras), Prof. (Dr.) Kuruvilla Joseph (IIST, Thiruvananthapuram), Dr. Nandakumar Kalarikkal (Deputy Director, IIUCNN, M. G. University), Dr. Vincent Mathew (Central University of Kerala) and Dr. Suraj Soman (NIIST, Thiruvanathapuram) were conducted during the two-day seminar. Dr. Praveen (Post Doc Fellow, IIUCNN, M. G. University) and Mr. Ajith Thomas (St. Thomas College, Palai) won the Best Paper and the Best Poster awards respectively. The proceedings of the seminar 'NANOCHEMBIO 2014 – The Interfaces of Nanotechnology, Chemistry and Biology' edited by Dr. Sunny Kuriakose and Dr. Thomas V. Mathew, was released at the valedictory function.

Seminar on Biotechnology

A one-day Seminar on 'Biotechnology - Recent Advances and Career Aspects' was organised by the Department of Applied Microbiology and Biotechnology on 18 September 2014. Dr. Roshni Baby Mathews, Department of Biotechnology, Cochin University of Science and Technology (CUSAT), was the chief resource person. She explained the importance of Biotechnology in pharmaceutical and agriculture sectors.



Principal Rev. Fr. N.V. Joseph Njarakkattil presents a memento to Dr. Roshni Baby Mathews

Seminar on Modern Separation **Techniques**

A Seminar on 'Modern Separation Techniques' was organised by the Department of Chemistry on 14 November 2014. Prof. (Dr.) Hassan Y. Aboul-Enein, Professor of Pharmaceutical and Medicinal Chemistry at National Research Centre, Cairo, Egypt, was the chief resource person at the seminar. A world renowned scientist in the field of separation chemistry, Prof. (Dr.) Hassan Y. Aboul-Enein was formerly Professor at the Universities of Alabama and Iowa (USA) and King Saud University, Riyadh (KSA). He is also the author of 950 research papers and 8 books on pharmaceutical and biomedical analysis. At the beginning of the programme, Dr. V.T. Thomas, Head, Department of Chemistry, welcomed the



Prof. (Dr.) Hassan Y. Aboul-Enein delivers the lecture

gathering and introduced the distinguished speaker to the audience. Prof. (Dr.) Hassan Y. Aboul-Enein then delivered two invited talks on the topics: 'The Impact of Chirality on Drug Development' and 'Capillary Electrophoresis: An Alternative Technique for Chiral Separation'. At the end of the lectures, Rev. Fr. N.V. Joseph Njarakkattil, Principal, presented a memento to the invited speaker, on behalf of the College. The programme came to an end with a vote of thanks by Dr. G.D. Gem Mathew, co-ordinator of the programme. About 120 students and teachers from the Departments of Chemistry, Botany, Biostatistics, Biotechnology and Applied Microbiology participated in the seminar.



Principal Rev. Fr. N.V. Joseph Njarakkattil presents a memento to Prof. (Dr.) Hassan Y. Aboul-Enein

Workshop on Research Methodology and **Developments in Literary Studies**

The Department of English organised a two-day workshop 'Research Methodology and Developments in Literary Studies', on 24 and 25 June 2014 for research scholars and postgraduate students. Talks were delivered by Dr. B.



Dr. B. Hariharan inaugurates the workshop

Hariharan (Director, Centre for Canadian Studies, Institute of English, University of Kerala) on 'Research Methodology', Dr. P.P. Raveendran (Former Director, School of Letters, Mahatma Gandhi University) on 'Developments in Literary Studies': Dr. P.S. Radhakrishnan (Director, School of Letters, Mahatma Gandhi University) on 'Literary Studies: Theory and Practice'; and Mr. Murali K.K. (Assistant Librarian, Mahatma Gandhi University) on 'Library, Resource for Research'. The workshop was co-ordinated by Prof. Tommy Cherian Vadakkekunnel (Head, Dept. of English) and Ms. Ajomy Maria Joseph.



Dr. P.P. Raveendran delivers the talk



Dr. P.S. Radhakrishnan delivers the talk

Reports of Administrative Audit

ADMINISTRATIVE AUDIT REPORT FOR THE YEAR 2014-15

1. Name of the Institution : St. Thomas College, Palai

2. Name of the Management : Diocese of Palai

3. Administrative Head of the Institution : The Principal

4. Head of the Office : The Senior Superintendent

5. Status of Bio-metric Punching : Yes / No

6. Office Timing : 10.00 a.m. to 5.00 p.m. for Office Staff

09.00 a.m. to 05.00 p.m. for Attenders

09.00 a.m. to 05.00 p.m. of LGS

04.30 p.m. to 08.30 a.m. for Watchman

7. Total Number of Administrative Staff

(a) Permanent : 49

(b) Temporary : 9
8. Administrative Structure : The Principle is the administrative head of the institution.

The head of the office is the Senior Superintendent. Senior Superintendent is in charge of the office administration. The Head Accountant is in charge of the Cash Book, Custodian of Cash Chest and Supervisor of all other financial matters and the section clerks under him. There is on Fair Copy section under the control of a Selection Grade Typist who

deals with tapal and despatch.

9. Number of Sections : 08

10. Name of different Sections : a) Establishment Sectioninistrative head of the institution

b) Accounts Section

c) Admission Section

d) Examination Section

e) E-Grants Section

f) Fee Collection Section

g) UGC Section

11. Work Distribution to the Sections and :

- h) Purchase Section
 - a) Establishment Section This section is under the direct control of the Senior Superintendent and deals with the service matters of teaching and administrative staff of the institution. The various service matters including Regularisation, Probation, Sanction of Annual Increment, Sanction of Leave, etc...
 - b) Accounts Section This section under the control of the Head Accountant and deals with the Salary, Advance Loans etc. of teaching and administrative staff of the institution. Also, other matters in connection with Provident Fund admission, P.F. advance, P.F. Non Refundable advance and Closure of Provident Fund etc.
 - c) Admission Section This section is under the control of Head Accountant and Senior Supdt. and deals with all matters related with admission of students in various classes of different department by following the reservation rules of the state Govt. It also deals with the matters related with student attendance etc.
 - d) Examination Section This section is under the control of Senior Superintendent and deals with Internal Marks, Internal Examinations and University Semester Examinations of the students.
 - e)E-Grants Section-This section is under the control of the Head Accountant and Senior Supdt. and deals with fee concession matters for eligible students. Provide informations about various scholarships to the students, invites applications of scholarships and verify it through the Scholarship Nodal Officer of the college.
 - f) Fee Collection Section This section is under the control of the Head Accountant and collect all kinds of fees from students.
 - g)UGC Section Under the control of the Head Accountant and Senior Superintendent and deals with correspondents with UGC and maintains the UGC accounts.
 - h) Purchase Section Under the control of the Head Accountant and Senior Superintendent and deals with

Purchases by using various funds available to the institution as per Store Purchase Rules of the State. 15/06/2015

12. Training Programmes to the Staff

13. The Various Sources of Funds :

(a) RUSA Fund - Rs. Nil

(b) UGC Fund - Rs. 53,65,450/-

(c) P.D. Fund - Rs. 12,05,949/-

(d) CPE -Rs. 10,00,000/-

14. Utilization of Funds Received

(a) RUSA Fund - Rs. Nil

(b) UGC Fund - Rs. 53,65,450/-

(c) P.D. Fund - Rs. 12,05,949/-

(d) CPE -Rs. 10,00,000/-

P. S. NAJEEB
ACCOUNTS OFFICER IN CHARGE
OF DY. DIRECTOR OF COLLEGIATE EDUCATION
ERNAKULAM

ADMINISTRATIVE AUDIT REPORT FOR THE YEAR 2015-16

1. Name of the Institution : St. Thomas College, Palai

2. Name of the Management : Diocese of Palai

3. Administrative Head of the Institution : The Principal

4. Head of the Office : The Senior Superintendent

5. Status of Bio-metric Punching : Yes / No

6. Office Timing : 10.00 a.m. to 5.00 p.m. for Office Staff

09.00 a.m. to 05.00 p.m. for Attenders

09.00 a.m. to 05.00 p.m. of LGS

04.30 p.m. to 08.30 a.m. for Watchman

7. Total Number of Administrative Staff

(a) Permanent : 46

(b) Temporary : 9

8. Administrative Structure : The Principle is the administrative head of the institution.

The head of the office is the Senior Superintendent. Senior Superintendent is in charge of the office administration. The Head Accountant is in charge of the Cash Book, Custodian of Cash Chest and Supervisor of all other financial matters and the section clerks under him. There is on Fair Copy section under the control of a Selection Grade Typist who

deals with tapal and despatch.

9. Number of Sections : 08

10. Name of different Sections : a) Establishment Sectioninistrative head of the institution

b) Accounts Section

c) Admission Section

d) Examination Section

e) E-Grants Section

f) Fee Collection Section

g) UGC Section

11. Work Distribution to the Sections and :

- h) Purchase Section
 - a) Establishment Section This section is under the direct control of the Senior Superintendent and deals with the service matters of teaching and administrative staff of the institution. The various service matters including Regularisation, Probation, Sanction of Annual Increment, Sanction of Leave, etc...
 - b) Accounts Section This section under the control of the Head Accountant and deals with the Salary, Advance Loans etc..of teaching and administrative staff of the institution. Also, other matters in connection with Provident Fund admission, P.F. advance, P.F. Non Refundable advance and Closure of Provident Fund etc..
 - c) Admission Section This section is under the control of Head Accountant and Senior Supdt. and deals with all matters related with admission of students in various classes of different department by following the reservation rules of the state Govt. It also deals with the matters related with student attendance etc..
 - d) Examination Section This section is under the control of Senior Superintendent and deals with Internal Marks, Internal Examinations and University Semester Examinations of the students.
 - e)E-Grants Section-This section is under the control of the Head Accountant and Senior Supdt. and deals with fee concession matters for eligible students. Provide informations about various scholarships to the students, invites applications of scholarships and verify it through the Scholarship Nodal Officer of the college.
 - f) Fee Collection Section This section is under the control of the Head Accountant and collect all kinds of fees from students.
 - g)UGC Section Under the control of the Head Accountant and Senior Superintendent and deals with correspondents with UGC and maintains the UGC accounts.
 - h) Purchase Section Under the control of the Head Accountant and Senior Superintendent and deals with

Purchases by using various funds available to the institution as per Store Purchase Rules of the State. 15/05/2017

- 12. Training Programmes to the Staff
- 13. The Various Sources of Funds

- (a) RUSA Fund Rs. Nil
- (b) UGC Fund Rs. 41,68,100/-
- (c) DST- Rs. 21,00,000/-
- (d) P.D. Fund Rs. 11,28,812/-

14. Utilization of Funds Received

- (a) RUSA Fund Rs. Nil
- (b) UGC Fund Rs. 41,68,100/-
- (c) DST- Rs. 21,00,000/-
- (d) P.D. Fund Rs. 11,28,812/-

P. S. NAJEEB
ACCOUNTS DEFICER IN CHARGE
OF DY DIRECTOR OF COLLEGIATE EDUCATION
ERNAKIJI AM

ADMINISTRATIVE AUDIT REPORT FOR THE YEAR 2016-17

:

:

1. Name of the Institution

St. Thomas College, Palai

2. Name of the Management

Diocese of Palai

3. Administrative Head of the Institution

The Principal

4. Head of the Office

The Senior Superintendent

5. Status of Bio-metric Punching

Yes / No

6. Office Timing

10.00 a.m. to 5.00 p.m. for Office Staff

09.00 a.m. to 05.00 p.m. for Attenders

09.00 a.m. to 05.00 p.m. of LGS

04.30 p.m. to 08.30 a.m. for Watchman

7. Total Number of Administrative Staff

(a) Permanent

44

(b) Temporary

11

8. Administrative Structure

The Principle is the administrative head of the institution. The head of the office is the Senior Superintendent. Senior Superintendent is in charge of the office administration. The Head Accountant is in charge of the Cash Book, Custodian of Cash Chest and Supervisor of all other financial matters and the section clerks under him. There is on Fair Copy section under the control of a Selection Grade Typist who deals with tapal and despatch.

9. Number of Sections

08

10. Name of different Sections

: a) Establishment Sectioninistrative head of the institution

- b) Accounts Section
- c) Admission Section
- d) Examination Section
- e) E-Grants Section
- f) Fee Collection Section
- g) UGC Section

11. Work Distribution to the Sections and :

- h) Purchase Section
 - a) Establishment Section This section is under the direct control of the Senior Superintendent and deals with the service matters of teaching and administrative staff of the institution. The various service matters including Regularisation, Probation, Sanction of Annual Increment, Sanction of Leave, etc...
 - b) Accounts Section This section under the control of the Head Accountant and deals with the Salary, Advance Loans etc..of teaching and administrative staff of the institution. Also, other matters in connection with Provident Fund admission, P.F. advance, P.F. Non Refundable advance and Closure of Provident Fund etc..
 - c) Admission Section This section is under the control of Head Accountant and Senior Supdt. and deals with all matters related with admission of students in various classes of different department by following the reservation rules of the state Govt. It also deals with the matters related with student attendance etc..
 - d) Examination Section This section is under the control of Senior Superintendent and deals with Internal Marks, Internal Examinations and University Semester Examinations of the students.
 - e)E-Grants Section-This section is under the control of the Head Accountant and Senior Supdt. and deals with fee concession matters for eligible students. Provide informations about various scholarships to the students, invites applications of scholarships and verify it through the Scholarship Nodal Officer of the college.
 - f) Fee Collection Section This section is under the control of the Head Accountant and collect all kinds of fees from students.
 - g) UGC Section Under the control of the Head Accountant and Senior Superintendent and deals with correspondents with UGC and maintains the UGC accounts.
 - h) Purchase Section Under the control of the Head Accountant and Senior Superintendent and deals with

Purchases by using various funds available to the institution as per Store Purchase Rules of the State. 09/11/2017, 25/11/2017

(a) RUSA Fund - Rs. Nil

12. Training Programmes to the Staff

13. The Various Sources of Funds

14. Utilization of Funds Received

- (b) UGC Fund Rs. 30,62,690/-
- (c) P.D. Fund Rs. 12,93,635/-
- (a) RUSA Fund Rs. Nil
- (b) UGC Fund Rs. 30,62,690/-
- (c) P.D. Fund Rs. 12,93,635/-

P. S. NAJEEB
ACCOUNTS OFFICER IN CHARGE
OF DY. DIRECTOR OF COLLEGIATE EDUCATION
ERNAKULAM

ADMINISTRATIVE AUDIT REPORT FOR THE YEAR 2017-18

1. Name of the Institution : St. Thomas College, Palai

2. Name of the Management : Diocese of Palai

3. Administrative Head of the Institution : The Principal

4. Head of the Office : The Senior Superintendent

5. Status of Bio-metric Punching : Yes / No

6. Office Timing : 10.00 a.m. to 5.00 p.m. for Office Staff

09.00 a.m. to 05.00 p.m. for Attenders

09.00 a.m. to 05.00 p.m. of LGS

04.30 p.m. to 08.30 a.m. for Watchman

7. Total Number of Administrative Staff

(a) Permanent : 37

(b) Temporary : 11

8. Administrative Structure : The Principle is the administrative head of the institution.

The head of the office is the Senior Superintendent. Senior Superintendent is in charge of the office administration. The Head Accountant is in charge of the Cash Book, Custodian of Cash Chest and Supervisor of all other financial matters and the section clerks under him. There is on Fair Copy section under the control of a Selection Grade Typist who

deals with tapal and despatch.

9. Number of Sections : 08

10. Name of different Sections : a) Establishment Sectioninistrative head of the institution

b) Accounts Section

c) Admission Section

d) Examination Section

e) E-Grants Section

f) Fee Collection Section

g) UGC Section

11. Work Distribution to the Sections and:

- h) Purchase Section
 - a) Establishment Section This section is under the direct control of the Senior Superintendent and deals with the service matters of teaching and administrative staff of the institution. The various service matters including Regularisation, Probation, Sanction of Annual Increment, Sanction of Leave, etc...
 - b) Accounts Section This section under the control of the Head Accountant and deals with the Salary, Advance Loans etc..of teaching and administrative staff of the institution. Also, other matters in connection with Provident Fund admission, P.F. advance, P.F. Non Refundable advance and Closure of Provident Fund etc..
 - c) Admission Section This section is under the control of Head Accountant and Senior Supdt. and deals with all matters related with admission of students in various classes of different department by following the reservation rules of the state Govt. It also deals with the matters related with student attendance etc..
 - d) Examination Section This section is under the control of Senior Superintendent and deals with Internal Marks, Internal Examinations and University Semester Examinations of the students.
 - e)E-Grants Section-This section is under the control of the Head Accountant and Senior Supdt. and deals with fee concession matters for eligible students. Provide informations about various scholarships to the students, invites applications of scholarships and verify it through the Scholarship Nodal Officer of the college.
 - f) Fee Collection Section This section is under the control of the Head Accountant and collect all kinds of fees from students.
 - g)UGC Section Under the control of the Head Accountant and Senior Superintendent and deals with correspondents with UGC and maintains the UGC accounts.
 - h) Purchase Section Under the control of the Head Accountant and Senior Superintendent and deals with

Purchases by using various funds available to the institution as per Store Purchase Rules of the State. 27/04/2018

- 12. Training Programmes to the Staff :
- 13. The Various Sources of Funds

- (a) RUSA Fund Rs. Nil
- (b) UGC Fund Rs. 10,991892/-
- (c) DST-Rs. 36,9000/-
- (d) P.D. Fund Rs.11,39,300/-
- (e) CPE Rs. 95,76,000/-

14. Utilization of Funds Received

- (a) RUSA Fund Rs. Nil
- (b) UGC Fund Rs. 10,991892/-
- (c) DST-Rs. 36,9000/-
- (d) P.D. Fund Rs.11,39,300/-
- (e) CPE Nil

ADMINISTRATIVE AUDIT REPORT FOR THE YEAR 2018-19

1. Name of the Institution : St. Thomas College, Paia

2. Name of the Management : Diocese of Palai

3. Administrative Head of the Institution : The Principal

4. Head of the Office : The Senior Superintendent

5. Status of Bio-metric Punching : Yes / No

6. Office Timing : 10.00 a.m. to 5.00 p.m. for Office Staff

09.00 a.m. to 05.00 p.m. for Attenders

09.00 a.m. to 05.00 p.m. of LGS

04.30 p.m. to 08.30 a.m. for Watchman

7. Total Number of Administrative Staff

(a) Permanent : 34

(b) Temporary : 12

8. Administrative Structure : The Principle is the administrative head of the institution.

The head of the office is the Senior Superintendent. Senior Superintendent is in charge of the office administration. The Head Accountant is in charge of the Cash Book, Custodian of Cash Chest and Supervisor of all other financial matters and the section clerks under him. There is on Fair Copy section under the control of a Selection Grade Typist who

deals with tapal and despatch.

9. Number of Sections : 08

10. Name of different Sections : a) Establishment Sectioninistrative head of the institution

b) Accounts Section

c) Admission Section

d) Examination Section

e) E-Grants Section

f) Fee Collection Section

g) UGC Section

11. Work Distribution to the Sections and :

- h) Purchase Section
 - a) Establishment Section This section is under the direct control of the Senior Superintendent and deals with the service matters of teaching and administrative staff of the institution. The various service matters including Annual of Sanction Probation, Regularisation. Increment, Sanction of Leave, etc...
 - b) Accounts Section This section under the control of the Head Accountant and deals with the Salary, Advance Loans etc..of teaching and administrative staff of the institution. Also, other matters in connection with Provident Fund admission, P.F. advance, P.F. Non Refundable advance and Closure of Provident Fund etc..
 - c) Admission Section This section is under the control of Head Accountant and Senior Supdt. and deals with all matters related with admission of students in various classes of different department by following the reservation rules of the state Govt. It also deals with the matters related with student attendance etc..
 - d) Examination Section This section is under the control of Senior Superintendent and deals with Internal Marks, Internal Examinations and University Examinations of the students.
 - e)E-Grants Section-This section is under the control of the Head Accountant and Senior Supdt. and deals with fee concession matters for eligible students. Provide informations about various scholarships to the students, invites applications of scholarships and verify it through the Scholarship Nodal Officer of the college.
 - f) Fee Collection Section This section is under the control of the Head Accountant and collect all kinds of fees from students.
 - g) UGC Section Under the control of the Head Accountant Superintendent deals and Senior correspondents with UGC and maintains the UGC accounts.
 - h) Purchase Section Under the control of the Head Accountant and Senior Superintendent and deals with

12. Training Programmes to the Staff

13. The Various Sources of Funds

Purchases by using various funds available to the institution as per Store Purchase Rules of the State. 02/09/2019

- (a) RUSA Fund Rs. 10,00,000/-
- (b) UGC Fund Rs. 71,12,985/-
- (c) DST-Rs. 6,30,000/-

P. S. NAJEEB
ACCOUNTS OFFICER IN CHARGE
OF DY. DIRECTOR OF COLLEGIATE EDUCATION (R15.)
ERNAKULAM

Participation in NIRF



National Institutional Ranking Framework Ministry of Human Resource Development

Government of India



Welcome to Data Capturing System: OVERALL

Institute ID: IR-O-C-11591

Institute Name: St. Thomas College, Arunapuram P.O., Pala-686 574

← Go Back (/DCS/Home)

Full Report

Sanctioned (Approved) Intake

Academic Year	2017-18	2016-17	2015-16	2014-15	2013-14	2012-13
UG [3 Years Program(s)]	776	776	776			
PG [2 Years Program(s)]	285	285				

Total Actual Student Strength (Program(s) Offered by Your Institution)

(All programs of all years)	No. of Male Students	No. of Female Students	Total Students	Within State (Including male & female)	Outside State (Including male & female)	Outside Country (Including male & female)	Economically Backward (Including male & female)	Socially Challenged (SC+ST+OBC Including male & female)	No. of students receiving full tuition fee reimbursement from the State and Central Government	No. of students receiving full tuition fee reimbursement from Institution Funds	No. of students receiving full tuition fee reimbursement from the Private Bodies	No. of students who are not receiving full tuition fee reimbursement
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(All programs of all years)	No. of Male Students	No. of Female Students	Total Students	Within State (Including male & female)	Outside State (Including male & female)	Outside Country (Including male & female)	Economically Backward (Including male & female)	Socially Challenged (SC+ST+OBC Including male & female)	No. of students receiving full tuition fee reimbursement from the State and Central Government	No. of students receiving full tuition fee reimbursement from Institution Funds	No. of students receiving full tuition fee reimbursement from the Private Bodies	No. of students who are not receiving full tuition fee reimbursement
UG [3 Years Program (s)]	1932	267	2199	2196	3	0	1135	509	926	9	0	709
PG [2 Years Program (s)]	115	422	537	535	2	0	300	126	278	8	15	125

Placement & Higher Studies

UG [3 Years Program(s)]: Placement & higher studies for previous 3 years

Academic Year	No. of first year students intake in the year	No. of first year students admitted in the year	Academic Year	No. of students admitted through Lateral entry	Academic Year	No. of students graduating in minimum stipulated time	No. of students placed	Median salary of placed graduates (Amount in Rs.)	No. of students selected for Higher Studies
(2013-14)	666	654	(2014-15)	0	(2015-16)	275	39	360000 (Three lakh sixty thousand)	91
(2014-15)	776	673	(2015-16)	0	(2016-17)	325	35	288000 (Two lakh eighty eight thousand)	131
(2015-16)	776	761	(2016-17)	0	(2017-18)	394	54	252000 (Two lakh fifty two thousand)	103

Academic Year	No. of first year students intake in the year	No. of first year students admitted in the year	Academic Year	No. of students graduating in minimum stipulated time	No. of students placed	Median salary of placed graduates (Amount in Rs.)	No. of students selected for Higher Studies
(2014-15)	285	242	(2015-16)	213	53	390000 (Three lakh ninty thousand)	49
(2015-16)	285	280	(2016-17)	220	39	312000 (Three lakh twelve thousand)	51
(2016-17)	285	260	(2017-18)	208	33	270000 (Two lakh seventy thousand)	38

Ph.D Student Details

Ph.D (Student pursuing doctoral program till 2017-18; Students admitted in the academic year 2018-19 should not be entered here.)					
	Total Students				
Full Time	80				
Part Time	51				

No. of Ph.D students graduated (including Integrated Ph.D)

	2017-18	2016-17	2015-16
Full Time	11	18	16
Part Time	8	16	18

Financial Resources: Utilised Amount for the Capital & Operational expenditure for previous 3 years

Financial Year	2017-18	2016-17	2015-16					
	Utilised Amount	Utilised Amount	Utilised Amount					
Annual Capital Expenditure on Academic Activities and Resources (excludi	Annual Capital Expenditure on Academic Activities and Resources (excluding expenditure on buildings)							
Library	651102 (Six lakh fifty one thousand one hundred and two)	650802 (Six lakh fifty thousand eight hundred and two)	647803 (Six lakh fourty seven thous and eight hundred and two)					
New Equipment for Laboratories	828663 (Eight lakh twenty eight thou sand six hundred and sixty three)	824190 (Eight lakh twenty four thou sand one hundred and ninty)	793125 (Seven lakh ninty three thou sand one hundred and twenty five)					
Engineering Workshops	0 (Zero)	0 (Zero)	0 (Zero)					
Other expenditure on creation of Capital Assets (excluding expenditure on Land and Building)	318500 (Three lakh eighteen thousa nd five hundred)	527000 (Five lakh twenty seven thou sand)	637500 (Six lakh thirty seven thousa nd five hundred)					
Annual Operational Expenditure								
Salaries (Teaching and Non Teaching staff)	112036671 (Eleven crore twenty lak h thirty six thousand six hundred se venty one)	100287332 (Ten crore two lakh eight y seven thousand three hundred thi rty two)	99000785 (Nine crore ninty lakh sev en hundred eighty five)					
Maintenance of Academic Infrastructure or consumables, other running expenditures etc. (excluding maintenance of hostels and allied services)	4185600 (Forty one lakh eighty five t housand six hundred)	3627500 (Thirty six lakh twenty seve n thousand five hundred)	3267750 (Thirty two lakh sixty seven thousand seven hundred fifty)					
Seminars/Conferences/Workshops	353000 (Three lakh fifty three thous and)	370000 (Three lakh seventy thousan d)	790000 (Seven lakh ninty thousand)					

IPR

Calendar year	2017	2016	2015
No. of Patents Published	0	0	0
No. of Patents Granted	0	0	0

Sponsored Research Details

Financial Year	2017-18	2016-17	2015-16
Total no. of Sponsored Projects	5	9	8
Total no. of Funding Agencies	5	4	4
Total Amount Received (Amount in Rupees)	356988	1272602	3363879
Amount Received in Words	Three lakh fifty six thousand nine hundred eig hty eight	Twelve lakh seventy two thousand six hund red two	Thirty three lakh sixty three thousand eight hundred se venty nine

Consultancy Project Details

Financial Year	2017-18	2016-17	2015-16
Total no. of Consultancy Projects	0	0	0
Total no. of Client Organizations	0	0	0
Total Amount Received (Amount in Rupees)	0	0	0
Amount Received in Words	Zero	Zero	Zero

Executive Development Programs (Minimum one year duration)

Financial Year	2017-18	2016-17	2015-16
Total no. of Executive Development Programs	0	0	0
Total no. of Participants	0	0	0
Total Annual Earnings (Amount in Rupees)	0	0	0

Financial Year	2017-18	2016-17	2015-16
Total Annual Earnings in Words	Zero	Zero	Zero

PCS Facilities: Facilities of physically challenged students

1. Do your institution buildings have Lifts/Ramps?	Yes, more than 80% of the buildings
2. Do your institution have provision for walking aids, includingwheelchairs and transportation from one building to another for handicapped students?	Yes
3. Do your institution buildings have specially designed toilets for handicapped students?	Yes, more than 80% of the buildings

Faculty Details

1. How many faculty members of your institution have received highly reputed national/international awards/recognition from Central government agencies in the previous year (2017-18)?

0

Srno	Name	Age	Designation	Gender	Qualification	Experience (In Months)	ls Associated Last Year	Currently working with institution?	Joining Date	Leaving Date	Association type
1	ABIN JOSE	35	Assistant Professor	Male	M.A	18	Yes	Yes	24-01- 2017		Regular
2	ANUPAMA K S RAMKUMAR	40	Lecturer	Female	M.Sc.(Microbiology)	100	Yes	Yes	01-03- 2010		Regular
3	BINOY CHACKO	32	Assistant Professor	Male	M.COM	72	Yes	Yes	09-07- 2012		Regular
4	DEEMAT C MATHEW	32	Assistant Professor	Male	Ph.D	29	Yes	Yes	15-02- 2016		Regular
5	GEORGE VARGHESE	41	Assistant Professor	Male	Ph.D	47	Yes	No	27-10- 2014	19-07- 2018	Regular

6	JAMES VARGHESE	29	Assistant Professor	Male	M.COM	57	Yes	Yes	31-10- 2013		Regular
7	JISHNU VENUGOPAL	32	Assistant Professor	Male	M. Phil	69	Yes	Yes	04-10- 2012		Regular
8	JOMY AUGUSTINE	52	Associate Professor	Male	Ph.D	284	Yes	Yes	25-11- 1994		Regular
9	JOY JACOB	59	Lecturer	Male	Ph.D	381	Yes	Yes	03-10- 2017		Adhoc / Contractual
10	LINI L ALAPPAT	42	Lecturer	Female	Ph.D	43	Yes	Yes	01-12- 2014		Adhoc / Contractual
11	MATHEW KURIAN	53	Assistant Professor	Male	M.A.(Political Science)	198	Yes	Yes	08-01- 2002		Regular
12	P J BENNY	54	Associate Professor	Male	Ph.D	320	Yes	Yes	04-11- 1991		Regular
13	RAJU K AUGUSTINE	51	Associate Professor	Male	M.A	309	Yes	Yes	01-09- 1992		Regular
14	SABU DE MATHEW	56	Associate Professor	Male	Ph.D	265	Yes	No	04-06- 1996	30-06- 2018	Regular
15	SHILPA MATHEW	29	Assistant Professor	Female	M.A	69	Yes	Yes	04-10- 2012		Regular
16	SOJAN PULLATTU	39	Assistant Professor	Male	Ph.D	116	Yes	Yes	06-11- 2008		Regular
17	SUVARNANI DEVI E	37	Assistant Professor	Female	Ph.D	18	Yes	Yes	30-01- 2017		Regular
18	TINJUMOL MATHEW	31	Assistant Professor	Female	M. Phil	63	Yes	Yes	31-10- 2013		Regular
19	V O CHUMMAR	77	Lecturer	Male	M.A	548	Yes	No	01-07- 1997	31-03- 2018	Adhoc / Contractual
20	ANISH CYRIAC	41	Assistant Professor	Male	Ph.D	25	Yes	Yes	08-06- 2016		Regular

21	AUGUSTINE J EDAKKARA	32	Assistant Professor	Male	M.Sc(Phy)	72	Yes	Yes	09-07- 2012		Regular
22	C K JAMES	53	Associate Professor	Male	Ph.D	309	Yes	Yes	16-09- 1992		Regular
23	G D GEM MATHEW	53	Associate Professor	Male	Ph.D	286	Yes	Yes	28-09- 1994		Regular
24	ISON V VANCHIPURACKAL	42	Assistant Professor	Male	Ph.D	181	Yes	Yes	02-06- 2003		Regular
25	JIKKI JOSE	34	Lecturer	Female	M.Tech	25	Yes	Yes	05-06- 2016		Adhoc / Contractual
26	JOGY ALEX	51	Associate Professor	Male	M. Phil	313	Yes	Yes	01-06- 1992		Regular
27	JOSEPH MATHEW	74	Lecturer	Male	M.Sc.	518	Yes	No	01-06- 2000	31-03- 2018	Adhoc / Contractual
28	KOCHURANI JOSEPH	43	Assistant Professor	Female	Ph.D	30	Yes	Yes	25-01- 2016		Regular
29	MANJESH MATHEW	34	Assistant Professor	Male	M.Sc.	25	Yes	Yes	08-06- 2016		Regular
30	NEETHU S NAIR	28	Lecturer	Female	M.A.(History)	8	Yes	No	19-11- 2017	31-10- 2018	Adhoc / Contractual
31	PRINCEMON JOSE	34	Assistant Professor	Male	Ph.D	72	Yes	Yes	09-07- 2012		Regular
32	ROBERSE THOMAS	30	Assistant Professor	Male	M. Phil	30	Yes	Yes	25-01- 2016		Regular
33	SEENA MATHEW	39	Assistant Professor	Female	Ph.D	18	Yes	Yes	24-01- 2017		Regular
34	SIMI JACOB	36	Lecturer	Female	M.Sc.	86	Yes	Yes	04-05- 2011		Adhoc / Contractual
35	SUNIL C MATHEW	46	Associate Professor	Male	Ph.D	276	Yes	Yes	17-07- 1995		Regular

36	THOMAS SCARIA	46	Assistant Professor	Male	Ph.D	116	Yes	Yes	06-11- 2008	 Regular
37	TONY JOSEPH	40	Assistant Professor	Male	M. Phil	30	Yes	Yes	25-01- 2016	 Regular
38	AMRUTHA GAYATHRY V	23	Lecturer	Female	B.Tech	18	Yes	Yes	03-01- 2017	 Visiting
39	ASHISH JOSEPH	40	Assistant Professor	Male	MP.Ed.	116	Yes	Yes	14-11- 2008	 Regular
40	BONEY BOSE	27	Lecturer	Male	M. Phil	8	Yes	Yes	05-11- 2017	 Adhoc / Contractual
41	FRANCY MATHEW	54	Associate Professor	Male	M.A	357	Yes	Yes	12-10- 1988	 Regular
42	GREENU ANS THOMAS	26	Lecturer	Female	M.A	13	Yes	Yes	01-07- 2017	 Adhoc / Contractual
43	JIBIN JOSEPH	29	Lecturer	Male	M.E.	21	Yes	Yes	03-10- 2016	 Adhoc / Contractual
44	JOBY MATHEW	37	Assistant Professor	Male	M.A	69	Yes	Yes	04-10- 2012	 Regular
45	JOSEPH J MATTAM	55	Associate Professor	Male	M. Phil	348	Yes	Yes	01-08- 1989	 Regular
46	KVJOHN	55	Associate Professor	Male	M.COM	360	Yes	Yes	12-07- 1988	 Regular
47	MANESH VARGHESE JOHN	40	Assistant Professor	Male	M. Phil	57	Yes	Yes	31-10- 2013	 Regular
48	MINU ABRAHAM	28	Lecturer	Female	M.Sc.	43	Yes	Yes	01-12- 2014	 Adhoc / Contractual
49	PRAVEENA GEORGE	33	Lecturer	Female	M.Sc.	84	Yes	Yes	15-07- 2011	 Adhoc / Contractual
50	RENU MATHEW	45	Lecturer	Female	M.Sc.	18	Yes	Yes	25-01- 2017	 Adhoc / Contractual

51	SEEMON THOMAS	47	Associate Professor	Male	Ph.D	249	Yes	Yes	09-10- 1997		Regular
52	SIJU JOSEPH	38	Assistant Professor	Male	M.A	57	Yes	Yes	31-10- 2013		Regular
53	STANY THOMAS	52	Associate Professor	Male	Ph.D	285	Yes	Yes	17-10- 1994		Regular
54	THOMAS JACOB	69	Lecturer	Male	M.A	457	Yes	No	01-06- 2005	31-03- 2018	Adhoc / Contractual
55	TOMY THOMAS	50	Associate Professor	Male	MSc(Mathematics)	304	Yes	Yes	15-09- 1995		Regular
56	AMAL JOSE BABY	30	Assistant Professor	Male	M.Sc.	72	Yes	Yes	09-07- 2012		Regular
57	ARYA S	25	Lecturer	Female	MSc(Mathematics)	6	Yes	No	06-10- 2017	28-04- 2018	Adhoc / Contractual
58	BOBY P MATHEW	36	Assistant Professor	Male	Ph.D	72	Yes	Yes	10-07- 2012		Regular
59	DONET M THOMAS	29	Lecturer	Male	M.A	18	Yes	No	27-09- 2016	31-03- 2018	Adhoc / Contractual
60	GINSON P JOSEPH	38	Assistant Professor	Male	Ph.D	116	Yes	Yes	06-11- 2008		Regular
61	JAYESH ANTONY	37	Assistant Professor	Male	Ph.D	30	Yes	Yes	27-01- 2016		Regular
62	JOBIN JOB MATHEN	27	Assistant Professor	Male	Ph.D	17	Yes	Yes	09-02- 2017		Adhoc / Contractual
63	JOSE MATHEW	49	Associate Professor	Male	M.A	275	Yes	Yes	29-08- 1995		Regular
64	K M KURIAN	54	Associate Professor	Male	Ph.D	373	Yes	Yes	01-06- 1987		Regular
65	M S JAYAPRASAD	61	Lecturer	Male	B.Sc.	43	Yes	Yes	01-12- 2014		Adhoc / Contractual

66	MICHAEL AGUSTINE	56	Associate Professor	Male	Ph.D	394	Yes	No	09-09- 1985	30-04- 2018	Regular
67	PAUL V KARAMTHANAM	50	Associate Professor	Male	M. Phil	290	Yes	Yes	24-08- 1995		Regular
68	RATHEESH M	38	Assistant Professor	Male	Ph.D	72	Yes	Yes	09-07- 2012		Regular
69	SEBASTIAN GEORGE	53	Associate Professor	Male	Ph.D	289	Yes	Yes	06-06- 1994		Regular
70	SIJO MATHEW	38	Assistant Professor	Male	M.A.(Political Science)	72	Yes	Yes	09-07- 2012		Regular
71	SREELAKSHMI RADHAKRISHNAN	25	Lecturer	Female	M.A.(History)	10	Yes	Yes	18-09- 2017		Adhoc / Contractual
72	THANKACHAN AUGUSTINE	53	Associate Professor	Male	M. Phil	288	Yes	Yes	08-07- 1994		Regular
73	TOM K VARGHESE	64	Lecturer	Male	M.A	393	Yes	No	01-06- 2010	31-03- 2018	Adhoc / Contractual
74	WILLIAM ZACHARIAS	55	Associate Professor	Male	M.A	381	Yes	Yes	20-10- 1986		Regular
75	ANJU SENAN	30	Lecturer	Female	M.Sc.(Food Service Management & Dietetics)	32	Yes	Yes	31-07- 2017		Visiting
76	BENNY KURIAN	54	Associate Professor	Male	Ph.D	288	Yes	Yes	18-07- 1994		Regular
77	DAVIS XAVIER	50	Associate Professor	Male	Ph.D	265	Yes	Yes	04-06- 1996		Regular
78	GEORGE JOSEPH	35	Assistant Professor	Male	M.A.(Political Science)	97	Yes	Yes	02-06- 2010		Regular
79	JAMES JOSEPH	63	Lecturer	Male	M. Phil	97	Yes	Yes	07-06- 2010		Adhoc / Contractual

80	JINU T JOSE	28	Lecturer	Female	M.Sc.	43	Yes	Yes	01-12- 2014		Adhoc / Contractual
81	JOJI JACOB	35	Assistant Professor	Male	M. Phil	72	Yes	Yes	17-07- 2012		Regular
82	JOY GEORGE	56	Associate Professor	Male	Ph.D	390	Yes	No	26-09- 1985	31-03- 2018	Regular
83	LIJI JOSE P	34	Lecturer	Female	MCA	13	Yes	Yes	03-06- 2017		Adhoc / Contractual
84	MATHEW ALAPPATTUMEDAYIL	40	Assistant Professor	Male	M.A	60	Yes	Yes	01-06- 2017		Regular
85	P D GEORGE	54	Associate Professor	Male	Ph.D	297	Yes	Yes	08-06- 1993		Regular
86	RAJ MATHEW	49	Assistant Professor	Male	Ph.D	116	Yes	Yes	14-11- 2008		Regular
87	ROSHAN JOSEPH	40	Lecturer	Female	МВА	18	Yes	Yes	03-01- 2017		Adhoc / Contractual
88	SHAJIMON K MATHEWS	56	Associate Professor	Male	Ph.D	391	Yes	Yes	17-12- 1985		Regular
89	SINI THOMAS K	31	Lecturer	Female	Ph.D	33	Yes	Yes	29-10- 2015		Adhoc / Contractual
90	SUNNY MATHEW	56	Associate Professor	Male	Ph.D	288	Yes	No	01-07- 1994	31-03- 2018	Regular
91	TINCHU P JAMES	29	Assistant Professor	Female	M.A.(Political Science)	57	Yes	Yes	31-10- 2013		Regular
92	V K JOSE	56	Associate Professor	Male	Ph.D	369	Yes	No	24-10- 1985	31-03- 2018	Regular
93	ANJANA THOMAS	27	Lecturer	Female	M.Sc.	39	Yes	Yes	21-04- 2015		Adhoc / Contractual
94	BABU JOSE	39	Assistant Professor	Male	Ph.D	72	Yes	Yes	09-07- 2012		Regular

95	CYRIAC JOSE	35	Assistant Professor	Male	Ph.D	72	Yes	Yes	09-07-		Damilan
95	CYRIAC JOSE	35	Assistant Professor	Male	Pn.D	72	res	res	2012		Regular
96	GEORGE J KAKKUZHIYIL	27	Assistant Professor	Male	M.COM	10	Yes	Yes	14-09- 2017		Adhoc / Contractual
97	JAMES JOHN	50	Dean / Principal / Director / Vice Chancellor	Male	Ph.D	198	Yes	Yes	08-01- 2002		Regular
98	JINU MATHEW	28	Assistant Professor	Male	M.COM	57	Yes	Yes	31-10- 2013		Regular
99	JOHNS AUGUSTINE	49	Assistant Professor	Male	Ph.D	116	Yes	Yes	06-11- 2008		Regular
100	JOVANCY MATHEW	38	Lecturer	Female	M.Sc.(Nutrition and Dietetics)	33	Yes	No	07-09- 2015	18-06- 2018	Adhoc / Contractual
101	LIBIN KURIAKOSE	37	Assistant Professor	Male	M.Tech	97	Yes	Yes	02-06- 2010		Regular
102	MATHEW ABRAHAM	27	Lecturer	Male	M. Phil	25	Yes	Yes	04-06- 2016		Adhoc / Contractual
103	NOBY MATHEW	34	Lecturer	Male	M.Sc.(Microbiology)	107	Yes	Yes	18-08- 2009		Adhoc / Contractual
104	PRIYA THOMAS	38	Lecturer	Female	M.Sc.(Microbiology)	11	Yes	Yes	14-08- 2017		Regular
105	ROSE MARIA JOSE	31	Lecturer	Female	MSc(Statistics)	70	Yes	Yes	10-09- 2012		Adhoc / Contractual
106	SETHU N NAIR	27	Lecturer	Female	MSc(Statistics)	47	Yes	Yes	09-06- 2014		Adhoc / Contractual
107	SIMON AUGUSTINE	55	Associate Professor	Male	Ph.D	294	Yes	Yes	20-01- 1994		Regular
108	SUNNY KURIAKOSE	52	Associate Professor	Male	Ph.D	320	Yes	Yes	06-11- 1991		Regular

109	THOMAS V MATHEW	40	Assistant Professor	Male	Ph.D	116	Yes	Yes	06-11- 2008		Regular
110	TRACE BENNY	25	Assistant Professor	Female	M.A	25	Yes	Yes	16-06- 2016		Adhoc / Contractual
111	ALAN ZACHARIA	38	Assistant Professor	Male	M.A.(Economics)	97	Yes	Yes	02-06- 2010		Regular
112	ARCHANA CHERIAN	36	Lecturer	Female	M.Sc.	134	Yes	Yes	27-05- 2007		Adhoc / Contractual
113	BINS MANI	35	Assistant Professor	Male	Ph.D	97	Yes	Yes	02-06- 2010		Regular
114	DINIMOL N D	45	Assistant Professor	Female	Ph.D	18	Yes	Yes	31-01- 2017		Regular
115	GIBIN RAJA GEORGE	30	Assistant Professor	Male	M.A	30	Yes	Yes	25-01- 2016		Regular
116	JAYAKRISHNAN R	25	Assistant Professor	Male	M.A.(Political Science)	20	Yes	No	02-11- 2016	01-11- 2018	Adhoc / Contractual
117	JITHIN PRAKASH P A	31	Assistant Professor	Male	M.Sc.	72	Yes	Yes	09-07- 2012		Regular
118	JOMY JOSE	27	Lecturer	Male	M.A.(History)	24	Yes	Yes	29-07- 2016		Adhoc / Contractual
119	K C BIJU	44	Assistant Professor	Male	Ph.D	192	Yes	Yes	02-07- 2002		Regular
120	LINO T MATHEW	36	Lecturer	Male	M.A	77	Yes	Yes	13-01- 2017		Visiting
121	MATHEW THOMAS	56	Associate Professor	Male	Ph.D	369	Yes	No	17-01- 1987	31-03- 2018	Regular
122	PJJOHNSON	51	Associate Professor	Male	M.A	300	Yes	Yes	12-07- 1993		Regular
123	RAJU MATHEW T	56	Associate Professor	Male	M. Phil	392	Yes	No	04-11- 1985	31-03- 2018	Regular

124	SAJEEV MARTIN GEORGE	38	Assistant Professor	Male	Ph.D	72	Yes	Yes	09-07- 2012		Regular
125	SIBY JAMES	48	Associate Professor	Male	Ph.D	282	Yes	Yes	05-01- 1995		Regular
126	SONIA M THOMAS	33	Lecturer	Female	M.COM	37	Yes	Yes	01-06- 2015		Adhoc / Contractual
127	SWEETYMOL JOSE	37	Lecturer	Female	M.Sc.	3	Yes	No	09-10- 2017	03-01- 2018	Adhoc / Contractual
128	TOJI THOMAS	43	Assistant Professor	Male	Ph.D	198	Yes	Yes	08-01- 2002		Regular
129	VIDYA VIJAYASENAN	25	Assistant Professor	Female	M.Sc.	11	Yes	No	01-12- 2016	31-10- 2017	Adhoc / Contractual
130	ALEX THANNIPPARA	53	Associate Professor	Male	Ph.D	360	Yes	Yes	11-07- 1988		Regular
131	ARJUN RAM SANKAR	29	Lecturer	Male	MCA	13	Yes	Yes	03-06- 2017		Adhoc / Contractual
132	BOBBY SIMON	40	Assistant Professor	Male	M. Phil	116	Yes	Yes	06-11- 2008		Regular
133	DIVYA BHASKARAN	35	Lecturer	Female	M.A.(History)	13	Yes	Yes	29-06- 2017		Regular
134	GIFTY ROSE GEORGE	28	Lecturer	Female	M.Sc.	9	Yes	Yes	01-11- 2017		Adhoc / Contractual
135	JAYASREE RAJU	27	Lecturer	Female	M.A.(History)	9	Yes	No	20-06- 2017	31-03- 2018	Adhoc / Contractual
136	JOBEN K ANTONY	38	Assistant Professor	Male	M. Phil	97	Yes	Yes	02-06- 2010		Regular
137	JOSE K XAVIER	55	Associate Professor	Male	Ph.D	310	Yes	Yes	01-09- 1992		Regular
138	K K JOSE	61	Lecturer	Male	Ph.D	451	Yes	Yes	01-01- 2016		Adhoc / Contractual

139	LITHIN THOMAS	25	Lecturer	Male	M.COM	9	Yes	No	11-10- 2017	28-03- 2018	Adhoc / Contractual
140	MATHEW THOMAS	35	Assistant Professor	Male	M.Sc.	97	Yes	Yes	02-06- 2010		Regular
141	P O AUGUSTHY	56	Associate Professor	Male	Ph.D	272	Yes	No	17-07- 1995	31-03- 2018	Regular
142	RAJU THOMAS	54	Associate Professor	Male	MP.Ed.	310	Yes	Yes	01-09- 1992		Regular
143	SALVIN K THOMAS	37	Assistant Professor	Male	M.A	55	Yes	Yes	16-12- 2016		Regular
144	SIJO K MANUEL	36	Assistant Professor	Male	Ph.D	116	Yes	Yes	03-11- 2008		Regular
145	SOUMYA JOSE	36	Assistant Professor	Female	M.A	72	Yes	Yes	09-07- 2012		Regular
146	TEJIL THOMAS	35	Assistant Professor	Male	Ph.D	97	Yes	Yes	02-06- 2010		Regular
147	TOJO JOSEPH	34	Assistant Professor	Male	M.Sc.	30	Yes	Yes	25-01- 2016		Regular
148	VINEETH VENUGOPAL	32	Lecturer	Male	M.Sc.	69	Yes	Yes	11-12- 2017		Visiting

Collaborative quality initiatives with other institutions

2018-19



Influence of MnCl₂ on the properties of an amino acid complex single crystal-L-arginine perchlorate (LAPCI) for optical limiter applications

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Abstract

The slow solvent evaporation technique has been employed for the synthesis of L-arginine perchlorate (LAPCl) single crystals. The grown crystals are doped with 1, 2 and 3 mol% of MnCl₂. The Powder X-ray Diffraction (PXRD) analysis confirmed that the pure and doped crystals belong to the orthorhombic crystal system with non-centrosymmetric space group $P2_12_12_1$. The incorporation of dopants has been confirmed by Laser-Induced Breakdown Spectroscopy (LIBS) and Energy Dispersive X-ray Analysis (EDX). The modification in the linear optical properties has been analyzed by measuring the cut off wavelength, band gap, Urbach energy and the refractive index of the pure and doped crystals. The changes in the nonlinearity of the LAPCl have been studied by open aperture Z-scan technique and found that two-photon absorption (2PA) coefficient increased with increasing the dopant concentration. The dielectric properties, electronic polarizability and thermal properties of the pure and doped crystals are also studied.

1 Introduction

Recently, great efforts have been made by many materials scientists to search for an appropriate semi-organic material exhibiting high nonlinearity and reasonable success in synthesizing bulk size single crystals which are favorable for device fabrication [1–7]. The studies on organic and semi-organic nonlinear optical materials have got greater attention due to their high flexibility in molecular design and high nonlinear optical efficiency [8]. The research on this way resulted in the invention of a new phase matchable amino acid based semi-organic crystal. The unique characteristics of amino acids like molecular chirality, the absence

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of strongly conjugated bonds and zwitterionic nature make them an ideal candidate among organic single crystals [9]. L-Arginine is an essential amino acid with a basic side chain and hydrophilic character. The L-arginine perchlorate (LAPCI) prominent among L-arginine complexes has been synthesized by Monaco et al. [10]. The LAPCI crystallizes in the orthorhombic crystal system with space group $P 2_1 2_1 2_1$ [11]. The Second Harmonic Generation Efficiency (SHG) test performed by Tapati Mallik and Tanusree Kar shows that it is higher than KDP [12]. The mechanical and dielectric studies conducted by Aruna et al. [13] revealed that the LAPCI crystal has anisotropic mechanical properties along different crystallographic directions and low values of the dielectric constant at high frequencies. The low dielectric constant value of LAPCI makes it a tool for high-speed electro-optic modulation [14] and indicates that this material is suitable for the development of NLO devices. Even though the growth and characterization studies of the LAPCl single crystals have been studied by many researchers [15-18], the effect of MnCl₂ on the electrical, thermal and optical properties of the LAPCI is studied for the first time.

The effects of the substitution and inclusion of metallic dopants in various single crystals with nonlinear optical properties have already been reported by many researchers. Studies conducted by Haja Hameed et al. [19] showed that addition of Magnesium (Mg) into the L-Arginine Phosphate

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Photoinduced electron transfer in novel CdSe-Cu₂Se type II core-shell quantum dots†

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Herein we report the synthesis, characterisation and electron transfer studies of CdSe-Cu₂Se QDs, a novel type II core-shell system. The synthesis was achieved by a high temperature organometallic method with oleylamine as ligand. Structural and optical properties of the nanostructures were investigated using X-ray diffraction, high resolution transmission electron microscopy, selected area electron diffraction, energy dispersive X-ray spectroscopy, inductive coupled plasma optical emission spectroscopy, cyclic voltammetry, X-ray photoelectron spectroscopy and absorption spectroscopy. The electron transfer dynamics were investigated by observing the variations in steady state and time resolved emission spectra in the presence of an electron acceptor-methyl viologen. Localization of electrons in the shells was evident from the studies performed indicating efficient charge separation.

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Introduction

Core-shell quantum dots (QDs) are functional nanomaterials where 'band engineering' results in tailored properties that are quite different from their monocomponent counterparts. 1,2 The possibility of adjusting the overlap of electron-hole wave functions in these systems leads to benefits in longer single3 and multiple4 exciton lifetimes, superior optical gain5 and reduced blinking.6 Their potential features make them in highly demandable in various fields such as light emitting diodes,7 photovoltaic devices,8 optical switches9 spintronic devices,10 low-threshold lasers,11 bio-labeling agents,12 etc. Depending on the band alignment of the core and shell materials, three types of core-shell QDs systems are identified, viz. type I, reverse type I and type II, possessing different functional features. 1,13-16 Among these assortments, a gifted advantage of the type II QDs is that the band gap offset in them spatially separates photogenerated carriers within the structure such that the electronwave function resides largely in one material and the holewave function in the other. 6,17-20 The energy offset can be tuned by a judicious control of the composition, size and shape of each component which offers the possibility of directly controlling the electron-hole wave function overlap, tailoring the optoelectronic properties of the devices based on them.21 The staggered alignment of band edges helps in improving the power conversion efficiency of photovoltaic cells by preventing the back electron transfer.22,23 This also causes a reduction in the oscillator strength of wave functions leading to longer lifetimes of the excited state. The exciplex state of type II QDs can raise the light absorption rate too. ²³

Different research groups reported the advancements in type II structures in consort with their characteristic features like wide absorption range extending to NIR, enhanced chemical stability, reduced recombination rate, longer exciton lifetime, efficiency enhancement in photovoltaics, etc.23-28 The band edge recombination energy of type II systems is observed to be smaller than the bandgap energy of its constituent semiconductor materials so that an emission at lower energies compared to the core (or shell) is a characteristic feature of type II QDs.29 A detailed investigation of the photo-induced electron/hole transfer dynamics is essential in core-shell structures, particularly while considering them as an active layer in light harvesters.30-33 Many research groups have used the method of monitoring the luminescence of core-shell QDs in presences of an electron donor/ acceptor to investigate their charge carrier dynamics.34,35 Zhang et al. investigated the quenching of QD photoluminescence in the presence of hole acceptors and explored the static and dynamic factors involved.36 A similar study in core-shell nanorods by Jiang group differentiated the quenching mechanism based on the nature of binding sites. The effect of shell thickness on the charge carrier separation and recombination was also investigated in presence of electron/hole scavengers.37 In case of CdTe-CdSe type II coreshell system, quenching studies with anthraquinone showed an increase in charge transfer rate as well as longer exciton lifetime with an increase in thickness of CdSe shell.38 Again, the role of shell in charge carrier dynamics was unambiguously proved by Maity et al. in case of a CdS-CdTe QD-bromopyrogallol system.31

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CuInS₂-In₂Se₃ quantum dots - a novel material via a green synthesis approach†

N. J. Simi, Da Libin Kuriakose, Da R. Vinayakan and V. V. Ison **D**a

Novel $CuInS_2-In_2Se_3$ QDs were prepared by a two stage organometallic colloidal synthesis procedure. A layer of indium selenide was grown over the $CuInS_2$ QD core, under high temperature in the presence of oleylamine. The optical properties of the nanostructures grown were studied using UV-Vis absorption spectroscopy and the band gap obtained was in line with the cyclic voltammetry (CV) results. The elemental composition was analysed using energy dispersive X-ray spectroscopy (EDAX), inductive coupled plasma-atomic emission spectroscopy (ICP-AES) and X-ray photoelectron spectroscopy (XPS). The structural properties were investigated using X-ray diffraction (XRD) and high resolution transmission electron microscopy (HRTEM). The TEM images showed spherical nanostructures of size about 4.8 nm with well-defined lattice planes which were also evident from selected area electron diffraction (SAED) patterns. The XRD pattern indicated a tetragonal chalcopyrite crystal structure for the nanostructures.

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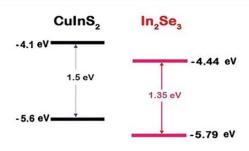
rsc.li/rsc-advances

Introduction

Engineering the physical and chemical properties of semiconductor nanostructures or quantum dots (QDs) has been a frontier research area for the past three decades.1-5 The efficaciousness of QDs lies in controlling their properties by tuning the size, shape and composition. 6-9 In addition, the choice of an organic surfactant layer protecting the nanostructure expands the possibility of surface engineering. 10,11 Though cadmium and lead based nanoparticles are verified with high applicability, 12,13 their inherent toxicity calls forth environment friendly and commercially viable 'green' nanostructures, 13-15 particularly when biomedical applications are concerned.16,17 Green QDs include I-III-VI2 compounds such as CuInS2 (CIS), CuInSe2 (CISe), and CuInSeS (CISeS) along with many other binary quantum dots which are free from heavy metals.18,19 Among these, CIS and CISe are direct band gap semiconductors with band gap onset in the NIR region.20,21 Besides, the high absorption coefficient makes them efficient in light harvesting applications.22 But, compared to the binary II-VI QDs, the slow hole scavenging and the presence of surface trap states limits the use of these I-III-VI2 nanostructures in different applications. This is due to the non-stoichiometric compositions and complex crystal structures of these nanostructures.23,24 A possible solution to overcome these issues is to passivate the surface states by an epitaxial growth of a semiconductor layer

which further modifies the electronic properties of the nano-

structures synthesized.24-27 Recently, Kim et al. observed that



Scheme 1 $\,$ Schematic representation of the energy level diagrams of CIS and In_2Se_3.

a ZnS shell over CISe core reduced non-radiative recombination and interfacial electron recombination in them. 15 Similarly, Donega and coworkers reported an appreciable improvement in photoluminescence quantum yield of CIS QDs by over coating with ZnS or CdS.28,29 The same observation was also reported by Klimov and coworkers while evaluating light emission mechanisms in a CIS/ZnS core-shell system.30 Most of the reported works on CIS and CISe QDs are based on growing a ZnS passivating layer over the core to form a core/shell type-I structure.17,31-33 In some earlier attempts, In2S3 was used in conjunction with CIS thin films for improving the performance of thin film based photovoltaic systems.34,35 Also, In2Se3 has been employed as a buffer layer in devising CIS QD sensitized solar cells.36 In the present study, the effort is to grow an indium selenide (In2Se3) passivating layer over the CIS core, which not only acts as a surface passivating layer, but also results in a type-II band offset, which can confine the holes in the core and the electrons in the outer layer³⁷ (Scheme 1). The resulting charge

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[†] Electronic supplementary information (ESI) available. See DOI: 10.1039/c8ra07389a

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Investigation of structural, optical and electrical properties of transition metal oxide semiconductor CdO—ZnO nanocomposite and its effective role in the removal of water contaminants



M. Mahendiran^{a,b}, J.J. Mathen^c, Mohamed Racik^{a,b}, J. Madhavan^a, M. Victor Antony Raj^{a,b,*}

- ^a Department of Physics, Loyola College, Chennai, India
- ^b Loyola Institute of Frontier Energy (LIFE), Loyola College, Chennai, India
- ^c Department of Physics, St. Thomas College, Palai, Kerala, India

ARTICLE INFO

Keywords: Cadmium oxide Zinc oxide Electron beam diffraction Williamson-Hall method and photocatalytic activity

ABSTRACT

In this technological era as the usage and development of technology is on the rise we encounter serious repercussions of pollution in both drinking and daily usage of water. Nanocomposite of Cadmium Oxide and Zinc Oxide (CdO–ZnO) has the property of alienating the pollutants from the water. A conventional hydrothermal method was adapted for the preparation of nanocomposite of CdO–ZnO from their respective metal acetate dihydrates and NaOH. Structural and morphological analysis by electron beam diffraction technique reveals the formation of unique nanorod with spherical morphology of the synthesized particle. Williamson-Hall method was used to find the crystallite size and the lattice strain. Fourier transforms infrared (FTIR) spectroscopy further confirmed the stretching and vibration of chemical bonds of the materials. The study of electronic transitions within the material was portrayed with UV–Vis absorption spectrum and the obtained energy gap is 3.99 eV. A thorough investigation of temperature dependent electrical properties of CdO–ZnO nanocomposite was carried out in the frequency range from 50 Hz to 5 MHz. Studies revealed that the composite material is responsible for higher photocatalytic performance under the irradiation of UV photon. The high photocatalytic activity was originated from superoxide O_2^- radicals due to the efficient trapping of photogenerated electrons in CdO by ZnO.

1. Introduction

In the economic growth of a country, industrial development plays an indispensable role. The incessant growth of human population with its increased needs promote many industrial evolutions. Food processing and textiles printing industries are widely exploit the nature by releasing contaminants like dyes and pigments. These pollutants cause threats to the human living environment in the recent past. The effect of these contaminants, especially on the water resources has been adverse in the recent years. Adapting innovative nanotechnological methods over traditional processes offer considerate solutions for water treatment. The latest advances in nanotechnology for wastewater treatment includes nano-based materials, nanometals, nano adsorbents, nanomembranes and photocatalysts [1,2].

Photocatalysis has interested the scientific community, as one of the most promising solutions for the removal of residual dye pollutants from wastewater streams. The process involves a photochemical reaction at the transition metal semiconductor's surface which must have

two reactions occurring concurrently. The oxidation from photo-induced positive holes as the first reaction and reduction from photon-induced negative electrons as the second reaction [3,4]. Semi-conductors like TiO₂, ZnO, CeO₂ and SnO₂ lead an effective green technology, suitable for eliminate and destruction of organic pollutants from wastewater [5–12]. Among many available photocatalysts, Cadmium oxide (CdO) and zinc oxide (ZnO) possess excellent performance, due to its interesting property of wide direct band gap of 2.5eV and 3.37eV. By combining these materials to form composite of mixed properties pave a way for further improvements in this arena. Cadmium oxide-zinc oxide (CdO–ZnO) composite can be thus used as a potential candidate for photocatalytic applications [13].

In recent studies, CdO-ZnO nanocrystalline materials are considered one of the best, a versatile and favourable material with its many exciting properties and wide perspective in pollutant removal applications. Their wide range of applications is extended to photocatalytic activity, solar cell applications, phototransistors, diodes, transparent electrodes, sensors, etc, [14]. CdO and ZnO are

^{*} Corresponding author. Department of Physics, Loyola College, Chennai, India. E-mail address: vicvad2003@yahoo.co.in (M.V. Antony Raj).



St. Thomas College, Palai

ARUNAPURAM P.O., PALAI - 686 574, KERALA STATE, INDIA

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No. Gs V/tour/PL/01/2019

ARUNAPURAM 24/01/2019

To,

The Proctor

English and Foreign Language University, Hyderabad

Subject: Study Tour and Cultural Exchange Programme-reg.

Sir,

As part of the study tour, 15 Students and three Teachers of Post Graduate and Research Department of Hindi, St. Thomas College, Palai, would like to visit EFL University, Hyderabad on 31st January 2019 from 9.00am to 10.00am. Kindly permit them to visit and have a short programme there.

I request you to render them all possible help to make their visit informative and successful.

Thanking You,

MAS COLLEGE

Yours faithfully,

Principal

Copy To:

Dr. Shyamrao Rathod
Deputy Proctor,
Associated Professor and Head
Department of Hindi

EFL University, Hyderabad

Department of Hindi

St. Thomas College Palai

SI. No	Name	Gender	Age
1	Aagrathi Unnikrishnan	Female	22
2	Anjana Babu	Female	22
3	Annamma Joseph	Female	22
4	Athira K Sali	Female	23
5	Bhagyalakshmi M	Female	22
6	Darsana S	Female	25
7	Deepa Lonappan	Female	28
8	Keerthana M Nair	Female	21
9	Saumya Sara Mathew	Female	22
10	Sheetal A A	Female	22
11	Sneha Hari	Female	21
12	Sreelekha N	Female	21
13	Vyshnavi Mohan	Female	23
14	Blessan Raju	Male	21
15	Sajo Sabu Joseph	Male	24
16	Dr. Kochurani Joseph [Escort]	Female	43
17	Dr.Anish Cyriac [Escort]	Male	41
8	Justin Joseph[Escort]	Male	33



II MA Hindi Students at EFLU



Students Presenting Cultural programmes at ${\bf EFLU}$

On Farm VAM Production

On Farm VAM Production was conducted by Department of Vocational Education on 5th of October 2018 at South Kidangoor Krishibhavan. It was conducted under the scheme "Capacity Building Training for Farmers" of Department of Agricultural Development & Farmers welfare.

About 25 students and 28 farmers participated the programme. Resource person for the programme were Sri Baburaj G., Agriculture Officer, Kidangoor and Ms.Renu Mathew (Asst. Prof. Department of Vocational Education, St Thomas College Pala).



VAM is a rooting inducing mychorrhiza which can be cultured in the field itself. Farmers can produce it in the field by using vermiculite, sand and they are grown in sweet corn roots. A training was given under Capacity Building and students demonstrated it before the farmers. Teachers participated in the programme were Ms. Renu Mathew and Mr.M.S. Jayaprasad.

Organising Agency - Department of Vocational Education Collaborating Agency - Department of Agricultural Development & Farmers welfare

Name of the scheme – Capacity Building Training for Farmers No of students participated – 25

Target Group - Farmers, Kidangoor Krishi Bhavan

Name and Contact details of Collaberating Agency – A O Kidangoor.. Ph no. 9446021539

Resource person – Sri Baburaj G., Agriculture Officer, Kidangoor and Ms. Renu Mathew

(Asst Prof, St Thomas College Pala)

Name of Teachers participated – Ms. Renu Mathew and Mr.M.S. Jayaprasad About the activity: VAM is a rooting inducing mychorrhiza which can be cultured in the field itself. Farmers can produce it in the field by using vermiculite, sand and they are grown in sweet corn roots. A training was given under Capacity Building and students demonstrated it before the farmers.







Students at doing Demonstration of VAM Production

UBA VILLAGE SURVEY

As Part of Unnat Bharat Abhiyan (UBA) Baseline Household Survey, students of St. Thomas College, Pala, Conducted survey in eight villages in the premises of the college with the support of the Village Offices and the elected Ward Members.

All Students from the III and II D.C. English classes took part in the survey. They visited more than 800 households and collected data on many aspects of the life of the family members and their property, their needs and scope for development and uplift. The students were very active and sincere in the work assigned to them. Students took part in the first phase of the programme, i.e., collecting data and students worked for uploading the data in the Govt. Portal.

Dr. Ratheesh M was the Co-ordinator of the programme. The students were guided by the teachers of the respective Students said it was a good experience for them though it was tiring. They said they learnt many things from the programme.

The Programme was introduced by the IQAC of St. Thomas College, Pala. This was done as part of our social commitment and feeling of unity and adherence to basic human values.

Name of the scheme	Name of the Depart- ment	Collaborat- ing agency	Name of the activity	Number of teachers	Number of students participat ed	Duration	Duration of Uploading	No. of Houses Visited
UBA- Elackad Village	Economics	Govt. of India	Baseline Househol d survey	5	115	10.01.2019 to 17.01.2019	25.01.2019	404
UBA- Kidangoor Village	Political Science	Govt. of India	Baseline Househol d Survey	4	48	10.01.2019 to 17.01.2019	30.01.2019	502
UBA- Puliyanno or Village	English	Govt. of India	Baseline Househol d Survey	5	52	10.01.2019 to 17.01.2019	06.02.2019	661
UBA- Lalam Village	History and Malayalam	Govt. of India	Baseline Househol d Survey	8	104	10.01.2019 to 17.01.2019	12.02.2019	356
UBA- Vallichira Village	Commerce	Govt.of India	Baseline Househol d Survey	6	55	10.01.2019 to 17.01.2019	21.02.2019	546

2017-18

REGISTRATION FORM ICTAM - 2017

Name (in block letters)

Designation

Address for communication

Phone

E-mail

Title of research paper

Participant as Delegate/

Author/ Co-Author

Type of accommodation

Hostel / Hotel

Name of the Bank

Branch

DD. No

Place :

Date :

Signature

Deligetes are requested to send their registration fee as Demand Draft drawn in favour of "The Principal St. Thomas College Pala" payable at Pala, along with their abstract and registration form. (photocopy of this may also be used). Kindly make your request for accommodation before 4th September 2017.

ORGANIZING COMMITTEE

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H.E. Mar Joseph Kallarangattu Bishop of Palai

MANAGER

H.E. Mar Jacob Muricken Auxiliary Bishop of Palai

CHAIR PERSON

Dr. Joy George Principal, St. Thomas College, Palai

CONVENOR

Dr.Ratheesh M - Assistant Professor, Department of Biochemistry

ORGANISING SECRETARY

Ms. Svenia P. Jose

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Dr. P.G.Biju Dr. Jotiharindran

TECHNICAL COMMITTEE

Mr. Sangeeth Saji

Mr. Sony Rajan Mr. Jobin Joseph Mr. Sharon Mr. Krishnanand Mr. Augustine Joseph Mr. Joseph Roy

FOR CORRESPONDENCE

Department of Biochemistry St.Thomas College Palai Arunapuram P.O., pin:686574 Ph: 8281978453, 9495751779 Email: biochemistrystcp@gmail.com

Website: www.stcp.ac.in



International Conference On TRADITIONAL & ALTERNATIVE MEDICINE

(ICTAM - 2017)

ORGANIZED BY
DEPARTMENT OF BIOCHEMISTRY
ST. THOMAS COLLEGE, PALA

VENUE-LIBRARY HALL, ST. THOMAS COLLEGE, PALA 18th & 19th September 2017

SPONSORED BY







INVITATION

The theme of this medical conference is Traversing the Future of Alternative Medicine. This conference will mainly ocus on the latest and exciting innovations in every area of Alternative Medicine research, and it will offer a unique ppportunity for scientists from all over the world to meet, network, and perceive new scientific interactions. ICTAM-2017 aims to gather leading educational scientists, researchers and research students to exchange & share heir experiences and research results about all aspects of Natural and Alternative Medicine.

At ICTAM-2017, a variety of special areas will be covered luring the 2 day meet including herbal therapy, Ayurvedic, tomeopathy, ethno pharmacology and many more exciting areas. I would like each one of you to make use of the great opportunity to learn and collaborate with others which will nighlight and exchange new insights of traditional therapies hat will be rewarding to the mankind as a whole.

CONFERENCE HIGHLIGHTS:

- **Evolution of Alternative Medicine**
- **Herbal Medicine & Plant Remedies**
- Coconut & its Value added Products **Current Research in Alternative Medicine**
- Holistic Approach of Alternative Medicine Ayurvedic & Homeopathy
- Physical Therapies and Natural Remedies
- Pharmacognosy & Biological Product Development Conservation & Sustainable Utility of Medicinal Plants

Biochemie Cordially Invites You....

St. Thomas College, Palai, founded in 1950 has to its credit nore than 60 years of distinguished, service in the field of nigher education in the state of Kerala sending out many graduate maxima cum laude to carve out their destinies in liverse spheres. The college has been recognized by the re-accredited with A grade.

Department of Biochemistry, founded in 1976 has grown trength over the years. The relatively small size of our lepartment provides an atmosphere of collegiality and eccessibility. At the same time, close contacts and collaborations with other strong institutions in India and broad, provide a breadth of expertise and experience of which we take full advantage. Research group in the lepartment addresses structure of biological nacromolecules, the mechanisms by which they function and the possible applications to research technology and

SPEAKERS

PLENARY SESSION

Dr. Muhammed Majeed

Founder & MD (Sami Labs Ltd)

KEYNOTE ADDRESS

- 1.Dr. Samson Mathews Samuel
- (Weill-Cornell Medicine Qatar Cornell University)
- 2. Dr. K. Radhakrishnan, Chief Executive Officer (IC), (SMPB, Kerala)
- 3. Dr. S. Sasidharan, Universiti Sains, Malaysia

INVITED TALKS

- 1. Dr. Anirban Sukul
- (Hony Physician, Ministry of Public Health, Govt of Thailand)
- 2. Dr. D. Suresh Kumar
 - (Head, Product Development, Cymbio Pharma Pvt, Ltd.)
- 3. Dr. Ronnie Moore (University College Dublin, Ireland)
- 4. Dr. Saji Francis (American Board of Internal Medicine)
- 5. Dr. Alex Hankey (USA)
- 6. Dr. P.G. Biju (Dept. of Biochemistry, Kerala University)
- 7. Dr. S. Sandya (IISC, Bangalore, Karnataka)
- 8. Dr. Cibin T.R.
 - (University of Colorado School of Medicine, USA)
- 9. Dr. Vibin M. (South Dakota State University, USA)
- 10. Dr. Rajmohan V. (Govt. Ayurveda College, Trivandrum)
- 11. Dr. K. Jagannathan

(Vice Principal, Santhigiri Siddha Medical College)

PROGRAMME SCHEDULE

DAY 1

08:30 am

:Registration

09:30 am 11:00 am - 04:30 pm :Inaugural Ceremony

02:00 pm - 05:00 pm :Oral Presentation(Venue-2)

:Invited Talks

04:30 pm - 05:30 pm :Poster Presentation

DAY 2

09:30 am - 05:00 pm :Invited Talks

09:30 am - 05:00 pm : Oral Presentation (Venue-2)

CALL FOR PAPERS

Authors are invited to send the soft copy of the abstract of their research work not exceeding 250 words in MS-word format. Soft copy should be sent to biochemistrystcp@gmail.com. The abstract should have title, authors name and affiliations', full address for corresponding including fax, phone no/mobile and email.

Selected papers will be peer reviewed by international experts before publication and it published in Inter disciplinary research journal "STARS" (ISSN0973-7804)

POSTER PRESENTATION

should be in poster (Length x Breadth)in size. It should be organized into introduction, materials & methods, results, discussion references. The matter should be brief illustrations, graphs and photographs should with be printed

REGISTRATION FEES

	FACULTY	STUDENTS
PARTICIPATION	Rs. 1000/-	Rs. 500/-
ORAL/POSTER PRESENTATION	Rs. 1500/-	Rs. 600/-

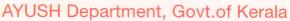
IMPORTANT DATES

Last date for abstract submission: : 25th August,2017 Notification of abstract acceptance: 30th August, 2017 Last date for registration : 3rd September, 2017

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SMPB/KL/20/2017/P-IEC - 1

Dt. 12/10/2017

The Principal St. Thomas College, Pala, Kottayam

Sir,

Sub: - Project proposal for International conference on Traditional and Alternative Medicine (ICTAM-2017)- sanction order-- reg.

Ref: -1) Project proposal submitted to the State Medicinal Plants Board.

2) Decision of the State Level Screening committee meeting dated 10/08/2017.

Kind attention is invited to the subject and reference cited above. I am to inform that the project proposal submitted by your institution has been approved by the State Level Screening Committee and sanctioned for an amount of Rs.50, 000/-(Rupees Fifty thousand only). You are requested to take up follow up action for the successful conduction of the workshop.

Your project No. is SMPB/KL/20/2017/P- IEC - 1. Please quote the Project No. for all future correspondence

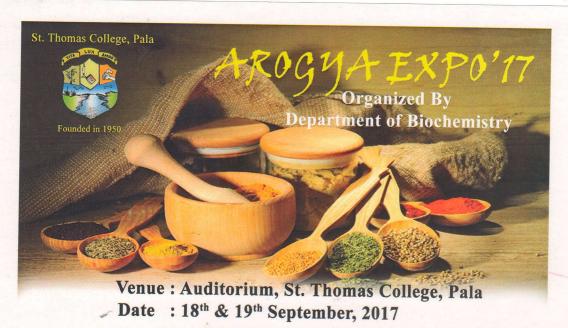
You are requested to submit the following documents to this office on or before 30/10/2017 for releasing the grant-in-aid.

- 1. A bond in the prescribed format in stamp paper worth Rs.50-(Format enclosed)
- 2. A stamped pre-receipt for Rs.50,000/- (Rs.1/- revenue stamp affixed)
- 3. A certificate stating that Institution/Organization is not involved in any proceeding relating to the account or conduct for any of its office bearers.
- 4. An undertaking that the terms and conditions of the grant are acceptable to the organization.
- 5. A certificate stating that the organization has not received any grant from State or Central govt. for the same proposal. (If your organization is receiving fund from other govt. institution, the details may please be furnish to this office.)

Yours faithfully

Chief Executive Officer. (1)

Copy to: Dr. Ratheesh M. Associate Prof. St. Thomas College, Pala, Kottayam for Information.



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PROGRAMMES

- •Medicinal Plant Exhibition
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- •Exhibition of Ayurveda Ashtangas
- ·Siddha Expo on 'Maruthvam'
- •Exhibition on Homeopathic Practice
- •Exhibition on Unani practice
- Anatomy Exhibition
- •Exhibition cum Sale of Ayurvedic & Natural Products

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- •Sports Medicine •Pediatrics
- •Ano Rectal Treatment
- •Toxin Treatment
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For Correspondence : Dr. Ratheesh M, Ph: 8281978453, 9495751779

A three-day Science Academies' Lecture Workshop

on

'Recent Advances in Chemical Sciences'

A three-day Science Academies' Lecture Workshop on 'Recent Advances in Chemical Sciences', sponsored by Indian Academy of Sciences, Bangalore; Indian National Science Academy, New Delhi and the National Academy of Sciences India, Allahabad, was organised by the Department of Chemistry, St. Thomas College, Pala, Kottayam District, Kerala at St. Thomas College, Pala during 13-15 June 2017. Dr. K. R. Gopidas, Fellow of the Indian Academy of Sciences, Bangalore and Chief Scientist, Chemical Sciences and Technology Division, National Institute for Interdisciplinary Science and Technology (NIIST- CSIR), Thiruvananthapuram was the Convener of the Lecture Workshop. Dr. G.D. Gem Mathew, Associate Professor, Department of Chemistry, St. Thomas College, Pala was the Coordinator.



Resource Persons

The following six nationally reputed professors/scientists in Chemistry were the resource persons:

1.	Prof. (Dr.) Uday Maitra	Dept. of Organic Chemistry
		IISc, Bangalore
2.	Prof. (Dr.) R.B. Sunoj	Dept. of Chemistry

		IIT Bombay
3.	(Dr.) Aninda J. Bhattacharyya	Solid State and Structural Chemistry Unit
		IISc, Bangalore
4.	Dr. Subi Jacob George	New Chemistry Unit
		JNCASR, Bangalore
5.	Dr. Joshy Joseph	Photoscienes & Photonics,
		NIIST (CSIR), Trivandrum
6.	Dr. Kana M. Sureshan	School of Chemistry
		IISER Thiruvananthapuram

INTERNATIONAL SEMINAR

2018 FEBRUARY 1,2,3



VISION EXPERIENCE NARRATION

NEW TRENDS IN LITERARY DISCOURSES

Organized by



PG and Research Department of Malayalam St. Thomas College, Pala, Kerala, INDIA

In Collaboration with



Kerala Lalithakala Akademi Thrissur, Kerala, INDIA

Second Announcement

Sir/Madam,

P. G and Research Department of Malayalam, St. Thomas College Pala in association with Kerala Lalithakala Akademi is conducting a three day international seminar from 1 to 3 February 2018. The Seminar probes into the paradigm shifts in art and literature across the globe. The literary horizons keep on expanding. This seminar incorporates scholarly talks and discussions that delver deep into the subtleties of these evolving trends. We cordially invite you to this seminar.

Dr. Joy George Principal St. Thomas College Palai Dr. Davis Xavier HOD, Malayalam St. Thomas College Palai Dr. Thomas Scaria Coordinator St. Thomas College Palai

Conveners	Accommodation	Registration	Organising Committee
Prince Mon Jose	Dr. Suvarnani Devi E	Soumya Jose	Dr. Sabu De Mathew
Fr. Salvin K Thomas	Mini Mariya	Tony Joseph	Sojan Pullattu
Athira K R	Afina Mary	Sreekutty Thankappan	Siju Joseph

Last Date for Submission of Full Paper: 2018 January 5

For Copies of proceedings Please Contact: 9497664363, 8547298464

International seminar on

"Vision Experience, Narration: New Trends in Literary Discourse" on 1 to 3 February 2018

Malayalam Department of St Thomas college Palai conducted an international seminar in collaboration with Kerala Lalitakala Academy from 1st February to 5 on the topic "Vision Experience, Narration: New Trends in Literary Discourse". Mar Joseph Pallickaparambil inaugurated the seminar on February 1st at the library hall. The famous Critic Dr.C.B Sudhakaran Manonmaniyam, University research guide Dr Prameela Mahesh, Literary Critic Prof A.P Sasidharan, College Principal Dr.Joy George, Vice Principal Rev.Dr.James John Mangalath, Bursar Fr.Mathew Kavanadi are among those who spoke. On January 15th there was a preseminar talk by Norbert Wessel on the topic "German Culture and Literature". As part of the seminar Fr.Sebastian translated Wessel's speech for the participants. As many as 200 academics across the world presented their paper in the seminar. The Dean of Faculty of Theology and Religion studies leuven Belgium, Prof Mathijis Lamberights delivered the key note address on the topic "The Struggle with a Changing World: Augustine's Autobiography". The valedictory session was inaugurated by the renowned short story writer and novelist N.S Madhavan. Rev. Thomas vadakkel lecturer Pourasthya Vidhyapitam Vadavathoor (Greco-Roman Literature in coopus paulinum), Dr.K.K Sivadas from Kannur university(post humanism in short story) and Dr.R V M Divakaran from Calicut university(Emogi Studies) delivered their talks. Department arranged a special video conference session for university professors in which shared their thoughts effectively.



Dr. Thomas Scaria co-ordinated the international seminar. Kerala Lalithakala Academy organized a painting workshop *Chithrachaithram*. The faculty members of the Fine Arts Colleges of the Kerala participated in it and they conducted a painting exhibition. The art fest *sargasara* by the students from the department of malayalam add more colour to the seminar.

Three - day training on

'Data Analysis using R'

on

18-20 September 2017

A Three – day training on 'Data Analysis using R' was organized in collaboration with CMC, Vellore during 18-20 September 2017. The Resource persons are: Dr. L Jayaseelan, Dr. Tunny Sebastian and Ms. Thenmozhi, CMC, Vellore. Total number of participants was 34. Dr. Joy George, Principal, inaugurated the ceremony.

Two - Day Training Programme on

'Advanced SAS'

Two Day Training Programme on 'Advanced SAS' in collaboration with CMC, Vellore held in November 2017 and the resource persons were Ms. Thenmozhi and Mrs. Ambily Nadaraj. Total number of participants was 67. Dr. Joy George, Principal, inaugurated the workshop and Dr K K Jose delivered the presidential address.

Ms. Thenmoshi and Mrs. A.	And a few of the last of the l	The state of the s
No Name of the participant	Class	Sugratu
S. Prima	I Msc Biostatistics	8 Am
Soump Thomas))	Joury.
3 Ann Elizabeth Thomas	I MS C Biostatistics	Am
4. Dinga Kuttenchalit Andrews	1 MSC. STATISTICS	Divip
5 Votraistine James	II M. sc stabstics	Khital
Ankuha Tom.	I MSC. STATISTICS	the file
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ST.THOMAS COLLEGE, PALA

College with Potential for Excellence - UGC (2010 and 2015)
Re-accredited with A Grade by NAAC (2015)



Newsletter

. XX No.1 June 2018

Principal's Message Aspiring to be the Best



The academic year 2017-18 was eventful for our college in both academic and co-/extra curricular aspects. The close rapport built up among the stake-holders of this mighty institution of higher learning in central Kerala, which enjoys an enviable track record in academic and allied accomplishments, has enabled us to scale new heights and plunge into more luminous depths of intellectual enterprise. From the treasure-troves of academic sedulity our adept philomaths could unearth bona fide prizes of scholarship.

As we all are patently aware, academic pursuit, the earnest search for knowledge, is shared metier where frontiers are pushed back. In the St. Thomas College family we always uphold the primacy of developing a close rapport between the mentors and the mentees, i.e. our teachers and our students. The responsibilities we took over and our achievements for the year were exciting, remarkable and indeed challenging. Thanks to the dedicated work of our Principal Dr. Joy George and the faculty, St. Thomas community was able to scale the towering heights of success in academic and co-curricular activities.

Last year our college organised a number of international / national conferences and symposia on recent developments in humanities, science and technology. Quite a few research papers in international / national journals have been published by our faculty members and research scholars. Also, papers were presented and invited lectures delivered by our teachers at seminars / workshops at universities, national institutes and other colleges within and outside the state. Three of our teachers were awarded Ph.D. last year.

In the domain of socio-cultural activities our departments organised intercollegiate fests, contests and other programmes. In sports, in the year 2017-18, our teams stood first in several tournaments and championships. Some of our sports persons won medals in championships at national level. A number of events such as intercollegiate and zonal tournaments, championships, camps etc. were organised by our Physical Education Department.

In M. G. University, at PG and UG levels, a good number of our students won top positions. This year we had a substantial number of publications from the campus. There were literary journals, books including textbooks etc. edited / authored by our faculty members. In the co-curricular and extra curricular fields our excellence was attested by the activities of various departmental associations, the NCC, the NSS, the College Union, the RACS Cell, the Faculty of Religion, the PTA, the Alumni Association etc.

The academic year has had its list of losses too. Eight of our eminent teachers and four non-teaching staff members retired from service. I remember their meritorious service with a deep sense of gratitude. Six retired teachers and a former non-teaching staff member were called to eternal rest this year. I pray for the repose of the departed souls.

I assumed the office of Principal on April 1, 2018. Our new Vice-Principal Dr. Sunny Kuriakose also took charge on the same day. I whole heartedly thank Dr. Joy George, our distinguished Principal during 2017-18 for all his support and positive encouragement. I take this opportunity also to thank all the teaching and non-teaching staff members of our college for their unstinting support extended to me during my stint as Vice-Principal of the College. I now request your undivided support and prayers as I take on the new responsibility.

I thank Almighty God for all His blessings and guidance. I remember all my colleagues and students and say a prayer of grateful thanks. I also thank our Patron H.E. Mar Joseph Kallarangatt and our Manager H.E. Mar Jacob Muricken for their paternal support and encouragement.

Rev. Dr. James John Mangalathu

67th Foundation Day Celebrated

St. Thomas College, the sparkling diamond in the crown of the Diocese of Palai, was founded by H. E. Bishop Mar Sebastian Vayalil on 16 April 1950 and inaugurated on 7 August 1950. Very Rev. Msgr. Emmanuel Mecherikunnel, Rev. Fr. Jacob Thazhathel, Sri. George Thomas Kottukapally, Sri. Cherian J. Kappen, Sri. R. V. Thomas, Sri. K. M. Chandy and others joined hands with the bishop in realizing this long cherished dream. The College has emerged as a leading centre of higher education moulding the lives of thousands of students with an agrarian rural background in the central part of Kerala. The College, which entered the new millennium under the patronage of H. E. Bishop Mar Joseph Pallikaparampil, is now administered by the able hands of H. E. Bishop Mar Joseph Kallarangatt (Patron), H. E. Bishop Mar Jacob Muricken (Manager), Very Rev. Dr. K. M. Joseph Kollamparampil (Pro-Manager) and Dr. Joy George (Principal).



Dr. Babu Sebastian, Hon'ble Vice Chancellor, inaugurates the 67th Foundation Day celebrations

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SEMINARS, CONFERENCES, WORKSHOPS AND LECTURES

International Conference on Recent Advances in Statistical Methodology



Dr. Barry D. Nussbaum, President of American Statistical Association, inaugurates the International Conference

An International Conference on Recent Advances in Statistical Methodology with Applications in Clinical and Official Satistics was organized by the Department of Statistics in collaboration with the Department of Mathematics and Statistics, University of Maryland, Baltimore County, USA and the Department of Biostatistics, Christian Medical College, Vellore, India during 3-5 January 2018. The sponsors of the conference were the Department of Science and Technology, Government of India; the Ministry of Statistics and Programme Implementation (MoSPI), Government of India and the Kerala State Council for Science, Technology and Environment, Govt. of Kerala. The two main themes of the conference were clinical statistics and official statistics. The Conference was attended by about 130 delegates, of which more than 20 were from abroad. There were plenary talks, invited talks and contributory presentations.

The Conference was inaugurated by Dr. Barry D. Nussbaum, President of American Statistical Association, at a glittering function in which eminent statisticians Prof. B. K. Sinha (University of Maryland) and Prof. John M. Lachin (George Washington University) addressed the gathering. Dr. Barry D. Nussbaum cited two eye-opening examples when American Statistical Association came up with appropriate statistical methods to deal with two very serious problems faced by the American Government and earned immediate recognition. Dr Thomas Mathew (University of Maryland), Dr. Ionut Bebu (George Washington University), Dr. K.Krishnamoorthy (University of



A view of the distinguished delegates who attended the inaugural function



Speakers at the International Conference



Dr. Barry D. Nussbam President, American Statistical Association University of Maryland, USA



Prof. B. K. Sinha



Prof. John M. Lachin George Washington University, USA



Dr. Thomas Mathew University of Maryland, USA



Dr. Sunitha Bhaskar Deputy Director, MoSPI, Govt. of India

Louisiana), Dr Suchindran C.M. (University of North Carolina) and Dr. Viswanath Iyer (Novartis Healthcare, India) were the key speakers on clinical statistics. Sessions on official statistics were mainly handled by officials from MoSPI. Dr. James Mathew, Deputy Director General, and Dr. Sunitha Bhaskar, Deputy Director from the Ministry of Statistics and Programme Implementation were the prominent speakers on official statistics.

The important topics discussed under clinical statistics were Challenges in the new era of personalized medicine, Cost-effective screening schedules for disease progression analysis, Applications of data mining in cancer survival, Modelling of epidemic outbreak data, Multivariate reference regions in laboratory medicine, Modelling of Self-Reported and Proxy Responses in Medical Treatment, The Vision of the South Asian Cochrane Center, and Some new statistical methods for the analyses of medical data. Some of the topics discussed under official statistics were Data analyses under confidentiality protection, National monitoring framework on sustainable development goals, Role of civil registration and vital statistics in monitoring sustainable development goals, Revelations on the health indicators of Kerala from the 4th(2015-'16) National Family Health Survey and The role of statisticians in big data analyses.

Unlike other conferences being organized in academic institutions, this conference offered a unique opportunity for people from academic, industry and government sectors to sit together and discuss current statistical issues. There were three venues for par-

allel sessions and a total of twenty-four technical sessions were conducted. The support given by Christian Medical College, Vellore, is to be specially mentioned. The conference coincided with the 59th year of service of the Department of Statistics of the College. Dr. Sebastian George (Associate Professor, Department of Statistics) was the Chief Co-ordinator of the international conference.



Dr. Sebastian George **Chief Co-ordinator**



Participants of the International Conference

Exuberanza - International Seminar on New Trends in Literary Discourse



H.E. Mar Joseph Pallikaparampil inaugurates the international seminar

The Department of Malayalam organised an International Seminar on New Trends in Literary Discourse titled Exuberanza during 1 to 5 February 2018, in collaboration with the Kerala Lalithakala Academy, Thrissur. The seminar was intended to probe into the paradigm shifts in art and literature across the globe. The seminar incorporated scholarly talks and discussions that delved deep into the subtleties of the evolving trends in the literary horizons.

The international seminar was inaugurated by H. E. Mar Joseph Pallikaparampil, Bishop Emeritus of Palai, on 1 February 2018. Noted writer Sri. N. S. Madhavan and Dr. Babu Sebastian, Hon'ble Vice Chancellor, Mahatma Gandhi University, Kottayam were the chief guests at the inaugural function. Invited lectures were delivered by Prof. Dr. Mathijs Lamberigts, Dean of the Faculty of Theology and Religious Studies, K. U. Leuven, Belgium, on the topic 'The Struggle with a Changing World: Augustine's Autobiography'; Fr. Norbert Wessel, Emisdetten, Germany, on the topic 'Germany - the Land of Poets and Thinkers'; Rev. Dr. Thomas Vadakkel, Paurastya Vidyapitham, Vadavathoor, on the topic 'Greco - Roman Literature and Culture in



Participants of the painting biennale with the Principal and Malayalam faculty

the Corpus Paulinum', Dr. K. K. Sivadas, Kannur University, on the topic 'Posthumanism in Short Story', Dr. R. V. M. Divakaran, University of Calicut, on the topic 'Methods of Film Studies' and Fr. Sebastian Myladiath, Emsdetten, Germany. The plenary lectures were delivered by Prof. Dr. Ekaterini Tsalampouni, Aristotle University of Thessaloniki, Greece, on the topic 'Literature and Culture in the Context of Greece'; Prof. Dr. Idesbald Goodeeris, Katholike Universiteit Leuven, Belgium, on the topic 'Lierature and Culture in the European Context'; Fr. Joseph Karikulam, Pontificio Ateneo Regina Apostolorum, Rome, on the topic 'Indian Culture and History of the 16th Century' and by Fr. Manoj Francis, Katholieke Universitiet Leuven, Belgium, on the topic 'Literature and Ethics'. Paper presentations were conducted by Dr. Prameela Mahesh, Dr. Haskerali E. C., Dr. A. P. Sasidharan, Sri. Rajendran Edathumkara, Sri. Anup Antony, Dr. Sunil Jose, Sr. Ciby Kurian, Dr. Jose K. Manuel, Dr. Deepesh Karimpumkara and Dr. Binu M. Mathew.

Along with the international seminar, a painting biennale ti-

tled 'Chithrachaithram' was held during 1-3 February 2018. It was curated by the master artists Sri. Nemam Pushparaj, Sri. Ponniam Chandran, Sri. V. R. Santhosh and Sri. C. S. Jayaram. In addition, a cultural evening titled 'Sargasaras' was held on 2 February 2018. Dr. Thomas Scaria, Assistant Professor, Dept. of Malayalam, was the Chief Co-ordinator of the international seminar.



Dr. Thomas Scaria Chief Co-ordinator

International Conference on Traditional and Alternative Medicine (ICTAM-2017)



Padma Sri Dr. P. R. Krishnakumar inaugurates the international conference

The Department of Biochemistry organised an International Conference on Traditional and Alternative Medicine (ICTAM - 2017) on 18 and 19 September 2017. The theme of the international conference was 'To Traverse the Future of Alternative Medicine'. In the twoday meet of ICTAM- 2017, a variety of special areas were covered including Herbal therapy, Ayurveda, Homoeopathy, Ethno-pharmacology and many more exciting areas. The endeavour was inaugurated by Padma Sri Dr. P.R. Krishnakumar, Chancellor, Avinashalingam University, Coimbatore & Founder of AVP Research Foundation. In the plenary session, Dr. Muhammed Majeed, Founder & MD of Sami Labs Ltd. Bangalore & winner of Ellis Island Medal awarded by US Congress and Daniel Statesman Award 2010 from USA, felicitated and spoke about the scope of nutraceuticals and also about the vision of a research scientist and how a passionate entrepreneur takes on social and commercial expressions. Students, researchers and faculty members from various universities and colleges inside and outside India participated in the conference. Overall there were one keynote speaker, one plenary speaker, 13 invited speakers and 480 participants in the two-day conference. The keynote speaker was Dr. Samson Mathews Samuel from Weill-Cornell University, Qatar, who delivered a talk on 'Anti-angiogenic effects of metformin in 2-deoxyglucose treated microvascular endothelial cells: Role of thrombospondin-1' The plenary speaker was Dr. S.Sasidharan from Universiti Sains, Malaysia, who spoke about 'The green cancer prevention: An opportunity to expand the cost-effective medicinal plant-based therapeutics'. Dr. K. Radhakrishnan, Chief Executive Officer (IC), SMPB, Kerala, India, presented a paper on the topic 'Problems and prospects of traditional medicine with reference to Kerala state, India'. Other invited speakers from various parts of the world were Dr.



Dr. P.R. Krishnakumar delivers the inaugural address

Roonie Moore (University College, Dublin, Ireland), Dr. Anirban Sukul (Hon'y Physician, Ministry of Public Health, Govt of Thailand), Dr. D. Suresh Kumar (Head of Product Development, Cymbio Pharma Pvt. Ltd., Bangalore), Dr. P. G. Biju (Assistant Professor, Department of Biochemistry, Kerala University), Dr. Cibin T.R. (University of Colorada School of Medicine, USA), Dr. Rajmohan V. (Assistant Professor, Govt. Ayurveda College, Trivandrum), Dr. S. Sandhya (Scientist, Indian Institute of Science, Bangalore), Dr. K. Jagannathan

(Vice Principal, Santhigiri Siddha Medical College, Trivandrum), Dr. Vibin M. (South Dakota State University, USA), and Sri. Sree Kumar (Processing Engineer, CDB, Cochin) who talked about various aspects of health related problems and also about role of alternative medicine. Dr. Ratheesh M., Asst. Professor, Department of Biochemistry, was the Co-ordinator of the international conference.



Dr. Ratheesh M. Co-ordinator



National Science Academies' Lecture Workshop on 'Recent Advances in Chemical Sciences'



H. E. Mar Jacob Muricken inaugurates the lecture workshop

A three-day National Science Academies' Lecture Workshop on 'Recent Advances in Chemical Sciences', sponsored by Indian Academy of Sciences, Bangalore; Indian National Science Academy, New Delhi, and the National Academy of Sciences India, Allahabad, was organised by the Department of Chemistry, during 13-15 June 2017. Dr. K. R. Gopidas, Fellow of the Indian Academy of Sciences, Bangalore and Chief Scientist, Chemical Sciences and Technology Division, National Institute for Interdisciplinary Science and Technology (NIIST- CSIR), Thiruvananthapuram, was the Convener of the lecture workshop. Dr. G.D. Gem Mathew, Associate Professor, Department of Chemistry, St. Thomas College, Pala, was the Co-ordinator.



H. E. Mar Jacob Muricken presents a memento to Prof. (Dr.) I. Ibnusaud, Director, IIRBS, Mahatma Gandhi University

Resource Persons

The following six nationally reputed professors/scientists in chemistry were the resource persons:

1.	Prof. (Dr.) Uday Maitra	Dept. of Organic Chemistry, IISc, Bangalore
2.	Prof. (Dr.) R.B. Sunoj	Dept. of Chemistry, IIT, Bombay
3.	Dr. Aninda J. Bhattacharyya	Solid State and Structural Chemistry Unit, IISc, Bangalore
4.	Dr. Subi Jacob George	New Chemistry Unit, JNCASR, Bangalore
5.	Dr. Joshy Joseph	Photoscienes & Photonics, NIIST (CSIR), Trivandrum
6.	Dr. Kana M. Sureshan	School of Chemistry, IISER, Thiruvananthapuram



H. E. Mar Jacob Muricken presents a memento to Dr. K. R. Gopidas, Convener of the lecture workshop





Dr. K. R. Gopidas, Convener, presents mementos to the UGC-CSIR JRF awardees Mr. Jayakrishnan K. R. and Mr. Anish Babu

Inaugural Function

The Lecture Workshop was inaugurated on 13 June 2017 by H.E. Mar Jacob Muricken, Auxiliary Bishop of Palai and Manager of St. Thomas College, Pala. The Principal of the College, Dr. Joy George, presided over the function. Dr. K. R. Gopidas, Fellow of the Indian Academy of Sciences, Bangalore, and Chief Scientist, Chemical Sciences and Technology Division, National Institute for Interdisciplinary Science and Technology (NIIST-CSIR), Thiruvananthapuram, and Convener of the Lecture Workshop, delivered the introductory remarks. Dr. Aninda J. Bhattacharyya and Dr. Joshy Joseph. offered felicitations on the occasion. Dr. Sunny Kuriakose, Head, Department of Chemistry, welcomed the gathering and Dr. G.D. Gem Mathew, Co-ordinator, proposed the vote of thanks. Prof. (Dr.) I. Ibnusaud, Director of Institute for Intensive Research in Basic Sciences (IIRBS), Mahatma Gandhi University, Kottayam, who was recently elected as a Fellow of the National Academy of Science India (NASI), Allahabad, was felicitated on the occasion.

Technical Sessions

The programme schedule for the technical sessions was kept to without any change. On the first day of the Lecture Workshop, Dr. Aninda J. Bhattacharyya delivered two lectures on the topic 'Role of Electrochemistry for Conversion of Waste to Bioelectricity & Chemicals', while Dr. Joshy Joseph delivered lectures on the topics 'Introduction to Carbon-based Functional Nanomaterials' and 'Graphenebased Hybrid Materials for Bio-sensing Applications'. On the second day, Prof. (Dr.) Uday Maitra delivered two lecture-demos on the topic 'Learning Chemistry with Fun', while Prof. (Dr.) R.B. Sunoj delivered lectures on the topics 'Introduction to Computational Chemistry' and 'Learning Organic Chemistry using Molecular Orbital Theory'. On the third and final day, the first two lectures were delivered by Dr. Suby Jacob George on the topics 'Dynamic Supramolecular Polymers' and 'How Far We Can Push the Molecular Self-assembly?'. It was followed by two lectures by Dr. K.N. Sureshan on the topics 'Topochemical Reactions for Synthesis of Biopolymer Mimics' and 'Sugar-based Organogels: Synthesis and Applications'. The sessions were all well attended by faculty, research scholars and postgraduate students from various institutes and colleges in Kerala.

Participants

There were about 125 participants on all the three days of the Lecture Workshop. These included 50 participants from the host institution - Department of Chemistry, St. Thomas College, Pala- and





Dr. Aninda J. Bhattacharyya presents to the M. Sc. Chemistry toppers Ms. Renitta Benny and Ms. Christin Mariya Davis



Resource Persons of the Lecture Workshop



Prof. (Dr.) Uday Maitra, IISc, Bangalore



Prof. (Dr.) R. B. Sunoj, IIT Bombay



Dr. Aninda J. Bhattacharyya, IISc, Bangalore



Dr. Subi Jacob George, JNCASR, Bangalore



Dr. Joshy Joseph, NIIST (CSIR), Thiruvananthapuram



Dr. Kana M. Sureshan, IISER, Thiruvananthapuram

25 from Institute for Intensive Research in Basic Sciences (IIRBS), Mahatma Gandhi University. The other participants included teachers and research scholars from other institutes, colleges and higher secondary schools. The participants were of the opinion that topics of the lectures were up-to-date and very useful. They also suggested arranging follow-up programmes like refresher courses in the future.

Concluding Session

The concluding session was held in the evening of 15 June 2017. The chief guest was Dr. Joy George, Principal of the College.

He delivered the valedictory address and presented certificates to the participants. Dr. Sunny Kuriakose, Head of the Department of Chemistry, welcomed the gathering. Dr. K.R. Gopidas, Convener, offered concluding remarks. Dr. Subi Jacob George gave feedback on behalf of the resource persons and Ms. Aina Elizabeth Antony gave feedback on behalf of the participants. Dr. G. D. Gem Mathew, Dr. G.D. Gem Mathew Co-ordinator, proposed the vote of thanks.



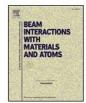
Co-ordinator

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Electron irradiation induced effects on the physico-chemical properties of L-Arginine Maleate Dihydrate (LAMD) single crystals



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Penn gap
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ABSTRACT

Single crystals of L-Arginine Maleate Dihydrate (LAMD) have been synthesized by slow solvent evaporation technique and irradiated with 6 MeV electrons at fluences of $0.5 \times 10^{15} e/cm^2$, $1.0 \times 10^{15} e/cm^2$ and $1.5 \times 10^{15} e/cm^2$. The Powder X-ray Diffraction (PXRD) studies showed that the intensity of the diffraction peaks of the Electron Beam (EB) irradiated crystals decreases with irradiation fluence. The electron irradiation induced effects on the optical parameters such as cut-off wavelength, band gap, Urbach energy and refractive index have been studied and the results are tabulated. The electronic parameters such as valence electron plasma energy, $\hbar \omega_p$, Penn gap, E_p , Fermi energy, E_F and Electronic polarizability, α for pure and irradiated LAMD crystals are calculated. The electrical and thermal properties of the pure and irradiated LAMD crystals are also investigated.

1. Introduction

Nonlinear optical materials based on amino acid complexes are intrigued by materials scientists due to high optical susceptibilities, ultrafast response, and high optical thresholds for lasers as compared with inorganic materials. The push-pull effect owing to proton donor carboxyl acid (-COO) group and the proton acceptor amino (-NH2) group is the countenance of amino acid complexes. The -COO group gives its proton to the amino group to form CH3CHCOONH3+ and thereby creates a dipolar nature. The donor and acceptor groups provide the ground state charge asymmetry of the molecule, which is essential for second-order nonlinearity [1-4]. The α-amino group and guanidyl group present in the LAMD structure are protonated and the C-N bond present in the guanidyl group is conjugated. The planar ring present in the LAMD structure is formed by sharing one hydrogen (H) atom between the oxygen (O) atoms in the carboxyl groups of the maleate anion. LAMD formed by the reaction of L-Arginine and Maleic acid belongs to the triclinic crystal system with cell parameters $a = 5.2710 \text{ Å}, b = 8.0481 \text{ Å}, c = 9.7942 \text{ Å}, \alpha = 106.155^{\circ}, \beta = 97.265^{\circ}$ and $\gamma = 101.649^{\circ}$ [5]. L-Arginine Maleate Dihydrate (LAMD) is one of the prominent crystals of 1-Arginine family having the SHG efficiency 1.5 times greater as compared to KDP crystals [6]. The nonlinear optical character of the LAMD is due to the intrinsic hyperpolarizabilities of the L-Argininium cations, Maleate anions and intermolecular hydrogen bonds [5]. The fundamental characterizations of LAMD have been already reported [6-11].

E-mail address: ginsonpj@gmail.com (G.P. Joseph).

Recently, materials scientists are fascinated by the electron irradiations on solid samples because of its capability of tailoring the desired properties by varying the dosage or energy of the electron bombardment. The hardening and softening of metals are possible by electron irradiation [12]. M. J. Makin, and T. H. Blewitt [13] have successfully hardened the copper (Cu) single crystal by 4 MeV EB irradiation. The bombarded electrons may be trapped in various lattice imperfections and cause permanent changes in the material [14]. Electron beam irradiation enhanced the glide dislocations in GaAs single crystals [15]. The reduction in the optical band gap of iminodiacetic acid doped ferroelectric triglycine sulphate (IDATGS) is also observed with graded dosages of electron beam [16]. The SHG efficiency of 4-amino-5-mercapto-3-[1-(4-isobutylphenyl)ethyl]-1,2,4-triazole (AMIT) single crystals increased with increasing the dosages of electron irradiation [17]. From the literature survey, we came to know that the optical band gap, photoluminescence, thermal and electrical properties of crystalline materials, nanoparticles and polymer electrolytes can be tuned by EB irradiation [18-27]. Hence in this paper, an attempt has been made to modify the electrical, thermal and optical properties of LAMD crystals using electron irradiation by varying the irradiation fluence.

^{*} Corresponding author.



Fabrication of Al deposited sandwich capacitor structure with CdSe/PVA dielectric thin film by spin coating technique for high power applications: synthesis and characterizations

Jobin Job Mathen¹ · Ajith Thomas² · Augustine J. Edakkara² · Jose Sebastian³ · J. Madhavan¹ · Ginson P. Joseph²

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Abstract The capacitor structures were fabricated in the configuration of Al : CdSe/PVA : Al with CdSe/PVA as an insulating dielectric layer for high power applications. The sandwiched layer gave an excellent energy density and a better dielectric strength that was obtained from the amalgamation of CdSe and poly (vinyl alcohol). For the detailed analysis of the interaction between CdSe and PVA, transparent CdSe/PVA composites were synthesized by ultra-sonication technique with micrometer thicknesses at different wt% of CdSe. The UV absorption edge of PVA matrix corresponds to $\pi \rightarrow \pi^*$ transition associated with ethylene unsaturation (C=C) was analysed and it was shifted towards higher wavelength with the CdSe incorporation. The sub-band states formation was evaluated, Urbach energy was increased up to ~835 meV, and an increase in structural defect was noticed by widening the tail state within the polymer matrix with the impurity addition. Optical parameters which include extinction coefficient (k) and index of refraction (n) have been determined. Three dielectric relaxations were pronounced as α , β and interfacial polarization and the high relative permittivity and the low values of dissipation factor indicated that the dielectric phenomenon was predominant in all membranes. Inspection of electrical conduction rate to temperatures was also investigated and the temperature coefficient of capacitance and temperature coefficient of permittivity were listed. Thermal stability could be enhanced with CdSe interaction and the variation in thermal parameters was discussed.

1 Introduction

Capacitors are important micro-electronic elements in electrical circuits, although they tend to be more bulkier than resistors, diodes and transistors, and having large energy density is the desired form in many power applications such as pulse-mode medical devices, electric guns, hybrid electronic vehicles, power grids and particle accelerates [1]. Due to the prerequisite of high capacitance and poor performance of electrical double layer capacitors at high frequencies, capacitors based on dielectrics are inevitable. In addition, the increasing energy density and volumetric efficiency of dielectric media are demanded for the high power applications.

For the power energy storage systems with high energy density have led to the development of polymer composite systems that combine the processability and breakdown field strength of the polymer with the high dielectric constant of ceramic fillers. Ferroelectric ceramics possess high dielectric constant but the low breakdown voltage limits their applications [2]. Ideally, the filler helps to increase the effective dielectric constant of the composite system without compromising the high inherent breakdown strength of polymers. Consequently, much research is being carried out for a better composite dielectrics. Lewis proposed that as the size of the filler particles decreases to the nano-region, the properties of the polymer-filler interface would become dominant [3, 4] and experimentally, this concept was explored by Sun et al. who studied the influence of the interface on the dielectric properties of

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Transparent ZnO-PVA binary composite for UV-A photo detector: optical, electrical and thermal properties followed by laser induced fluorescence

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Abstract A compatible high performance UV-A sensor has been developed using poly(vinyl alcohol) (PVA)/ZnO membrane on an ITO substrate. The current challenges on UV-A photo detector have been overcome with the optimized performance of the binary composition through combining the wide-range of UV-A light photo-response, high sensitivity and quick response. This paper presents the electrical and optical properties of ZnO/PVA nanocomposites. It deals with the experimental correlation between complex optical conductivity and complex dielectric function. The ZnO filler is addressed to the modification in the band-structure, thermal properties and molecular orbital electron density. The defect states formation and laser induced fluorescence of composites were also investigated for the first time.

1 Introduction

Recently, materials scientists are fascinated by II–VI semiconducting nanoparticles because of their unique electronic and optical properties [1, 2] in several applications such as solar cells [3], light emitting devices [4], IR windows [5], sensors and displays [6]. The integration of polymer membrane with superior properties and nano-inclusion offers

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new opportunities for designing next-generation electronic and optoelectronic devices. The interfacial interaction between the filler and the matrix results in a large improvement in the dielectric, optical and mechanical properties of composite systems dramatically since the composition greatly influences the functions of nano-hybrid materials [7-15]. Among the II-VI, ZnO nanoparticles find wide applications in electronic sensing devices including visible blind ultraviolet (UV) detectors [16], gas sensors [17], biosensors [18] and UV photo detectors [16, 19, 20]. ZnO nano-materials in particular, with a band gap of ~3.4 eV and an exciton binding energy of 60 meV, show great promise for UV sensors because of their relatively fast response and high on/off ratio [21-24]. However, the point defects, confirmed dimensionality and poor device performance hindered the further developments in making UV sensors. Zhang et al. [23] fabricated a ZnO tetrapod based multiterminal sensor by E-beam lithography which followed a false response that holds back the practical application of the devices.

In UV radiation (200–400 nm) emitted by the sun, most of UV-C (200–290 nm) light and UV-B (290–320 nm) light can be absorbed by the molecules in sunscreen lotions and the earth's atmosphere respectively. The UV-A (320–400 nm) light reaches the earth's surface leading to skin cancer [25]. Although a large variety of UV detectors have been fabricated and studied, limited investigations on UV-A photo detectors have been done. The direct band gap II–VI semiconductors are the most important materials for UV-A photo detectors [26–29], nevertheless a slow response speed and poor photo current stability [27] limit further developments. The shortcomings of the II–VI semiconductors can be overcome when the ZnO is uniformly dispersed in PVA. Due to the attractive physical properties, elegant film forming, biocompatibility and





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Electron irradiation induced effects on the physico-chemical properties of L-Arginine Maleate Dihydrate (LAMD) single crystals



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ARTICLE INFO

Keywords: Single crystal Electron beam irradiation Urbach energy Dielectric study Penn gap Electronic polarizability

ABSTRACT

Single crystals of L-Arginine Maleate Dihydrate (LAMD) have been synthesized by slow solvent evaporation technique and irradiated with 6 MeV electrons at fluences of $0.5 \times 10^{15} \mathrm{e/cm^2}$, $1.0 \times 10^{15} \mathrm{e/cm^2}$ and $1.5 \times 10^{15} \mathrm{e/cm^2}$. The Powder X-ray Diffraction (PXRD) studies showed that the intensity of the diffraction peaks of the Electron Beam (EB) irradiated crystals decreases with irradiation fluence. The electron irradiation induced effects on the optical parameters such as cut-off wavelength, band gap, Urbach energy and refractive index have been studied and the results are tabulated. The electronic parameters such as valence electron plasma energy, $\hbar\omega_p$, Penn gap, E_p , Fermi energy, E_F and Electronic polarizability, α for pure and irradiated LAMD crystals are calculated. The electrical and thermal properties of the pure and irradiated LAMD crystals are also investigated.

1. Introduction

Nonlinear optical materials based on amino acid complexes are intrigued by materials scientists due to high optical susceptibilities, ultrafast response, and high optical thresholds for lasers as compared with inorganic materials. The push-pull effect owing to proton donor carboxyl acid (-COO) group and the proton acceptor amino (-NH2) group is the countenance of amino acid complexes. The -COO group gives its proton to the amino group to form CH3CHCOONH3+ and thereby creates a dipolar nature. The donor and acceptor groups provide the ground state charge asymmetry of the molecule, which is essential for second-order nonlinearity [1-4]. The α -amino group and guanidyl group present in the LAMD structure are protonated and the C-N bond present in the guanidyl group is conjugated. The planar ring present in the LAMD structure is formed by sharing one hydrogen (H) atom between the oxygen (O) atoms in the carboxyl groups of the maleate anion. LAMD formed by the reaction of L-Arginine and Maleic acid belongs to the triclinic crystal system with cell parameters a = 5.2710 Å, b = 8.0481 Å, c = 9.7942 Å, α = 106.155°, β = 97.265° and $\gamma = 101.649^{\circ}$ [5]. L-Arginine Maleate Dihydrate (LAMD) is one of the prominent crystals of L-Arginine family having the SHG efficiency 1.5 times greater as compared to KDP crystals [6]. The nonlinear optical character of the LAMD is due to the intrinsic hyperpolarizabilities of the L-Argininium cations, Maleate anions and intermolecular hydrogen bonds [5]. The fundamental characterizations of LAMD have been already reported [6-11].

Recently, materials scientists are fascinated by the electron irradiations on solid samples because of its capability of tailoring the desired properties by varying the dosage or energy of the electron bombardment. The hardening and softening of metals are possible by electron irradiation [12]. M. J. Makin, and T. H. Blewitt [13] have successfully hardened the copper (Cu) single crystal by 4 MeV EB irradiation. The bombarded electrons may be trapped in various lattice imperfections and cause permanent changes in the material [14]. Electron beam irradiation enhanced the glide dislocations in GaAs single crystals [15]. The reduction in the optical band gap of iminodiacetic acid doped ferroelectric triglycine sulphate (IDATGS) is also observed with graded dosages of electron beam [16]. The SHG efficiency of 4-amino-5-mercapto-3-[1-(4-isobutylphenyl)ethyl]-1,2,4-triazole (AMIT) single crystals increased with increasing the dosages of electron irradiation [17]. From the literature survey, we came to know that the optical band gap, photoluminescence, thermal and electrical properties of crystalline materials, nanoparticles and polymer electrolytes can be tuned by EB irradiation [18-27]. Hence in this paper, an attempt has been made to modify the electrical, thermal and optical properties of LAMD crystals using electron irradiation by varying the irradiation fluence.

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Modification of the electrical, optical and thermal properties of L-Arginine Perchlorate single crystals by 5 kGy and 8 kGy electron beam irradiation for optoelectronic devices



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ABSTRACT

This paper attempts to elucidate the effect of 5 kGy and 8 kGy electron irradiation on the optical, thermal and electrical properties of a prominent amino acid crystal, L-Arginine Perchlorate (LAPCI) grown by low-temperature solution growth technique. Optical absorption studies revealed that the UV lower cut-off wavelength shift towards the higher wavelength region (Red shift), the optical band gap of LAPCI were found to be decreasing while the Urbach energy was found to be increasing with increasing the dosage of irradiation. Fourier Transform Infrared (FT-IR) spectroscopic result showed that peak intensities corresponding to typical bonding increase with the increase in electron beam irradiation dosage. Electrical studies revealed that the dielectric constant, loss and conductivity of the sample increases with increasing the dosage of irradiation. The behaviour of electrical properties on temperature and thermal properties has also been investigated.

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1. Introduction

In this era of information and communication technology, scientists are very much attracted towards the developments in nonlinear optical (NLO) materials due to its potential applications in the field of optical modulation, optical switching, frequency shifting and optical data storage [1,2]. Among the NLO crystals, amino acid family crystals much-attracted crystal growers since these crystals have the advantages of high optical nonlinearity of organics and flattering physico-chemical properties of inorganic solids. The chiral carbon atom, the proton donor carboxyl group (-COOH) and the proton acceptor amino group (NH₂) present in the amino acid family crystals aids them to crystallize in noncentrosymmetric space group and makes them suitable for NLO applications [2]. Semi organic amino acid complex single crystals possess enhanced physico-chemical properties compared to the amino acid single crystals in its pristine form. 1-Arginine

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Perchlorate (LAPCI) is a prominent semi organic nonlinear optical crystal belongs to the LAP family, having all the above-mentioned properties. LAPCI crystallizes in the orthorhombic crystal system with noncentrosymmetric space group P2₁2₁2₁ [3,4]. The growth of large size single crystals of LAPCI and a few physical properties were studied and reported by Tapati Mallik and Tanusree Kar [5]. L-Arginine Phosphate (LAP) and its chemical analogues were firstly studied by Monaco et al. [6].

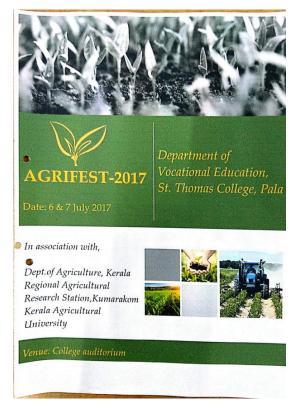
Physical properties of a solid material can be altered by irradiating it with electron beams of suitable energy [7]. Organic solids are sensitive to the energy deposited in their electronic system through irradiation. Electrons do not cause impurity production directly but they can cause impurity production indirectly through chemical bond breakage. These impurities in a crystal can alter its electrical and mechanical properties [8]. Previous studies show that electron beam with MeV range of energy can induce defects in crystals [9–11]. The shift of the optical absorption edge towards the longer wavelength region was observed in some semi organic crystals upon electron beam irradiation. The reduction in band gap and the changes in dielectric properties with graded dosages of electron beam were also observed in some semi organic single crystals [12,13].

Abbreviations: LAPCI, L-Arginine Perchlorate; NLO, Nonlinear Optics; UV-Vis, Ultraviolet Visible; FT-IR, Fourier Transform Infrared; TGA, Thermogravimetric Analysis; DSC, Differential Scanning Calorimetry.

^{*} Corresponding author.

Agri fest- 2017-18

Agri fest was conducted in St. Thomas College, Palai on 5th and 6th of July 2017. The fest was conducted under the scheme "Kissan Goshti" of Agriculture Technology Management Agency (ATMA) along with Department of Agriculture Development & Farmer's Welfare. Regional Agricultural Research Station (RARS) and Krishi Vigyan Kendra (KVK), Kumarakom under Kerala Agricultural University extended technical support to the fest.



Two hundred and fifty students participated in the fest. Resource persons were Dr. Vandana Venugopal, Scientist, R.A.R.S and Ms. Anitha, Asst. Director of Agriculture, District Soil Testing Laboratory, Kozha. Dr. Vandana Venugopal took class about Homestead vegetable cultivation and Ms. Anitha took class about soil sampling and testing.





Target group of the fest was farmers, students and teachers of the college and public. Sixty farmers and students of various vocational higher secondary schools were participated in the fest. The exhibition organised by B.Voc. (S.A.) students disseminated new agricultural methods and technologies to the farmers as well as to the public. The demonstration include integrated farming system model, terrariums, composting, integrated pest management methods etc. B.voc. (FPT) students sold cookies and cakes made by them to the public. The teachers participated in the fest were M.S.Jayaprasad, Dr. Lini L.Alappat, Renu Mathew, Roshan Joseph, Minu Abraham, Jinu T. Jose, Jovancy Mathew, Gisha T. Mathew, Arun P.M. and Jibin Joseph.







സെന്റ് തോമസ് കോളേജ്, പാലാ

കാർഷ്യകമേള -2017

പാലാ സെന്റ് തോമസ് കോളേജിൽ ജൂലൈ 6,7 തീയതിക ളിൽ കൃഷി വകുപ്പിന്റെയും വൊക്കേഷണൽ ഡിപ്പാർട്ടുമെന്റിന്റെയും ആഭിമുഖ്യത്തിൽ ഒരു കാർഷികമേള സംഘടിപ്പിക്കുന്നു. മേളയിൽ ജൈവകൃഷിയുടെ അനന്തസാധ്യതകളെക്കുറിച്ചും, നൂതന ജൈവ കൃഷിരീതികളെപ്പറ്റിയും സെമിനാറുകളും ക്ലാസുകളും ഉണ്ടായി രിക്കുന്നതാണ്. കൂടാതെ 3-ാം വർഷ അഗ്രീകൾച്ചർ വിദ്യാർത്ഥി കളുടെ നേതൃത്വത്തിൽ നൂതന കാർഷികവിദ്യകളുടെ ഒരു പ്രദർശ നവും, വിവിധ കാർഷിക ഉപാധികളായ ജൈവവളം, വിത്തുകൾ, തൈകൾ എന്നിവയുടെ വിൽപ്പനയും ഉണ്ടായിരിക്കുന്നതാണ്. കാർഷികമേയിൽ പങ്കെടുക്കുന്നതിന് ഏവരെയും സാദരം ക്ഷണിച്ചു കൊള്ളുന്നു.

പ്രദർശനം സൗജന്യം

സ്ഥലം : കോളേജ് ആഡിറ്റോറിയം

കാർഷിക മേള -2017

സ്ഥലം : സെന്റ് തോമസ് കോളേജ് പാലാ

തിയതി: 06-07-2017 (10:30 am)

കാര്യ പരിപാടികൾ

- ഈശ്വര പ്രാർത്ഥന
- സ്ഥാഗതം ജി ബാബു രാജ്

(അസിസ്റ്റന്റ് ഡയറക്ടർ ഓഫ് അഗ്രികളർ പാലാ)

• അധ്യക്ഷൻ - ഡോ ജോയ് ജോർജ്

പ്രിരുനിപ്പൽ സെന്റ് തോമസ് കോളേജ് പാലാ

• കാർഷിക മേള ഉദ്ഘാടനം ശ്രീമതി ജയലളിത എസ് പ്രോജക്റ്റ് ഡയറക്ടർ atma കോട്ടയം)

 ഫുഡ് & അഗ്രി അസോസിയേഷൻ ഉദ്ഘാടനം : റെവ ഡോ ജെയിംസ് ജോൺ മംഗലത്തു

(വൈസ് പ്രിൻസിപ്പൽ സെന്റ് തോമസ് കോളേജ് പാലാ)

- സ്റ്റാൾ ഉദ്ഘാടനം -റെവ ഫാദർ മാത്യു കുര്യൻ കാവനടിമലയിൽ ബ്രർസാർ സെന്റ് തോമസ് കോളേജ് പാലാ
- ആശംസ -ഡോ കെ കെ ജോസ്,

(മുൻ പ്രിൻസിപ്പൽ സെന്റ് തോമസ് കോളേജ് പാലാ)

ഡോ സണ്ണി ജോസഫ്

(മുൻ പ്രിൻസിപ്പൽ സെന്റ് തോമസ് കോളേജ് പാലാ) കെ ജെ ജോസ്, (അഗ്രി ഫീൽഡ് ഓഫീസർ, പാലാ)

• കൃതജ്ഞത - സ്റ്റെഫി മോനി മൈക്കിൾ , (втм , atma)

2016-17

ORIGINAL PAPER



Microton irradiation induced tuning of dielectric properties of nano ZnO-natural rubber disks

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Abstract The effect of electron beam irradiation of dielectric and conductivity properties of nano ZnO-natural rubber (NR) disks was investigated here. It is revealed that electric properties such as AC conductivity, dielectric constant, and loss tangent of the irradiated samples were improved significantly as compared to the non-irradiated samples, which have been associated with defects in the composites. The total number of dipoles was generated inside the polymer matrix upon irradiation depends on the dislocations formed inside the matrix. From the experiments, we observe that in the amorphous region electron beam irradiation fetches crosslinking and breakdown at the same time. The enhancement of the dielectric and conductivity properties demonstrates that nano ZnO-NR disks will be a promising candidate for the optoelectronic industry. Finally, we also examined the influences of temperature on the electrical conductivity of irradiated samples.

Keywords Nanocomposites · Electronic materials · Dielectrics · ZnO–NR disks · Electron beam irradiation

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Microtron Irradiation Induced Tuning of Band Gap and Photoresponse of Al-ZnO Thin Films Synthesized by mSILAR

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Al-doped polycrystalline nano ZnO (Al-ZnO) thin films with different doping concentrations were successfully prepared by the microwave-assisted successive ionic layer adsorption and reaction (mSILAR) technique. The structural analysis along with the orientation of the prepared films was examined by powder x-ray diffraction (PXRD) patterns. The deposited film is polycrystalline and the (002) orientation enhanced upon doping. Additional investigations were carried out to study the effect of electron beam irradiation (e⁻-irradiation) on the band gap and photoconductivity of both irradiated and unirradiated samples. Both the Al doping and e⁻-irradiation led to the enhancement of the photoconductivity of prepared materials. This property enables us to tune the properties of materials for various applications by controlling dopant concentrations and e⁻-irradiation. The dependence of photocurrent on e⁻-irradiation of Al-ZnO thin films was not reported previously. Therefore, Al-doped polycrystalline nano-ZnO thin film is a promising material for band gap engineering and for the development of solar cells.

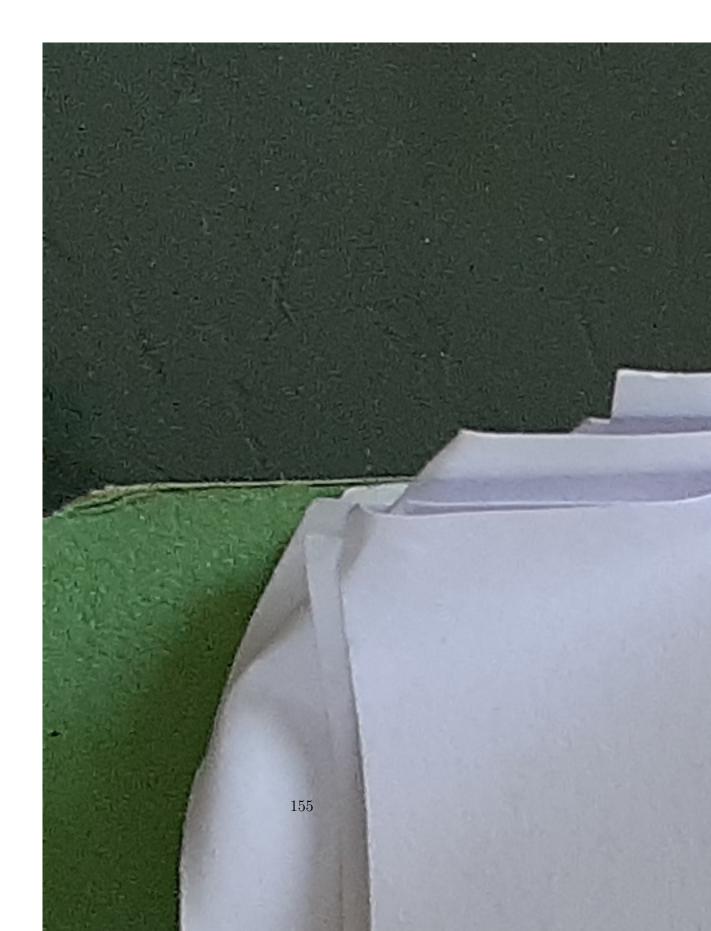
Key words: mSILAR, doping, photoconductivity, band gap, solar cell

INTRODUCTION

Zinc oxide (ZnO) is a technologically important material for photo-voltaic devices and an *n*-type buffer material in the solar cell because of its large band gap of 3.3 eV. It has been investigated over the last four decades because of its interesting optical, piezoelectric, and electrical properties. However, ZnO stability at high temperature and in a high radiation environment still needs to be well explored. The e⁻-irradiation on solid materials is known to produce changes in the microstructural properties of the material, which in turn affects the optical, electrical, and other physical properties of the same material. It is reported that

e⁻-irradiation can also alter different surface properties of ZnO thin films such as variation in diameter of nanowires and formation of bigger grains.^{3,4} Numerous efforts have been made to investigate the influence of e⁻-irradiation on various metal oxides and polymer thin film structures, in order to test their applicability as e-radiation dosimeters.⁵ Yun et al. suggested e⁻-irradiation as a tool to produce different structures on the surface of thin films, and hence modulated different properties of thin films.⁶ Nevertheless, a detailed study of photocurrent produced upon the e⁻-irradiation on metal oxide thin films needs to be more investigated.

The present investigation aims at synthesizing Al-doped polycrystalline nano-ZnO (Al-ZnO) thin films with different doping concentrations by microwave-assisted successive ionic layer adsorption reaction (mSILAR). The deposited metal oxide film



2015-16



ST.THOMAS COLLEGE, PALA COLLEGE WITH POTENTIAL FOR EXCELLENCE - UGC (2010 and 2015)



NEWSLETTE

Principal's Message **Making Dreams Come True**



My best wishes to all the colleagues, students, parents, friends, benefactors and well wishers of the college. As we all know, the academic year 2015-16 has been a highly productive one - academically and in the field of co-curricular activities and infrastructure development. Indeed, we are one of the best colleges in the state, nay in the country, and I think we should contemplate the factors that have contributed to this pride of place we enjoy. For a track record marked with successes I

thank all the members of our community who have upheld the lofty principles of our Founding Fathers. For the coming years I call on everyone in the St. Thomas community to work together to sustain an environment in which all of us are academically committed, intellectually free and politically wise so that the stakeholders as well as the community at large can speak glowingly of St. Thomas' importance in the academic scenario of the state.

We have a dream sports infrastructure project completed and inaugurated this year. On February 28, 2016 the Integrated Sports Complex, which houses a spacious and state-of-the-art indoor stadium and Olympic-standard swimming pool, was inaugurated. You can read details on the following pages.

Our ability to deliver excellence in higher education, post-graduate and research studies, has been borne out by the distinctions, ranks and top positions won by our students, in some cases the honour in a row for several years for our college – hat trick and more. This year 10 research scholars who pursued their academic expedition at St. Thomas were awarded Ph.D. by the University. It is a truly remarkable achievement. This gives an opportunity for me to congratulate the Ph.D. awardees and their guides. Hearty Congratulations! Research remains one of the pillars that make St. Thomas a university-leading college. External factors like the increasing competition from autonomous colleges in the state are posing a challenge to our competitiveness. In future we will have to strive to maintain academic excellence which is the defining feature of our institutional landscape integral to establishing our university and national level reputation. The recent developmental work enables our college to offer an infrastructure that is commensurate with its standing as a leading college.

Apart from providing facilities for the holistic development of the young generation, we are succeeding in our endeavour to serve the local community in new and creative ways. We have to further enhance our regional engagement to strengthen alumni network, parent interaction, political and administrative goodwill etc. By sharing our intellectual assets, infrastructure facilities such as the sports complex and swimming pool, experimental knowledge and hands-on experience with the community we can further invest in fruitful interactive relationships which the future of the college is intimately bound with.

Let us together enable our students to experience life-transforming education process at St. Thomas. Let each graduand be a St. Thomas graduate. Assuredly our distinguished institution has great DNA to spur us to soar higher in the academic empyrean and to serve as a trailblazer and a beacon on an eminence for the modern knowledge-based social system.

Thank you all.

Dr. Sunny Joseph Panjikunnel

Integrated Sports Complex Inaugurated

St. Thomas College on the Fast Track

The legacy of sports achievement of our institution is underlined by the completion of the mega project of sports infrastructure - the Integrated Sports Complex - with the partial financial assistance of Rupees one crore seventy lakhs from the University Grants Commission. The project was completed at a total cost of Rupees eleven crores. The Management, teachers and private individuals contributed substantially for the successful completion of the project. The Sports Complex consists of a Multipurpose Indoor Sports Training Facility with maple wood flooring which can accommodate six badminton courts at a time. An Olympic-standard Swimming Pool with latest water purification system, a kid's pool and a walkers' lane are the other facilities developed as part of the Integrated Sports Complex. The entire project was completed during this academic year.



Sri, Oommen Chandy, Hon'ble Chief Minister of Kerala. inaugurates the Integrated Sports Complex

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Prof. K. Philip John Endowment Lecture and Business Plan Presentation Contest



Very Rev. Msgr. Abraham Kollithanathumalayil inaugurates the Endowment Lecture and Business Plan Presentation Contest

The Department of Commerce in association with Prof. K. Philip John Memorial Academic Foundation and Vegetable and Fruit Promotion Council Keralam (VFPCK), hosted a prestigious event viz. Prof. K. Philip John Endowment Lecture and Business Plan Presentation Contest on 'Value Addition in Agro and Dairy Products' on 29 January 2015. The programme consisted of endowment lecture, seminar and exhibition of value added products. The programme was inaugurated by Very Rev. Msgr. Abraham Kollithanathumalayil, Vicar General, Diocese of Palai. In his keynote address, he shared his views on value addition in agro-dairy products and pointed out the initiatives taken by Palai Diocese for farmers' empowerment and assistance. Dr. Sunny Joseph, Principal of the College, presided over the function and said that value addition is essential in every field in order to survive in the long run. Ms. Resmi I., Manager VFPCK, Kottayam delivered the keynote address and presented a brief report on the topic 'Recent changes in the field of value addition in agricultural and dairy products'. Rev. Dr. James John Mangalathu, Vice-Principal of the College and Prof. K. V. John, Head of the Department of Commerce, offered felicitations. Prof. Bobby Simon, Director of the Commerce Forum, welcomed the gathering and Prof. Binoy Chacko, Convener of the programme, proposed the vote of thanks. Around 100 value added products were exhibited in this session.

Ms. Remya R. and Ms. Shijini V. M., Assistant Managers of VFPCK, Kottayam delivered lectures on the topics 'Agro processing', 'Benefits of value added agricultural products with case studies' and 'Threats of hazardous chemicals in food processing'. There





Adv. George C. Kappen, President, KISCO Bank, launches the blog named 'Taste of Kalavara'

were separate 'business plan presentation' contests for public and students. In the public category, there were nine teams who qualified the preliminary round and among them, Mrs. Ancy Mathew (Mangalathil, Pala) secured the first prize. The team of Mr. Mathew Joseph and Mr. Reji Joseph (VFPCK, Parathodu)

Internal Quality Assurance Cell (IQAC) Reconstituted

The IQAC of the College reconstituted on 23 July 2015 keeping in view the quality assurance needs of the College for the next five years and reaccreditation falling due in 2020. The prime task of the IQAC is to develop a system for conscious, consistent and catalytic improvement in the performance of the institution. The IQAC will channel the efforts and measures



Dr. Sunil C. Mathew IQAC Co-ordinator

towards academic excellence in all the operations of the institution to assure the stakeholders the accountability of the institution for its own quality and probity.

: Dr. Sunny Joseph (Principal) Chairman Vice Chairman: Rev. Dr. James John Mangalathu

(Vice Principal)

Members

Co-ordinator : Dr. Sunil C. Mathew (Dept. of Mathematics) : Rev. Fr. Mathew Kurian Kavanadimalayil

(Bursar)

Dr. Sunny Kuriakose (Dept. of Chemistry)

Dr. T.J. Abraham (Dept. of English)

Dr. Siby James (Dept. of English)

Dr. Ison V. Vanchipurackal (Dept. of Physics)

Prof. Mathew Thomas (Dept. of Zoology)

Dr. Babu Jose (Dept. of Commerce)

Sri. Jose Joseph (Administrative Assistant)

Dr. K. K. Jose (Distinguished Educationalist

& Local Representative)

Sri. Joby George (Sub Div. Engineer, BSNL

and Alumi Representative)

Sri. Jose Mamparampil (Industrialist)

and Ms. Ruby Thomas (Thengumthottathil, Puliyannoor) secured the second and third prizes respectively.

From the students' category, Mr. Nithin Varghese (S.B. College, Changanassery), Mr. Arun Mohanan and Mr. Jinesh George (Presentation College, Puthenvayalil) and Mr. Amal C. Shaji and Mr. Ajith Aji (Mate Foundation) secured the first, second and third prizes respectively. Around 100 value added products were exhibited in this session.

As part of the programme, a blog named "Taste of Kalavara" was also launched. Adv. George C. Kappen, President, KISCO Bank, officially launched the blog. The seminar concluded with a valedictory session chaired by Adv. George C. Kappen. Dr. Lini L. Alappattu, Assistant Professor, Vocational Education Department, gave the valedictory message. The delegates expressed their high appreciation for the meticulous organization and conduct of the programme and for the choice of competent speakers on the topics. Trophies and certificates were distributed to the winners by Dr. Sunny Joseph, Principal.

The College Accorded CPE Status (Phase II)

The University Grants Commission (UGC) has selected St. Thomas College, Pala for the College with Potential for Excellence (CPE) status (Phase II) for the period 2016-2021. The College is expected to receive a special grant of Rs. Two crore as part of this program. Rev. Dr. James John Mangalathu, Vice Principal and Dr. Sunny Kuriakose, Head, Dept of Chemistry, represented the College in the interface with the expert committee of the UGC held at the UGC headquarters in New Delhi on 16 May 2016.







Dr. Sunny Kuriakose

Know Your Campus (KYC 2015) Programme

An innovative campus tour titled 'Know Your Campus (KYC 2015)' was organized as part of the induction program for the freshers to the College on 16 July 2015. The first year students were taken to all the Departments and facilitation centres of the College by student co-ordinators for acquainting them with the College. A documentary film on the College was also exhibited for them.

SEMINARS, CONFERENCES, WORKSHOPS AND LECTURES

International Symposium on Concurrent Methodologies in Organic Synthesis and Erudite Lecture



Dr. Babu Sebastian, Hon'ble Vice Chancellor, M. G. University, inaugurates the International Symposium

A one-day international symposium on Concurrent Methodologies in Organic Synthesis was organised by the Department of Chemistry of the College in association with the Institute for Intensive Research in Basic Sciences (IIRBS), Mahatma Gandhi University, Kottayam on 13 February 2016, in honour Prof. Ei-ichi Negishi (2010 Chemistry Nobel Laureate), Purdue University, USA, who visited Kerala as a

State Guest. The programme was sponsored by the Department of Science of Technology (DST), Government of India; Kerala State Council for Science, Technology and Environment (KSCSTE), and Kerala State Higher Education Council (KSHEC), Government of Kerala. It was intended to be part of enriching basic science education in the State of Kerala. Prof. Negishi was the Chief Guest of Honour at the symposium where



Dr. Sunny Joseph, Principal, presents a memento to Nobel Laurede Prof.Ei-ichi Negishi on behalf of the College

ST.THOMAS COLLEGE, PALA COLLEGE WITH POTENTIAL FOR EXCELLENCE - UGC (2010 and 2015)

Speakers at the International Symposium



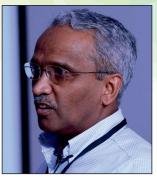
Dr. H. Junjappa, INSA Senior Scientist



Dr. S. Chandrasekaran, IISc, Bangalore



Dr. Ganesh Pandey, Director, CBMR (CSIR), Lucknow



Dr. T.V. RajanBabu, Ohio State Uty., USA



Dr. A. Ajayghosh, Director, NIIST (CSIR), Thiruvananthapuram



Dr. Thomas J. Colacot, Johnson Matthey Inc., USA



Dr. H. Ila, JNCASR, Bangalore



Dr. Srivari Chandrashekar, Director, IICT (CSIR), Hyderabad



Dr. M. Periasamy, Vice Chancellor, Hyderabad Central Uty.



Dr. I.N.N. Namboothiri,



Dr. Suresh Das, Executive Vice President, KSCSTE



Dr. V.N. Rajasekharan Pillai, former Vice Chairman, UGC



Views of the distinguished deligates who attended the international symposium



several eminent scientists in diverse areas of organic synthesis delivered plenary lectures.

The symposium was inaugurated by Dr. Babu Sebastian, Vice Chancellor, Mahatma Gandhi University at a meeting presided over by Dr. Suresh Das, Executive Vice President of KSCSTE, Government of Kerala. The Vice Chancellor draped Prof. Ei-ichi Negishi with a ponnada. Dr. Sunny Joseph, Principal, offered felicitations. He also presented a memento to Prof. Ei-ichi Negishi on behalf of the College. Dr. I. Ibnusaud, Convener, welcomed the gathering and Dr. G.D. Gem Mathew, Local Co-ordinator, proposed the vote of thanks.

In the Scientific Session 1 that followed, Prof. H. Junjappa, INSA-Senior Scientist was the chairman. Plenary lectures were delivered by Dr. S. Chandrasekaran, Indian Institute of Science, Bangalore; Dr. Ganesh Pandey, Director, Centre for Bio-medical Research (CSIR), Lucknow; Dr. T.V. RajanBabu, Professor, Ohio State University, USA; Dr. A Ajayaghosh, Director, National Institute for Interdisciplinary Science and Technology (CSIR), Thiruvananthapuram and Dr. Thomas J. Colacot, Global R & D Manager, Johnson Matthey Inc., USA.

In the Scientific Session 2, Dr. Ganesh Pandey, Director, CBMR, Lucknow was the chairman. Plenary lectures were delivered by Dr. H. Ila, Jawaharlal Nehru Centre for Advanced



Prof.Ei-ichi Negishi presents a memento to Ms. Isna Susan Abraham

Scientific Research, Bangalore; Dr. Srivari Chandrashekar, Director, Indian Institute of Chemical Technology (CSIR), Hyderabad; Dr. M. Periasamy, Vice Chancellor, Hyderabad Central University and Dr. I.N.N. Namboothiri, Professor, IIT Bombay.

In the Scientific Session 3, Dr. Thomas J. Colacot introduced Nobel Laureate Prof. Ei-ichi Negishi to the audience. Prof. Ei-ichi Negishi then delivered the Erudite Lecture of the Kerala State Higher Education Council on the topic "Magical Power of Transition Meal Catalysis: Past, Present and Future". This was followed by the Valedictory Session which was chaired by Dr. V.N. Rajasekharan Pillai, former Vice Chairman of University Grants Commission. Dr. Suresh Das, Executive Vice President of Kerala State Council for Science Technology and Environment (KSCSTE), Government of Kerala, delivered the valedictory address. Prof Ei-ichi Negishi presented merit certificates and mementos to meritorious students including the following students of the college: Ms. Isna Susan Abraham (M.Sc. Chemistry 2013-15 batch topper and winner of 'A' grade), Mr. Anish Babu (II M.Sc. Chemistry 2015-16 class topper) and Ms. Amala Shaliya Joseph (I M.Sc. Chemistry 2015-16 class topper). The symposium came to an end with concluding remarks by Dr. I. Ibnusaud, Convener.



Prof. Ei-ichi Negishi presents a certificate of merit to Mr. Anish Babu



Prof.Ei-ichi Negishi presents a certificate of merit to Ms. Amala Shaliya Joseph



The faculty of the Department of Chemistry with Nobel Laureate Prof. Ei-ichi Negishi

Prof. Ei-ichi Negishi - 2010 Chemistry Nobel Laureate

Professor Ei-ichi Negishi is a world renowned Japanese chemist who has spent most of his career at Purdue University in the United States. He is best known for his discovery of the 'Negishi coupling reaction'. In December 2010, he was awarded the Nobel Prize in Chemistry jointly with Richard F. Heck and Akira Suzuki, for developing metal-based reactions called palladium-catalyzed cross-coupling, that allow for easy and efficient synthesis of complex organic compounds.

Born in 1935, Negishi came to the United States in 1960 after graduating from the University of Tokyo. In 1962, while studying for his doctorate at the University of Pennsylvania, he met Purdue chemistry professor Herbert C. Brown — a pioneer in synthetic organic chemistry. Negishi admired Brown's research and predicted, "Brown will change the whole world of organic chemistry and that is why I came to Purdue." With Brown as a mentor, Negishi arrived at Purdue University in West Lafayette as a postdoctoral researcher in 1966.

He then moved to Syracuse University where he served as an assistant professor (1972-76) and associate professor (1976-79). Dr. Negishi joined the faculty at Purdue in 1979 — the same year Brown was awarded the Nobel Prize in Chemistry



Prof. Ei-ichi Negishi

— and has been a researcher in Purdue University for more than thirty years. In 1999, he was named the Inaugural Herbert C. Brown Distinguished Professor of Chemistry.

Dr. Negishi has authored several books, and published more than 400 research papers. He has received various awards, with the most representative being 1987 J.S. Guggenheim Fellowship, 1996 Chemical Society of Japan Award, 1998 ACS Award in Organometallic Chemistry, 1998–2001 Alexander von Humboldt Senior Researcher Award, Germany, 2000 Sir Edward Frankland Prize, Royal Society of Chemistry, UK, 2007 Yamada Koga Prize, Japan, 2010 ACS Award for Creative Work in Synthetic Organic Chemistry, 2010 Japanese Order of Culture, 2010 Nobel Prize in Chemistry, 2010 UK Royal Society of Chemistry Honorary Fellowship Award, 2011 Fellow of the American Academy of Arts and Sciences, and 2014 elected into the National Academy of Sciences as a Foreign Associate.

Dr. Negishi's name is pronounced: Ei-ichi (Â-E-chE) Negishi (Na-gE-shE).

and Nanotechnology

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Sabu Thomas

Him. Director

ì

30.08.2016

CERTIFICATE

EXACTERIZATION OF BARIUM TITANATE-GRAPHENE COMPOSITE"

FURTHERIZATION OF BARIUM TITANATE-GRAPHENE COMPOSITE"

Furthentic record of the project work carried out by MISS ANJANA BABU under

Furthentic record of Prof. SABU THOMAS at INTERNATIONAL AND INTER

NIVERSITY CENTRE FOR NANO SCIENCE AND NANOTECHNOLGY,

MAHATMA GANDHI UNIVERSITY, KOTTAYAM in partial fulfillment of the

Prof. (Dr.) Sabu Thomas

DIRECTOR

MATE

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Prof. Sabu Thomas Hon. Director 30.08.2016

CERTIFICATE

This is to certify that the project report entitled "PREPARATION OF CELLULOSE-POLYANILINE NATURAL RUBBER COMPOSITE" is an authentic record of the project work carried out by MISS ARSHITHA SAJU under the guidance of Prof. SABU THOMAS at INTERNATIONAL AND INTER UNIVERSITY CENTRE FOR NANO SCIENCE AND NANOTECHNOLGY, MAHATMA GANDHI UNIVERSITY, KOTTAYAM in partial fulfillment of the requirements for the award of the degree of master of science in chemistry.

Prof. (Dr.) Sabu Thomas

DIRECTOR

KOTTAYAM

39-08-2016

Materials Chemistry and Physics xxx (2016) 1-6

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Influence of Sb incorporation on optical, electrical and gas sensing properties of transparent ZnO thin films

N.H. Sheeba ^a, Sunil C. Vattappalam ^b, P.V. Sreenivasan ^c, Sunny Mathew ^b, Rachel Reena Philip a, *

HIGHLIGHTS

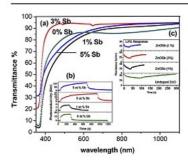
- Transparent ZnO and ZnO:Sb thin films are deposited by vacuum evaporation followed by annealing.
- Enhanced photoconductivity and transmittance are achieved on doping with Sb.
- · Improved sensitivity and response time to Liquid Petroleum Gas on Sb doping of ZnO shows applicability in gas sensors.

ARTICLE INFO

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Keywords: Thin films Vacuum deposition Annealing Surface properties

GRAPHICAL ABSTRACT



ABSTRACT

Polycrystalline nanostructured thin films of n-type ZnO and Sb doped ZnO with doping at 1%, 3% &5% possessing tailored electrical and optical properties are prepared by vacuum evaporation followed by air annealing and their application as gas sensor is evaluated. Doped films show substantial improvement in response time and sensitivity to Liquid Petroleum Gas, with fastest response ~20 s for 5% Sb doped samples. Doping enhances optical bandgap, transmittance, photoresponse and electrical conductivity. Carrier concentration and mobility are maximum for 5% doped, which corroborates the electrical conductivity variations for the doped samples which is also maximum for 5% doped.

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1. Introduction

ZnO is a II-VI transparent conducting oxide (TCO) of wide research interest due to their desirable features like high transmittance in visible region, wide band gap (3.37 eV), n-type

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conductivity and ease to grow with diverse morphologies as nanotubes, nanorods, nanosheets etc., that renders them useful for various electronics, optical, optoelectronics, photocatalysis and sensing devices [1,2]. ZnO finds applications in ultraviolet Light Emitting Diodes, laser diodes, photodetectors, gas sensors, dye sensitized solar cells etc. [3,4]. Though its high resistivity and difficulty to dope as p-type semiconductor are two factors that limit them to be employed extensively in transparent electronics, ZnO nanostructures are recently attracting great interest due to their

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>: Szbu Thomas

30.08.2016

Fire Director

CERTIFICATE

TO certify that the project report entitled "PREPARATION AND HARACTERISATION OF ACTIVATED CARBON FROM GREEN COCONUT IS I.I." is an authentic record of the project work carried out by MISS NEETHU K. SEPH under the guidance of Prof. SABU THOMAS at INTERNATIONAL AND SEPH UNIVERSITY CENTRE FOR NANO SCIENCE AND ANOTECHNOLGY, MAHATMA GANDHI UNIVERSITY, KOTTAYAM in a fulfillment of the requirements for the award of the degree of master of science in the strustry.

Prof. (Dr.) Sabu Thomas

DIRECTOR

KOTTAYAM

31-08-2016

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Enhancement in the Electrical and Thermal Properties of Ethylene Vinyl Acetate (EVA) Co-Polymer by Zinc Oxide Nanoparticles

Jose Sebastian¹, Eby T. Thachil¹, Jobin Job Mathen², Joseph Madhavan², Prince Thomas³, Jacob Philip⁴, M. S. Jayalakshmy⁴, Shahrom Mahmud⁵, Ginson P. Joseph^{3*}

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Open Access

Abstract

EVA/ZnO nanocomposites of 1%, 2% and 4% ZnO were fabricated by direct probe sonicator method. The ZnO nanopowders were prepared by solvothermal method. As the particle size of the filler incorporated to the polymer matrix decreases, the properties of the polymer-filler interface show dominance over its bulk properties. The dielectric constant and dielectric loss of the composites at ambient temperatures are found to decrease with increasing frequency. The thermal analysis using TGA-DTA is also performed and it is found that the thermal stability of the nanocomposites increases with increasing the filler concentrations. The thermal parameters such as thermal diffusivity (α) and thermal effusivity (α), the thermal conductivity (α) and heat capacity (α) were studied using photopyroelectric technique. The band gap of the samples was also determined and found to decrease with increasing filler concentrations. The tensile strength and peel strength of the samples were also investigated and it is found to increase with small inclusion of filler material.

Keywords

Composite Materials, Polymers, Differential Thermal Analysis (DTA), Dielectric Properties

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⁴Department of Instrumentation, Cochin University of Science and Technology, Kerala, India

⁵School of Physics, Universiti Sains Malaysia, Minden, Malaysia

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2014-15

ORGANIZING COMMITTEE

CHIEF PATRON

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PATRON

Mar Jacob Muricken (Auxillary Bishop of Pala, Manager)

CHAIR PERSON

Rev. Fr. N. V. Joseph (Principal, St. Thomas College, Pala)

CONVENOR

Prof. James Joseph (H.O.D., Dept. of Biotechnology & Applied Microbiology)

CO-ORDINATOR

Dr. Ratheesh. M

(Assistant Professor, Dept. of Biochemistry)

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SCIENTIFIC COMMITTEE

Mr. Sony Rajan Mr. Thomas Thomas Mr. Sarath. S Mr. Rony Thomas

FOR CORRESPONDENCE

Dr. Ratheesh. M Email:biochemistrystcp@gmail.com Ph: 9995012581,9497358718



NATIONAL WORKSHOP ON

INTIBLUECTUAL PROPERTY RIGHTS

VENUE

TISSERANT HALL, ST.THOMAS COLLEGE

12th August, 2014

JOINTLY ORGANIZED BY

PIC-KERALA/KSCSTE

8

DEPARTMENT OF BIOCHEMISTRY



College with Potential for Excellence

ST. THOMAS COLLEGE, PALA

Arunapuram P.O., PIN: 686574 Kottayam (DT), Kerala, INDIA www.stcp.ac.in| Ph.04822212317

INVITATION

The time for grasping knowledge has become an important parameter for determining the success of an institution, enterprise, government and industry. Intellectual property rights (IPR) have become important in the face of changing trade environment which is characterized by the following features namely global competition, high innovation risks, short product cycle, need for rapid changes in technology, high investments in research and development (R&D), production, marketing and need for highly skilled human resources. An efficient and equitable intellectual property system can help all countries realize intellectual property's potential as a powerful tool for economic development and social and cultural well-being. The main objective of the seminar is to create awareness among the public about the intellectual property rights and also aimed to exchange recent development on international protection acts.

BIOCHEMIE CORDIALLY INVITES YOU...

St. Thomas College, Pala, founded in 1950 has to its credit more than 60 years of distinguished, service in the field of higher education in the state of Kerala sending out many graduate maxima cum laude to carve out their destinies in diverse spheres. The college has been recognized by the UGC as a college with potential for excellence.

Department of Biochemistry, founded in 1976 has grown strength to strength over the years. The relatively small size of our department provides an atmosphere of collegiality and accessibility. At the same time, close contacts and collaborations with other strong institutions in India and abroad, provide a breadth of expertise and experience of which we take full advantage. Research group in the department addresses structure of biological macromolecules, the mechanisms by which they function and the possible applications to research technology and medicine.



PROGRAMME SCHEDULE

09.00 AM - 10.00 AM REGISTRATION

10.00 AM - 10.45 AM INAUGURAL SESSION

10.45 AM - 11.00 AM TEA BREAK

11.00 AM - 12.15 PM TECHNICAL SESSION - I

'AN OVERVIEW OF INTELLECTUAL PROPERTY RIGHTS'

SHRI. H.L. NARENDRA BHATTA

(PATENT ATTORNEY & FOUNDER, INTELLOCOPIA IP SERVICES, BANGALORE)

12.15 PM - 01.00 PM TECHNICAL SESSION - II

HOW TO DO PATENT SEARCHING: TOOLS AND PROCE-

SHRI. SAFIKH.S

(TECHNICAL OFFICER (IPR), KSCSTE, TRIVANDRUM)

01.00 PM - 02.00 PM LUNCH BREAK

02.00 PM - 03.30 PM TECHNICAL SESSION - III

'PATENTING SYSTEM IN INDIA & PATENT FILING PROCE-DURES'

SHRI. H.L. NARENDRA BHATTA

(PATENT ATTORNEY & FOUNDER, INTELLOCOPIA IP SERVICES, BANGALORE)

03.30 PM - 04.00 PM PANEL DISCUSSION &

CONCLUDING SESSION

04.00 PM TEA

SELECTION

The number of maximum participants is limited to 100. Selection will be on first-come-first-served basis. NO REGISTRATION FEE

IMPORTANT DATES

Last date for reciept of application 5-08-2014, Tuesday Intimation of selection by e-mail 08-08-2014, Friday Email: biochemistrystep@gmail.com

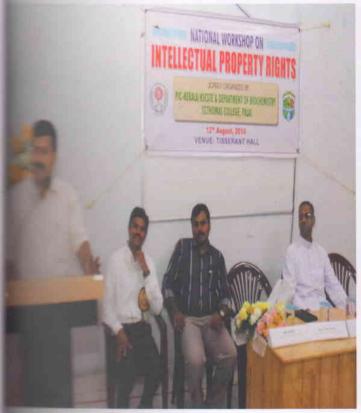
Photographs



Attorney & Founder, Intellocopia • *arnataka) inaugurated the seminar.



PATION FUNCTION: H.L .Narendra Bhatta WELCOME SPEECH:DR. Ratheesh M, co-ordinator of IPR-2014 and assistant professor in Department of Biochemistry welcomed all dignitaries, delegates and students.



Bhatta delivered the inaugural



Deligates from various parts of Kerala

Seminar on 'The Fiscal Dynamics and Growth Prospects of the Economy of Kerala'



Hon'ble Minister Sri. K.M. Mani inaugurates the seminar

The Department of Economics in association with the Dr. P.J. Thomas Centre for Social Sciences Research, organized a one-day State-level Seminar on 'The Fiscal Dynamics and Growth Prospects of the Economy of Kerala' on 5 January 2015. The postgraduate students belonging to Economics, Politics and Commerce Departments of the College and student delegates from nearby institutions attended the programme. Sri. K.M. Mani, Hon'ble Minister for Finance and Law.

Government of Kerala, inaugurated the Seminar at a meeting presided over by Rev. Fr. N.V. Joseph Njarakkattil, Principal. Dr. Joy George, HoD of Economics, delivered a retrospective on Dr. P.J. Thomas. Dr. Rajan Varughese, former Pro-Vice Chancellor, M G University, Kottayam and Dr. E.M. Thomas, Associate Professor, Christ College, Irinjalakuda were the chief resource persons. Prof. Tommy Cherian, Vice Principal, welcomed the gathering and Dr. Biju K.C. proposed the vote of thanks.

National Workshop on Intellectual Property Rights, IPR-2014

A National Workshop on Intellectual Property Rights (IPR-2014) was organised by the Department of Biochemistry of the College in collaboration with Patent Information Centre-Kerala of the Kerala State Council for Science, Technology and Environment (KCSTE). Govt. of Kerala on 12 August 2014. The objective of the Workshop was to create awareness on the basics of IPR including Patents, Copyrights, Trademarks, Industrial Designs, Patentability Criteria, Patent Searching, Patent Filing Procedures etc. among the participants. The workshop was inaugurated by Mr. H.L. Narendra Bhatta, Patent Attorney & Founder, Intellocopia IP Services, Bangalore, at a meeting presided over by Rev. Fr. N.V. Joseph Njarakkattil, Principal. Mr. Safikh S., Technical Officer (IPR), KSCSTE, Govt. of Kerala offered felicitations. Dr. Ratheesh M., Co-ordinator, IPR-2014, welcomed the gathering and Mr. Jobin Joseph, Secretary, Biochemie proposed the vote of thanks. In the technical sessions that followed, Mr. Safikh S. spoke on the

topic 'How to do Patent Searching: Tools and Procedures' and Mr. H.L. Narendra Bhatta spoke on the topics 'An Overview of Intellectual Property Rights' and 'Patent System in India and Patent Filing Procedures'. The programme came to an end with a panel discussion followed by the concluding session.



Mr. H.L. Narendra Bhatta inaugurates the workshop

Workshop on Mathematical Physics



Hon'ble Vice Chancellor Dr. Babu Sebastian inaugurates the workshop

The Academy of Physics Teachers (APT) and the Centre for Nano-Biopolymer Science and Technology, Dept. of Physics jointly organized a three-day Workshop on Mathematical Physics during 26-28 December 2014. The workshop was inaugurated by Dr. Babu Sebastian, Hon. Vice Chancellor, Mahatma Gandhi University, Kottayam. Dr. S.V.M. Satyanarayana, Pondicherry Central University was the resource person. Rev. Fr. N.V. Joseph Njarakkattil, Principal,

presided over the inaugural function. The welcome address was delivered by Dr. Ison V. Vanchipurackal, local organizing secretary. Dr. Shaju K.Y., Secretary of APT, felicitated and Prof. G. Harikrishnan, State Organizer of the Workshop proposed the vote of thanks. The workshop was focused on the topic "Linear Algebra" and 25 teachers from all over Kerala participated in it. Dr. Ison V. Vanchipurackal was the organizer of the Workshop.

Seminar on Current Trends in Physics

In connection with the Centenary of the Bohr Atom Model, the Centre for Nano-Biopolymer Science and Technology, Dept. of Physics organized a one day seminar on 'Current Trends in Physics' on 15 December 2014. The programme was organized in association with the Academy of Physics Teachers (APT). The seminar was inaugurated by Dr. K.B. Jinesh, IIST, Trivandrum. Rev. Fr. N.V. Joseph Njarakkattil, Principal, presided over the inaugural function. The welcome address was given by Dr. Michael Augustine, Head, Dept. of Physics. Dr. Isaac Paul, Regional Co-ordinator, APT (Dept. of Physics, S.B. College, Changanassery) felicitated. Talks were delivered by Dr. K.B. Jinesh on "Evolutions in nanotechnology: Enough room at the bottom", by Dr. K. Indulekha, M.G. University, Kottayam on "Atoms" and by Dr. Ison V. Vanchipurackal, Dept. of Physics, St. Thomas College, Pala on "Nobel-winning blue LED". The seminar was attended by 98 participants including teachers and students. There was also a lab visit at the end of the seminar. Dr. Ison V. Vanchipurackal, was the co-ordinator of the programme.

The programme was sponsored by the Kerala State Council for Science Technology and Environment, Govt. of Kerala, Trivandrum.



Dr. K.B. Jinesh inaugurates the seminar

NEWSLETTER 2014-'15

National Seminar on Hindi Literature

A two-day national seminar on Hindi Literature was organised by the Department of Hindi on 28 and 29 January 2015. It was inaugurated by Dr. Kumud Sharma from the University of Delhi. The seminar was sponsored by the University Grants Commission.



Dr. Kumud Sharma inaugurates the seminar

Workshop on Biodiversity of Kerala

A Workshop on the Biodiversity of Kerala was organised jointly by the Departments of Zoology and Botany in collaboration with Pala Municipality on 6 February 2015. It was inaugurated by Shri. Kuriakose Padavan, Chairman of Pala Municipal Council. Shri. Toby Thomas, Municipal Secretary, delivered the key-note address

Invited Talk on the Local Heritage of Meenachil

The Department of History in collaboration with the Heritage Forum, Pala, organized an invited talk on the 'Local Heritage of Meenachil' on 25 June 2014. Dr. Cyriac Thomas, Member of National Minority Education Commission, Govt. of India, and Former Vice Chancellor of M.G. University, was the chief speaker. The programme was presided over by the Principal Rev Fr. N.V. Joseph Njarakkattil. Social activist Mr. V.I. Purushotthaman Poonjar also spoke on the occasion. 40 students and 30 members of the public attended the function. The programme was jointly co-ordinated by Rev. Dr. James John Mangalathu and Prof. Cyriac Jose.



Dr. Cyriac Thomas delivers the invited lecture

Jawaharlal Nehru Memorial Lecture Series-1

Jawaharlal Nehru Memorial Lecture Series-1 organised by the Department of Politics was inaugurated by Sri. P.C. George M.L.A. (Hon. Govt. Chief Whip) on 11 August 2014. The meeting was presided over by Rev. Fr. N.V Joseph Njarakkattil, Principal. Rev. Fr. Mathew Kavanadimalayil, Bursar and Dr. Shajimon K. Mathews, HoD, Dept of Politics, offered felicitations. Mr. Nidhin Jose, President, Political Science Association, proposed the vote of thanks.



Sri. P.C. George MLA inaugurates the lecture series

INVITED LECTURES DELIVERED BY EXPERTS

DEPARTMENT OF APPLIED MICROBIOLOGY AND BIOTECHNOLOGY

- 1. Mr. Titto Mathew, Senior Research Fellow, Defence Research and Development Organisation (DRDO), New Delhi, delivered a lecture on 'The Effect of Hypoxia on Alveolar Epithelium: The Role of Curcumin' on 21 August 2014.
- **2. Mr. Christo Rajan**, Senior Research Fellow, Regional Cancer Centre (RCC), Thiruvananthapuram, delivered a lecture on 'Advances in DNA Microarray Technology and its Applications' on 14 October 2014.

DEPARTMENT OF HISTORY

Rev. Dr. Pius Malekandathil, Professor of History, Jawaharlal Nehru University, New Delhi, delivered an invited talk on History on 21 November 2014.

DEPARTMENT OF PHYSICS

Dr. M.M Shaijumon, Indian Institute of Science Education and Research (IISER), Thiruvananthapuram, delivered the Prof. Antony Simon memorial lecture.



Dr. M.M. Shaijumon delivers the lecture

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Effect of Sn doping on properties of transparent ZnO thin films prepared by thermal evaporation technique



N.H. Sheeba^a, Sunil C. Vattappalam^b, Johns Naduvath^c, P.V. Sreenivasan^d, Sunny Mathew^b, Rachel Reena Philip^{a,*}

- ^a Thin Film Research Lab, U.C. College, Aluva, Kerala, India
- b Material Science Research Lab-1, St. Thomas College, Pala, Kerala, India
- ^c Department of Metallurgical Engineering and Materials Science, Indian Institute of Technology, Bombay, India
- ^d Department of Chemistry, U.C. College, Aluva, Kerala, India

ARTICLE INFO

Article history: Received 12 May 2015 In final form 7 July 2015 Available online 14 July 2015

ABSTRACT

Sn doping is used as an effective method to increase conductivity and photosensitivity of highly transparent nanostructured ZnO thin films, prepared by multisource vacuum evaporation followed by air annealing. The microstructural characterizations reveal formation of polycrystalline ZnO and ZnO:Sn films, with grain size \sim 16–20 nm and preferred orientation along (0 0 2) plane. Increased electrical conductivity by a factor \sim 10² on doping, coupled with the enhancement of transmittance (80–90% in visible range) and photoconductivity lends these wide band gap films (\sim 3.21 eV–3.24 eV) application in photovoltaics. Fast response to ethanol (5–7 s) indicates suitability of these films in gas sensors.

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1. Introduction

ZnO is a II–VI transparent conducting oxide which can exhibit amorphous structure or can crystallize in hexagonal wurtzite or cubic zincblende. It possesses a wide bandgap >3 eV that favours transparency to photons in the visible range and shows n-type polarity. Though these properties along with the non-toxicity make it a suitable material for application in opto-electronics, the high sensitivity to humid and corrosive media and high electrical resistance often limit its use in device applications [1–3]. The free exciton energy of ≈60 meV, along with its direct bandgap makes it an interesting material for optoelectronic applications in the near ultraviolet (UV) region, such as UV light-emitting diodes and diode lasers [4,5]. Further, since ZnO shows variation in the resistance on exposure to gases, it is used as gas sensors.

Researchers have deposited thin films of ZnO of various nano structures by techniques such as spray pyrolysis, molecular beam epitaxy, chemical bath deposition, pulsed laser deposition, magnetron sputtering and sol–gel process [6–9]. Vacuum evaporation is generally avoided due to the corrosive nature of Zn on the glass vacuum bell jars. In our ZnO deposition process, Zn metallic films are evaporated onto glass substrates in a vacuum chamber fitted

with a metallic bell jar and the films subsequently are annealed in air to form thin films of ZnO. By this two stage technique, it is possible to deposit films of good homogeneity, when compared to the films obtained earlier in our lab by chemical bath deposition and spray pyrolysis [10]. Doping with pure elements is also much easier by this technique. In this work, we initially investigated the effect of annealing temperature on the crystallinity and transparency of the ZnO films using XRD and UV-Vis transmittance spectra, by selecting the annealing temperatures as between 200 °C and 350 °C. Since among these, the 350 °C annealed films are found to have better crystallinity, transmittance and electrical conductivity, the annealing temperature has been chosen as 350°C for Sn doping. A comparative study of electrical, optical and optoelectronic properties of undoped ZnO and Sn doped ZnO (ZnO:Sn) is done to evaluate the effect of doping. Increased electrical and photoconductivity with high transparency, exhibited by ZnO:Sn in this study indicates the enhanced suitability of doped over undoped, for application in optoelectronic devices [11,12]. Since Sn doped ZnO thin films are found to be gas sensitive, gas sensing property of the films also has been tested. Ethanol gas is used to study this property.

2. Experimental technique

ZnO and ZnO:Sn thin films are deposited on ultrasonically cleaned sodalime glass substrate by a two stage method. In the

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E-mail address: reenatara@rediffmail.com (R.R. Philip).



Solvent polarity and nanoscale morphology in bulk heterojunction organic solar cells: A case study

Ajith Thomas, $^{1,4,a)}$ Anju Elsa Tom, $^{1,a)}$ Arun D. Rao, 2 K. Arul Varman, 2 K. Ranjith, 2 R. Vinayakan, 3 Praveen C. Ramamurthy, $^{2,b)}$ and V. V. Ison $^{1,b)}$

¹Centre for Nano-Bio-Polymer Science and Technology, Department of Physics, St. Thomas College, Pala, Kerala 686574, India

²Department of Materials Engineering, Indian Institute of Science Bangalore, Karnataka 560012, India

(Received 26 December 2013; accepted 23 February 2014; published online 10 March 2014)

Organic bulk heterojunction solar cells were fabricated under identical experimental conditions, except by varying the solvent polarity used for spin coating the active layer components and their performance was evaluated systematically. Results showed that presence of nitrobenzene-chlorobenzene composition governs the morphology of active layer formed, which is due to the tuning of solvent polarity as well as the resulting solubility of the P3HT:PCBM blend. Trace amount of nitrobenzene favoured the formation of better organised P3HT domains, as evident from conductive AFM, tapping mode AFM and surface, and cross-sectional SEM analysis. The higher interfacial surface area thus generated produced cells with high efficiency. But, an increase in the nitrobenzene composition leads to a decrease in cell performance, which is due to the formation of an active layer with larger size polymer domain networks with poor charge separation possibility. © 2014 AIP Publishing LLC. [http://dx.doi.org/10.1063/1.4867642]

I. INTRODUCTION

Solar cells based on organic semiconducting polymers have received considerable attention in the past few years due to their potential of providing light weight, flexible, environmentally safe, and inexpensive solar cells using solution processing methods. Due to their strong absorption cross-section, they are also ideal for fabricating thin film based devices, which makes them efficient in materials saving. A commonly used organic solar cell configuration employs an active layer formed out of an electron donor-acceptor heterojunction, comprising a conjugate polymer and a fullerene derivative, to separate the photo-generated excitons. Since the conjugated polymers have strong electron donating properties and the fullerene derivatives are electron acceptors, the charge separation in organic solar cells occurs by photo induced electron transfer between the two components. 2,3 But, a simple bilayer interface is insufficient to serve the purpose effectively due to the short exciton diffusion length of polymers by virtue of their lower dielectric constant values. A strategy that is adopted to overcome this issue is the bulk-heterojunction (BHJ) concept, in which the donor-acceptor phases are mixed to form a three dimensional interpenetrating network (distributed donor-acceptor junction) throughout the active region, to separate the excitons. The distributed active layer serves not only as the interface for charge separation within the diffusion range but also as the percolation pathways for efficient charge carrier transport to the respective electrodes. An active layer of sufficient thickness with a nanoscale morphology, ensuring a balance between large interface area and

continuous pathways for efficient charge transport, determines the power conversion efficiency of the organic solar cells. Therefore, the research on organic solar cells requires more attention in tuning the active layer morphology so as to contribute to high efficiency.

The present study is focused on analyzing the nanoscale morphology and the resulting cell performance of poly(3-hexylthiophene) (P3HT)-[6,6]-phenyl C61-butyric acid methyl ester (PCBM) based solar cells subjected to certain pre/postdeposition treatments. Though P3HT:PCBM solar cells have reached a power conversion efficiency of about 9%, there are still certain intrinsic issues to be addressed for further improvement.⁵ Conventionally, the polymer and the fullerene components are spin coated together using a common solvent and as the solvent gets evaporated, a heterojunction network spanning the entire active layer comprising phase separated polymer and fullerene domains is formed and it has been reported that the morphology of the active layer formed depends strongly on the processing conditions.⁴⁻⁷ Several approaches have been adopted by different research groups in this direction that include thermal annealing of the active layer, solvent annealing, usage of suitable additives to the coating solvent, etc. After the thermal annealing, the P3HT:PCBM blend was found to adopt a well organized structure resulting in a better crystalline phase, a condition favorable for efficient charge transport. 8,9 The solvent annealing enhances the cell performance by allowing the active layer components to remain partially dissolved for longer time periods so that their diffusion occurs at a higher rate resulting in an improvement of the P3HT crystallinity. 10-13

The presence of a processing additive is also shown as an effective route to control the bulk heterojunction morphology. It has been reported that the addition of a miscible

³Department of Chemistry, SVR NSS College Vazhoor, Kerala 686505, India

⁴Research and Development Centre, Bharathiar University, Coimbatore, Tamilnadu 641046, India

a)A. Thomas and A. Elsa Tom contributed equally to this work.

b) Authors to whom the correspondence should be addressed. Electronic addresses: isonvv@yahoo.in and praveen@materials.iisc.ernet.in

Orientation programme on quality issues for teachers and students organised by the institution

2018-19

ST.THOMAS COLLEGE PALAI

CODE OF CONDUCT MONITORING COMMITTEE

Report of Professional Ethics Programme on Code of Conduct for Administrative Staff

Academic Year (2018-2019)

An annual Orientation Programme on Professional Ethics was conducted for the Non-Teaching Staff of St. Thomas College on 09.06.2018. It was conducted as per the suggestion of the Code of Conduct Committee. Dr. Joy George, Former Principal of the college made an assessment of the overall performance of the non-teaching staff of St. Thomas College. Classes were taken by Sri. Libin Kuriakose, Dr. Biju K.C and Dr. Sunny Kuriakose on various topics. Various computer softwares useful for improving the administrative skill and speed were introduced by Smt. Sinimol Chandran, Smt. Shinu Joseph.

Palai

09/06/2018

AS COLLEGE

Principal

CODE OF CONDUCT MONITORING COMMITTEE

Report of Professional Ethics Programme for Students Academic Year (2018-2019)

Before closing the college for Onam vacation, the college conducted a programme with a view to impart the values of social, moral, spiritual and environmental consciousness, and professional ethics of students. The programme was arranged in the Open-air quadrangle in front of the main block during forenoon of 17.08.2018. The Principal addressed the gathering and spoke on the need of practicing and imparting the moral, spiritual and professional ethics in student life. Teachers also spoke on various subjects related to the need of environmental consciousness and professional ethics applicable to students. The session was followed by group activities and cultural activities in which students were actively participated. Various competitions were also conducted. The programme was followed by distribution of sweets.

Palai 17/08/2018



CODE OF CONDUCT MONITORING COMMITTEE

Report of Professional Ethics Programme

Academic Year (2018-2019)

A special programme for all the teaching staff was conducted during 21-22 December 2018 in the seminar hall. 79 members were present in the meeting. The meeting was organized with a view to impart awareness among the teachers about the code of conduct which is already in force in the campus and applicable to students, teachers and the supporting staff. A main Theme of the gathering was a review of professional ethics and related issues. Two sessions were dedicated for the deliberations on this subject. The Principal welcomed the gathering. The Manager of the college spoke on the occasion about the need of enforcing the code of conduct. The Principal Dr. James John spoke on the challenges on implementing the code of conduct in the campus. The Principal has made an assessment of the Code of Conduct of the institution during the current academic year. The Principal spoke on the measures including talks, classes, squad work and other measures taken to enforce the code of conduct in the campus during the current academic year. He also spoke on the steps which are to be implemented in the next academic year. Various sessions on the professional, spiritual and social ethics were conducted and talks and group discussions were organized. Open discussions were also conducted in the seminar.

Principal

Palai

21/12/2018

CODE OF CONDUCT MONITORING COMMITTEE

Report of Annual Awareness Programme on Code of Conduct Academic Year (2018-2019)

A special programme for all the teaching staff was conducted during 21-22 December 2018 in the seminar hall. 79 members were present in the meeting. The meeting was organized with a view to impart awareness among the teachers about the code of conduct which is already in force in the campus and applicable to students, teachers and the supporting staff. The Principal welcomed the gathering. The Manager of the college spoke on the occasion about the need of enforcing the code of conduct. The Principal Dr.James John spoke on the challenges on implementing the code of conduct in the campus. The Principal has made an assessment of the Code of Conduct of the institution during the current academic year. The Principal spoke on the measures including talks, classes, squad work and other measures taken to enforce the code of conduct in the campus during the current academic year. He also spoke on the steps which are to be implemented in the next academic year. Various sessions on the professional, spiritual and social ethics were conducted and talks and group discussions were organized. Open discussions were also conducted in the seminar.

Palai

21/12/2018



Dr. Mathew Joseph Endowment Lecture 'Orientation to Literary Theory'

on

25 Feb. 2019.



The Department organized the Dr. Mathew Joseph Endowment Lecture on 25.02.2019 in St. Joseph's Hall. In the inaugural Session Prof. William Zacharias, the HOD, welcomed the gathering. The inaugural address was delivered by Rev. Dr. James John Mangalathu, the Principal of the College. Prof. Siby James introduced the Resource Person.



The Endowment Lecture was delivered by Dr. Joseph Dorairaj, the Dean of English and Foreign Languages at Gandhigram Rural Institute, Gandhigram, Tamil Nadu. He is a Fulbright Scholar and an author of many books on literary theory. The topic was 'Orientation to Literary Theory'. The talk lasted for two and a half hours from 10.30 am to 1 pm. There were more than 200 participants including 46 students from the home institution. Prof. Joby Mathew proposed the vote of thanks.







UGC APPROVED COLLEGE WITH POTENTIAL FOR EXCELLENCE RE-ACCREDITED BY NAAC WITH A GRADE (CGPA 3.30)

RECEPTION TO MR. SIBY GEORGE IFS



The Department of Political Science organized a reception to Mr. Siby George IFS, Ambassador to Switzerland and Vatican and former student of the department on 23rd July 2018. H. E. Mar Jacob Muricken, Auxiliary Bishop of Pala and manager of

St. Thomas College Palai presided over the function. Principal Dr. James John welcomed the gathering and Vice Principal Dr. Sunny Kuriakose expressed vote of thanks.

ORIENTATION TALK



Dr. M. S. John Professor and Director of Global Studies and Politics, Central University of Kerala offered an orientation talk to the students of the Political Science on the topic 'New Trends in Political Science'on 27th July 2018 at Tiserant Hall. Dr.Shajimon K. Mathews, HOD welcomed the gathering and Dr. Stany Thomas expressed the words of gratitude.

I DC ORIENTATION

The I DC students were given an orientation talk on 25-07-2018. Mr.Manesh Varghese, HOD, Dept. of History delivered the talk. He discussed the scope of Social Sciences and various opportunities awaiting the students.

I PG FRESHER'S DAY



The Second PG students of Political Science department organised a welcoming programme for I PG students on 6th September 2018 at Tiserant Hall. HoD Dr. Shajimon K Mathews, class teacher of II PG Fr. Mathew Kurian and Dr.Stany Thomas felicitated the gathering.

ANTI-NARCOTIC CLUB ST. THOMAS COLLEGE, PALA

Brief Annual Report 2018 - '19



OFFICE BEAREARS 2018–'19

President : Rahul Soy III; B.A

Vice President : Cyril Joy; III; B.A

Secretary : Harikrishnan G; III B. Sc.

Joint Secretary : Anandhakrishnan C. S; III B.A

Teachers in Charge:1. Prof. Thankachan Augustine

2. Dr. Sojan Pullattu





ST. THOMAS COLLEGE, PALA ARUNAPURAM P. O, KERALA; 686 574



OBSERVANCE OF ANTI - NARCOTIC DAY 2018 & ANTI - NARCOTIC AWARENESS

(Organized jointly by "Anti – Narcotic Club"

Venue: TISSERANT HALL; Time: 1:45 pm − *3:30 pm. on 26 June 2018)*

Programme

Prayer : Vishnu Sivadas

III B. A. Malayalam.

Introductory remarks : **Prof. Thankachan Augustine**

Teacher in Charge, Anti-narcotic Club.

Words of welcome : Prof. Sojan Pullattu,

Teacher in Charge, Anti-narcotic Club.

Presidential Address : Rev. Dr. James John Mangalath,

Principal, St. Thomas College, Pala

Key note address : Sri. T. M. Maju,

Circle Inspector of Excise, Pala

Solo : Sreejith P. R

III B. A Malayalam

Anti – narcotic pledge : Sri. Cyril K. Mathews

Excise Inspector, Pala

Vote of Thanks : Rahul Soy

III B. A Malayalam

National Anthem





Prayer by Vishnu Sivadas

Words of Welcome by Prof. Sojan Pullattu







Presidential address by Rev. Fr. Jamaes John Mangalath, Principal



Key note address by Sri. T. M. Maju, Circle Inspector of Excise, Pala





Anti – narcotic pledge led by Sri. Cyril K. Mathews, Excise Inspector, Pala



Anti – Narcotic pledge



Vote of Thanks by Rahul Soy, President, Anti – narcotic Club

Election Literacy Club

As per the directions of Deputy Directorate, Collegiate Education, Kottayam (Letter No. G4/46991/2017, Date: 06/04/2018), Election Literacy Club was formed in St. Thomas College, Pala, on 13/06/2018. Office bearers of the Club are:

Nodal Officers : 1. Dr. Sijo K. Manuel, Asst. Prof., Dept. of Political Science

2. Sijo Mathew, Asst. Prof., Dept. of Political Science

Chairman : Aby G Cheruvallil (Student)

Vice Chairman : Sneha Soman (Student)

Campus Ambassador: Martin Joseph (Student)

Aim of the Club

To educate the students about voter registration, entire electoral process and related matters by engaging them through well designed attractive resources in hands on experience.

Activities 2018 – 2019

Enrolling Names to Voters' List

Under the auspices of Election Literacy Club, the names of 402 students were enrolled to Voters' List in connection with the General Election 2019. This process ended 30th November 2018.

EVM & VVPAT Machine Awareness

In connection with the General Election 2019, the District Election wing and Election Literacy Club gave an awareness class on EVM & VVPAT Machine to all the students of the college on 14/02/2019.





2017-18

CODE OF CONDUCT MONITORING COMMITTEE

Report of Professional Ethics Programme on Code of Conduct for Administrative Staff

Academic Year (2017-2018)

An annual Orientation Programme on Professional Ethics was conducted for the Non-Teaching Staff of St. Thomas College on 03.06.2017. It was conducted as per the suggestion of the Code of Conduct Committee. Dr. Sunny Joseph, Former Principal of the college made an assessment of the non-teaching staff of St. Thomas College as far as their skills, commitment and efficiency are concerned. Classes were taken by Sri. Jogy Alex, Dr. Sunil C. Mathew and Dr. Sunny Kuriakose on various topics. The programme helped them to reorient themselves in their professional approach.

Palai

03/06/2017

CODE OF CONDUCT MONITORING COMMITTEE

Report of Professional Ethics Programme for Students Academic Year (2017-2018)

After the Gandhi Jayanthi Celebrations, the college conducted a programme with a view to impart the values of environmental consciousness, and professional and moral ethics of students. The programme was arranged in the Open air quadrangle in front of the main block during forenoon of October 02, 2017. The Principal addressed the gathering and spoke on the need of practicing and imparting the moral, spiritual and professional ethics in student life. Teachers also spoke on various subjects related to the need of environmental consciousness and professional ethics applicable to students. The session was followed by group activities and campus cleaning activities in which students were actively participated. The programme was followed by distribution of sweets.

Palai 02/10/2017



Pyincipal

CODE OF CONDUCT MONITORING COMMITTEE

Report of Professional Ethics Programme

Academic Year (2017-2018)

A special programme for all the teaching staff was conducted on 22 December, 2017 in the seminar hall. 79 members were present in the meeting. A main Theme of the gathering was a review of professional ethics and related issues. One session was dedicated for the deliberations on this subject. The Principal welcomed the gathering. The Manager of the college spoke on the occasion about the need of enforcing the code of conduct, including that applicable in the professional ethics of teachers. The Principal spoke on the challenges on implementing the code of conduct in the campus. The Principal Dr. Joy George has made an assessment of the Code of Conduct of the institution effective during the current academic year. The Principal Dr. Joy George spoke on the measures taken to enforce the code of conduct in the campus during the current academic year. He also spoke on the steps which are to be implemented in the next academic year. Talks on Professional Ethics and Social Responsibilities were given by experts in educational and social areas. Teachers came up with their suggestions during the interaction. The Principal assured that all the suggestions would be taken into consideration.

Palai 22/12/2017

CODE OF CONDUCT MONITORING COMMITTEE

Report of Annual Awareness Programme on Code of Conduct

Academic Year (2017-2018)

A special programme for all the teaching staff was conducted on 22 December, 2017 in the seminar hall. 79 members were present in the meeting. The Principal welcomed the gathering. The Manager of the college spoke on the occasion about the need of enforcing the code of conduct. The Principal spoke on the challenges on implementing the code of conduct in the campus. The Principal Dr.Joy George has made an assessment of the Code of Conduct of the institution effective during the current academic year. The Principal Dr.Joy George spoke on the measures taken to enforce the code of conduct in the campus during the current academic year. He also spoke on the steps which are to be implemented in the next academic year. Talks on Professional Ethics and Social Responsibilities were given by experts in educational and social areas. Teachers came up with their suggestions during the interaction. The Principal assured that all the suggestions would be taken into consideration.

Palai

22/12/2017

ANTI-NARCOTIC CLUB ST. THOMAS COLLEGE, PALA

Brief Annual Report 2017 – '18



OFFICE BEAREARS 2017-'18.

Prsident : Jomal Josen, III B.Sc., Mathematics

Vice President : Aslam Basheer, III B. A. Malayalam

Secretary : Gijo Mathew, II B. A. Malayalam

Joint Secretary : Appu Mani, I B. Sc. Mathematics

Co-Ordinator : Donn George Varghese, III. B.A. Politics

Teachers in Charge:1. Prof. Thankachan Augustine

2. Prof. Sojan Pullattu









OBSERVANCE OF ANTI - NARCOTIC DAY 2017

(Organized jointly by

"Walk with the Scholar" & "Anti – Narcotic Club"

Venue: TISSERANT HALL

Time: 2:00 pm - 3:30 pm. on 22 June 2017)

Programme

Prayer : Vishnu Sivadas

II B. A. Malayalam.

Words of welcome : Dr. Jose K. Xavier,

Teacher in charge, 'Walk with the Scholar".

Introductory remarks : Prof. Thankachan Augustine

Teacher in Charge, Antinarcotic Club.

Presidential Address : Dr. Joy George,

Principal, St. Thomas College, Pala

Key note address : Dr. N. M. Sebastian,

Director, ADART Pala.

Vote of Thanks : Sachin Shaji

III B. A Economics

National Anthem



















AWARENESS PROGAMME ON

IMPACTS OF ALCOHOLS, DRUG ABUSE, TOBACO & PAN MASALA

Venue: NEW LIBRARY SEMINAR HALL; Time: 10:00 am - 12:55 pm on 15 Jan 2018

Programme

Prayer : Vishnu Sivadas

II B. A. Malayalam.

Words of welcome : Mr. Jomal Josan,

President, Anti – Narcotic club.

Introductory remarks

& exchange of Flag: Prof. Sojan Pullattu

Teacher in Charge, Antinarcotic Club.

Presidential Address : Dr. Joy George,

Principal, St. Thomas College, Pala

Inauguration &

Key note address : Sri. Suresh Richard,

Deputy Commissioner of Excise, Govt. of Kerala

Vote of Thanks : Mr, Rahul Soy

II B. A Malayalam.































AWARENESS PROGAMME ON
IMPACTS OF ALCOHOLS, DRUG ABUSE, TOBACO & PAN MASALA

Venue: NEW LIBRARY SEMINAR HALL; Time: 1:50 pm - 3:40 pm on 15 Jan 2018

<u>Programme</u>

Words of welcome : Mr. Aslam Basheer,

Vice President, Anti – Narcotic club.

Key note address : Sri. Mathew Kurian,

Assistant Commissioner of Excise, Govt. of Kerala

Felicitation : Don George Varghese

III B. A Politics, Coordinator.

Vote of Thanks : Mr. Cyril Joy

II B. A Malayalam.

National Anthem



















2016-17

Two Day Training Program on SPSS, SAS& R			
in collaboration with CI To I alational Academy			
10 + Health Sciences & Research, Bangalore 10 - 11 March 2017 by Ms. Nivya Creorge & Ms. Irene Elizabeth Joy			
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Newsletter_{2016-'17}

Prof. M. T. Thariyan Endowment Lecture



Sri. K. M. Mani MLA delivers the endowment lecture

Prof. M. T. Thariyan Endowment Lecture 2017 was delivered by Sri. K. M. Mani MLA, former Minister for Finance and Law, Govt. of Kerala, on the topic 'Union Budget, Demonetisation and the Impact on Co-operative Sector', on 16 February 2017. He also distributed scholarships to meritorious students at the meeting organised by the Political Science Association and presided over by Dr. Sunny Joseph, Principal.

Panel Discussion on BREXIT and the Future of the Idea of Europe

A Panel Discussion on the topic 'BREXIT and the Future of the Idea of Europe' was organised by the Department of Politics on 5 August 2016. The panellists were: Prof. Chandran Komath (Govt. College, Kottayam), Prof. Dawson D'Souza (Maharajas College, Ernakulam), Dr. Anil Kumar (University College, Trivandrum) and Dr. Mathew Varghese (Research Fellow).



The panel discussion on BREXIT in progress

Training Programme on R Programming, SAS and SPSS

A two-day training program on 'R Programming, SAS and SPSS' was organized by the Department of Biostatistics during 11-12 March 2017 in collaboration with St. John's Medical College, Bangalore. The resource persons were Ms. Nivya George and Ms. Irene Elizabeth Joy from St. John's Research Academy, Bangalore.



Dr. K. K. Jose speaks at the training programme

CODE OF CONDUCT MONITORING COMMITTEE

Report of Professional Ethics Programme on Code of Conduct for Administrative Staff

Academic Year (2016-2017)

An annual Orientation Programme on Professional Ethics was conducted for the Non- Teaching Staff of St.Thomas College on 04.06.2016. It was conducted as per the suggestion of the Code of Conduct Committee. Fr. N. V. Joseph, Former Principal of the college took class on professional ethics. It was an interactive programme on Life Skills and Professional Values. The programme helped them to reorient themselves in their professional approach. They opined that the programme was very useful to them and would help them in their professional life.

Palai

04/06/2016

CODE OF CONDUCT MONITORING COMMITTEE

Report of Professional Ethics Programme for Students Academic Year (2016-2017)

On the opening day itself, the college conducted a programme with an intention to extend a warm welcome for the students, and to give a message of responsible studentship, responsible citizenship, and professional and moral ethics of students. The programme was arranged in the auditorium during forenoon of June 01, 2016. The Principal addressed the gathering and spoke on the need of practicing and imparting the moral, spiritual and professional ethics in student life. Teachers also spoke on various subjects related to moral values, responsibility in student life. The session was followed by group activities and open discussion in which students were actively participated. The programme was followed by cultural activities.

Palai 01/06/2016



May Principal

CODE OF CONDUCT MONITORING COMMITTEE

Report of Professional Ethics Programme

Academic Year (2016-2017)

A special programme for all the teaching staff was conducted on 22.12.2016 in the seminar hall. 67 members were present in the meeting. The meeting was organized with a view to impart awareness among the teachers about the code of conduct which is already in force in the campus and applicable to students, teachers and the supporting staff. A main Theme of the gathering was a review of professional ethics and related issues. One session was dedicated for the deliberations on this subject. The Principal welcomed the gathering. The Manager of the college spoke on the occasion about the need of enforcing the code of conduct. The Principal spoke on the challenges on implementing the code of conduct in the campus, including the professional ethics of teachers. The Code of Conduct Committee having presented their report, the Manager came up with his suggestions. Most of the teachers felt that the overall discipline of the college should be strengthened. The Principal has made an assessment of the Code of Conduct of the institution during the current academic year. The Principal Dr. Sunny Joseph spoke on the measures including talks, classes, squad work and other measures taken to enforce the code of conduct in the campus during the current academic year. He also spoke on the steps which are to be implemented in the next academic year. Talks on Professional Ethics and Social Responsibilities were given by Fr. Davis Chirammel. Teachers came up with their suggestions during the interaction. The Principal assured that all the suggestions would be taken into consideration.

Principal

Palai 22/12/2016

CODE OF CONDUCT MONITORING COMMITTEE Report of Annual Awareness Programme on Code of Conduct Academic Year (2016-2017)

A special programme for all the teaching staff was conducted on 22.12.2016 in the seminar hall. 67 members were present in the meeting. The meeting was organized with a view to impart awareness among the teachers about the code of conduct which is already in force in the campus and applicable to students, teachers and the supporting staff. The Principal welcomed the gathering. The Manager of the college spoke on the occasion about the need of enforcing the code of conduct. The Principal spoke on the challenges on implementing the code of conduct in the campus. The Code of Conduct Committee having presented their report, the Manager came up with his suggestions. Most of the teachers felt that the overall discipline of the college should be strengthened. The Principal has made an assessment of the Code of Conduct of the institution during the current academic year. The Principal Dr. Sunny Joseph spoke on the measures including talks, classes, squad work and other measures taken to enforce the code of conduct in the campus during the current academic year. He also spoke on the steps which are to be implemented in the next academic year. Talks on Professional Ethics and Social Responsibilities were given by Fr.Davis Chirammel. Teachers came up with their suggestions during the interaction. The Principal assured that all the suggestions would be taken into consideration.

Palai

22/12/2016

Anti-Narcotic Club, St. Thomas College Pala

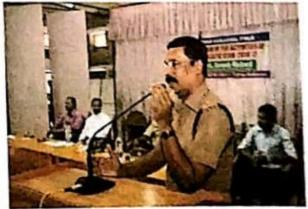
Activities Report - Academic year 2016-17

The anti-narcotic club was formed in the college to sensitize the students on drug abuse and to strengthen the participation of students in anti-narcotic campaigns through organizing various programmes like awareness classes, poster exhibition, pamphlet distribution etc. During the academic year 2016-17, the Club had 125 members who worked earnestly to make the campus drug free. We did not find any students using drugs in the Campus and also no cases of selling drugs and narcotic substances nearby the Campus. The main programmes organized by the Club during this academic year were Awareness classes, Pledge taking by students to refrain from alcohol and drug abuse, Poster designing competition and Poster exhibition.

Inauguration & Awareness Class for third year Degree students

The formal inauguration of the activities of the Anti-Narcotic Club for the academic year 2016-17 was held in the college auditorium on 26 July 2016 at 2.00 P.M. Sri. Suresh Richard, Deputy Commissioner of Excise, Kottayam inaugurated the Club activities of the year at a meeting presided over by Rev. Dr. Fr. James John Mangalath, Vice Principal, St. Thomas College, Pala. It was followed by awareness class and interactive session for the III DC students of the college by Shri. Suresh Richard, Deputy Commissioner of Excise, Kottayam. At the end of the class, all the participants took a pledge to refrain from alcohol and drug abuse and to work earnestly for promoting an addiction-free society. Dr. Biju K C, Director, Anti-Narcotic Club, welcomed the function and Ashin Paul, Secretary, proposed the vote of thanks.





Poster Designing Competition

Anti-Narcotic Club, St. Thomas College Pala organized a Poster Designing Competition for the students of the college on the theme "പതയുന്ന ലഹരി, പതറുന്ന ജീവിതം" on 21 February 2017. The response from the students was marvelous. Fifty students participated in the event. The winners were awarded cash prizes (Rs. 1000, Rs. 750 and Rs. 500 were the first, second and third prizes respectively) and certificate of merit.

Poster exhibition

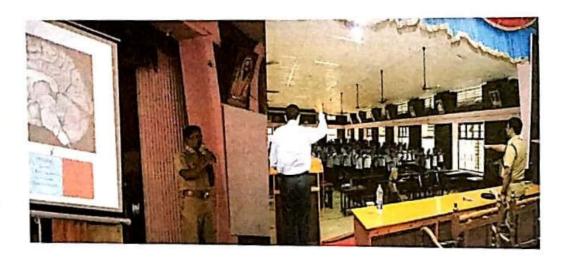
All the 50 posters designed by the students were displayed in the college auditorium on 22 February 2017. The programme was intended to sensitize the students on the dangers of drugs and alcohol consumption and to send a strong message against it. All the students of the college visited the exhibition.





Awareness class for the first year and second year Degree students

Anti-Narcotic Club, St. Thomas College Pala organized a Talk on "പതയുന്ന ലഹരി, പതരുന്ന ജീവിതം" for the first year and second year students of the college on 22 February 2017. The lecture was delivered by Sri. Suresh Richard, Deputy Commissioner of Excise, Kottayam at a meeting presided over by Dr. Sunny Joseph, Principal St. Thomas College Pala. All the students took a pledge at the end of the class to refrain from alcohol and drug abuse and to work earnestly for promoting an addiction-free society. After the talk, the chief guest distributed the cash prizes and certificates to the winners of poster designing competition which held on 21 February 2017. Prof. Roberse Thomas, Director, Anti-Narcotic Club, welcomed the gathering and Ashin Paul, Secretary, proposed the vote of thanks.



Dr. Biju K.C. Director Anti-narcotic club St. Thomas College Pala

Ashin Paul Secretary

The information given above is true and correct to the best of my knowledge and belief.

Pala 12/06/2017

2015-16

CODE OF CONDUCT MONITORING COMMITTEE

Report of Professional Ethics Programme on Code of Conduct for Administrative Staff

Academic Year (2015-2016)

An annual orientation Programme on Professional Ethics was conducted for the Non- Teaching Staff of St. Thomas College on 06.06.2015. It was conducted as per the suggestion of the Code of Conduct Committee. Dr. Kurian Mattam, Former Principal of the college took class on professional ethics and Dr. Sunil C. Mathew, the IQAC coordinator introduced the regulations of UGC and NAAC which are applicable to the supporting staff to create a smooth working atmosphere in the campus. Smt. Sinimol Chandran took a class on the computer softwares useful for the administrative staff. On the whole, it was an interactive programme on Life Skills and Professional Values. The programme helped them to reorient themselves in their professional approach. They opined that the programme was very useful to them and would help them in their professional life.

Principal

Palai

06/06/2015

CODE OF CONDUCT MONITORING COMMITTEE

Report of Professional Ethics Programme for Students Academic Year (2015-2016)

The college conducted a programme on October 02, 2015 with a view to impart the values of environmental consciousness, and professional and moral ethics of students. The programme was arranged in the Open air quadrangle in front of the main block during forenoon of October 02, 2015. The Principal addressed the gathering and spoke on the need of practicing and imparting the moral, spiritual and professional ethics in student life. Teachers also spoke on various subjects related to the need of environmental consciousness and professional ethics applicable to students. The session was followed by group activities and campus cleaning activities in which students were actively participated. The programme was followed by distribution of sweets.

Palai 02/10/2015



CODE OF CONDUCT MONITORING COMMITTEE

Report of Professional Ethics Programme

Academic Year (2015-2016)

A special programme for all the teaching staff was conducted on 25.02.2016 in the seminar hall. 101 members were present in the meeting. The meeting was organized with a view to impart awareness among the teachers about the code of conduct which is already in force in the campus and applicable to students, teachers and the supporting staff. A main Theme of the gathering was a review of professional ethics and related issues. One session was dedicated for the deliberations on this subject. Dr. Kurian Mattam, former Principal of the college spoke on the occasion about the new challenges on implementing the code of conduct on professional ethics in an institution like St. Thomas College. The Principal has made an assessment of the Code of Conduct of the institution during the current academic year. The Principal Dr. Sunny Joseph spoke on the measures which have already taken during 2015-2016 including talks, classes, squad work and other measures taken to enforce the code of conduct in the campus. He also spoke on the steps which are to be implemented in the next academic year. Teachers came up with their suggestions during the interaction. The Principal assured that all the suggestions would be taken into consideration.

Palai 25/02/2016



CODE OF CONDUCT MONITORING COMMITTEE

Report of Annual Awareness Programme on Code of Conduct Academic Year (2015-2016)

A special programme for all the teaching staff was conducted on 25.02.2016 in the seminar hall. 101 members were present in the meeting. The meeting was organized with a view to impart awareness among the teachers about the code of conduct which is already in force in the campus and applicable to students, teachers and the supporting staff. Dr. Kurian Mattam, former Principal of the college spoke on the occasion about the new challenges on implementing the code of conduct in an institution like St. Thomas College. The Principal has made an assessment of the Code of Conduct of the institution during the current academic year. The Principal Dr. Sunny Joseph spoke on the measures which have already taken during 2015-2016 including talks, classes, squad work and other measures taken to enforce the code of conduct in the campus. He also spoke on the steps which are to be implemented in the next academic year. Teachers came up with their suggestions during the interaction. The Principal assured that all the suggestions would be taken into consideration.

Palai

25/02/2016



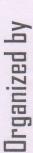
AWARENESS PROGRAMME

ZO

"PROSPECTS OF LED BULBS"

AND

LED BULB ASSEMBLING



INTERNAL QUALITY ASSURANCE CELL, ST. THOMAS COLLEGE, PALA In association with

Department of Physics

11 March 2016



Tisserant Hall

INTERNAL QUALITY ASSURANCE CELL ST. THOMAS COLLEGE PALAI

AWARENESS PROGRAMME ON PROSPECTS OF LED BULBS

AND

TRAINING ON LED BULB ASSEMBLING

11 March 2016

Programme

1. Prayer

2. Welcome:

Dr. Sunil C Mathew, IQAC Co-ordinator

3. Talk:

Dr. Ison V Vanchipurackal,

Assistant Professor

Dept. of Physics

St. Thomas College Palai

4. Training on LED Bulb Assembling: Dr. Ison V Vanchipurackal

5. Vote of Thanks:

Mr. James Joseph, I B.Sc. Maths.

Organized by
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St. Thomas College Palai

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3 2.	Jijo Joseph	MPC Politics	dijo
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2014-15

CODE OF CONDUCT MONITORING COMMITTEE

Report of Professional Ethics Programme on Code of Conduct for Administrative Staff

Academic Year (2014-2015)

An annual Orientation Programme on Professional Ethics was conducted for the Non-Teaching Staff of St. Thomas College on 07.06.2014. It was conducted as per the suggestion of the Code of Conduct Committee. Dr. K. K. Jose, Former Principal of the college took class on professional ethics and soft skills useful for the effective imparting of administrative skills. On the whole, it was an interactive programme on Life Skills and Professional Values. The programme helped them to reorient themselves in their professional approach. They opined that the programme was very useful to them and would help them in their professional life.

Palai

07/06/2014

CODE OF CONDUCT MONITORING COMMITTEE

Report of Professional Ethics Programme for Students

Academic Year (2014-2015)

On December 01, 2014, the college conducted a programme with a view to impart the values of professional and moral ethics of students. The programme was arranged in the auditorium during the afternoon session. Classes by medical experts were arranged. The Principal addressed the gathering and spoke on the need of practicing and imparting the moral, spiritual and professional ethics in student life. Teachers also spoke on various subjects related to the professional ethics applicable to students. The session was followed by an active discussion where students were actively participated. In view of the programme the time schedule of the college was rearranged.

Palai 01/12/2014



CODE OF CONDUCT MONITORING COMMITTEE

Report of Professional Ethics Programme

Academic Year (2014-2015)

A meeting of all the teaching staff including permanent, guest and ad-hoc categories were conducted on 28.03.2015 in the seminar hall. The meeting was organized with a view to impart awareness among the teachers about the code of conduct which is already in force in the campus and applicable to students, teachers and the supporting staff. A main Theme of the gathering was a review of professional ethics and related issues. One session was dedicated for the deliberations on this subject. The Manager of the college spoke on the need of implementing, revising and regulating the code of conduct on professional ethics and he has made an assessment of the Code of Conduct of the institution during the current academic year. The Principal Fr. N. V. Joseph spoke on the measures which have already taken during 2014-2015 including talks, classes, squad work and other measures taken to enforce the code of conduct in the campus. He also spoke on the steps which are to be implemented in the next academic year. Teachers came up with their suggestions during the interaction. The meeting came to an end with the assurance by the Principal that the suggestions would be taken into consideration.

Palai 28/03/2015



Principal

parakkettil

CODE OF CONDUCT MONITORING COMMITTEE

Report of Annual Awareness Programme on Code of Conduct

Academic Year (2014-2015)

A General Staff meeting of all the teaching staff including permanent, guest and adhoc categories were conducted on 28.03.2015 in the seminar hall. The meeting was organized with a view to impart awareness among the teachers about the code of conduct which is already in force in the campus and applicable to students, teachers and the supporting staff. The Manager of the college spoke on the need of implementing, revising and regulating the code of conduct and he has made an assessment of the Code of Conduct of the institution during the current academic year. The Principal Fr. N. V. Joseph spoke on the measures which have already taken during 2014-2015 including talks, classes, squad work and other

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which are to be implemented in the next academic year. Teachers came up with their

suggestions during the interaction. The meeting came to an end with the assurance by the

Principal that the suggestions would be taken into consideration.

Palai 28/03/2015

LOMAS COLLEGE

Principal

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