

16th Prof. K. V. Thomas Endowment Workshop on
“Sustainable Energy Storage and Conversion”

15-16 January 2018

BROCHURE

Organising Committee

1. Fr. Dr. Augustine Thottakkara CMI, Manager (Patron)
2. Fr. Dr. Prasant Palackappillil CMI, Principal (Chairman)
3. Fr. Dr. Jose John Thuravackal CMI, Vice Principal
4. Dr. Joseph John (General Convener)
5. Dr. K B Jose
6. Dr. Joseph T Moolayil
7. Dr. Thommachan Xavier
8. Dr. V S Sebastian
9. Dr. M George
10. Dr. Jorphin Joseph (Co-ordinator)
11. Dr. Franklin J
12. Dr. Jinu George
13. Dr. Grace Thomas
14. Dr. Ignatious Abraham
15. Mr. Midhun Dominic C D
16. Mr. Senju Devassykutty
17. Ms. June Cyriac
18. Dr. Ramakrishnan S
19. Dr. Abi T G
20. Ms. Ragi A.S

Registration fee

Students/ Research Scholars	: Rs.100/-
Faculty	: Rs.200/-
Delegates from industry	: Rs.300/-

Space is limited to approximately 100 participants: early registration is advised.

The Department of Chemistry, Sacred Heart College, Thevara, Kochi invites you to the National Workshop on

SUSTAINABLE ENERGY STORAGE AND CONVERSION

16th Prof. K.V. Thomas Endowment Workshop

DAY 1
ELECTROCHEMISTRY & ENERGY STORAGE

ELECTROCHEMICAL SUPER CAPACITORS

RECHARGEABLE BATTERIES

DAY 2
ENERGY CONVERSION

FUEL CELLS

SOLAR CELLS

Learn how batteries, fuel cells, solar cells, and super capacitors work, how to improve their performance, what are the material challenges behind these technologies, & how they are key in the world of renewable energy

Fr. Melesius Hall
Sacred Heart College (Autonomous)
Thevara, Kochi, Kerala
January 15 - 16, 2018
9AM - 4PM

All correspondence shall be addressed to:
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SACRED HEART COLLEGE

Sacred Heart College, Thevara is an autonomous college in the state of Kerala affiliated to Mahatma Gandhi University, Kottayam. The college was established in the year 1944 by the Carmelites of Mary Immaculate (CMI). It was initially affiliated to University of Madras. The College is ideally situated, on a peninsular strip known as Thevara, in the city of Kochi. The Vembanad lake adds to the beautiful ambience of the campus. As a crowning glory for its history of academic and non-academic achievements, the institution obtained Autonomous status in June 2014.

DEPARTMENT OF CHEMISTRY

The Department of Chemistry was established in 1946 and has celebrated its Platinum Jubilee in the year 2016. It offers one undergraduate programme and two post graduate programmes (Chemistry and Pharmaceutical Chemistry). The Department is a recognised research centre under Mahatma Gandhi University and is now supported by DST under FIST programme.

PROF. K V THOMAS ENDOWMENT TRUST



Prof. K V Thomas served the Department as a member of the faculty and later as HoD. He is the former Union Minister for Food and Public Distribution and the Chairman of Public Accounts Committee, Government of India and the Minister for Tourism and Fisheries, Government of Kerala. Presently, he is the Member of Parliament representing Ernakulam constituency. The trust organises National Seminar annually, to honour their beloved Professor. This is the sixteenth edition of the National Seminar.



The objective of this workshop is to provide a forum for experts, researchers and students to discuss the recent advances in fuel cells, solar energy conversion devices, energy storage devices and the impact of functional/nomaterials on energy conversion and storage efficiencies. It also aims at helping the post-graduate students to narrow-down their research interests in to the vast and intriguing fields of energy storage and conversion.

SPEAKERS



Dr. Vijayamohan K Pillai
Director, CSIR-CECRI
Karaikudi



Dr. M. M. Shaijumon
Associate Professor
IISER TVM



Dr. Anil Verma
Associate Professor
IIT Delhi



Dr. Ranjith Krishna Pai
Scientist 'D' / Deputy Secretary
Technology Missions Division, DST

REPORT

The Department of Chemistry, Sacred Heart College, Thevara in association with Prof. K.V. Thomas Endowment Trust, Agency for Non-conventional Energy and Rural Technology (ANERT) and Kerala State Council for Science, Technology and Environment (KSCSTE) organized a two-day workshop on “sustainable energy storage and conversion”. The workshop was conducted on 15th (Monday) and 16th (Tuesday) January, 2018. The objective of this workshop was to provide a forum for experts, researchers and students to discuss the recent advances in fuel cells, solar energy conversion devices, energy storage devices such as batteries and super capacitors and the impact of functional/nanomaterials on energy conversion and storage efficiencies. It also aimed at helping the post-graduate students to narrow-down their research interests in to the vast and intriguing fields of energy storage and conversion.

On the first day (15 January, 2018), the registration formalities started at the registration desk from 9:00 am onwards. All the registered candidates were provided with the course material containing the handouts of the presentations, writing pad and a pen. The formal inaugural ceremony was started at 9:30 am with a prayer. The Manager, Fr. Dr. Augustine Thottakkara CMI was the president of the inaugural meeting. The Head of The Department (HoD) welcomed all the delegates and other participants of the programme. Dr. Joseph T. Moolayil introduced the Prof. K V Thomas Endowment Workshop and its background. The workshop was formally inaugurated by Dr. Vijayamohan K. Pillai, Director, CSIR-CECRI, Karaikudi. In his keynote address, he talked on the topic “Electrochemical Energy Storage: Sustainable options for the future using engineered carbon”, introducing the conference topic. The formal inauguration came to an end by 11:30 am after the vote of thanks by Dr. K. B. Jose.

The first session of the workshop was handled by Dr. Vijayamohan K Pillai on the topic “what is super about super capacitors?” The post lunch session was on the topic “rechargeable batteries: materials, technologies and recent trends” by Dr. M. M. Shaijumon, IISER, Thiruvananthapuram. The programme on the first day came to an end by 4:15 pm.

The second day (16 January, 2018-Tuesday) was devoted to energy conversion systems. The first speaker was Dr. Anil Verma from IIT Delhi. He made a 2.5 hour presentation on the topic “Fundamentals of Electrochemical Storage and Conversion Devices:

Fuel cells and redox flow batteries. The post-lunch session was handled by Dr. Suraj Soman, DST-Inspire Faculty, NIIST, Thiruvannthapuram. His presentation was on “Solar Photovoltaics: Fundamentals and emerging trends”. He also exhibited some prototype materials and devices used in solar systems during his 2 hour-long presentation. In the valedictory meeting, the Principal, Dr. Prasant Palackappillil CMI urged the participants to adopt ‘green ways of living and consuming the resources’ for saving the ‘mother earth’. The workshop formally came to an end by 4: 30 pm. All the participants were provided with the certificates duly signed by the Director of Collegiate Education, Fr. Principal and the HoD.

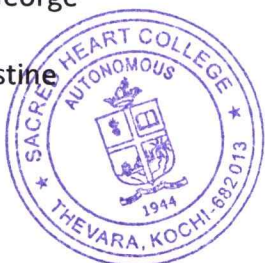
PHOTO:



Dr. D. Vijayamohan K Pillai Inaugurating the National Workshop on Sustainable Energy Storage and Conversion (15/01/2017)

LIST OF PARTICIPANTS

1. Dr. Joseph John
2. Dr. K. B. Jose
3. Dr. Joseph T Moolayil
4. Dr. Thommachan Xavier
5. Dr. V. S. Sebastian
6. Dr. M. George
7. Dr. Jorphin Joseph
8. Dr. Franklin J
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14. June Cyriac
15. Dr. Ramakrishnan S
16. Dr. Abi T G
17. Dr. Roby Cherian
18. Dr. Jimmy Sebastian
19. Dr. Sumod S G
20. Dr. Mathew George
21. Dr. Pius Augustine




Dr. Johnson X Palackappillil
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