

**Program Schedule : C-MET's Annual Foundation Day
and Technical Sessions of
Int'l Conference on Supercapacitors, Energy storage & Applications
(ICSEA-2019)**

Venue: TMCAA Academic Complex, Govt. Medical College, Thrissur-680581, Kerala

08.30-9.30 REGISTRATION

ANNUAL FOUNDATION DAY & ICSEA-2019 INAUGURAL FUNCTION

9.30-11.45 Invocation & Lighting of Lamp

Welcome

Dr. N Raghu, Director, C-MET, Thrissur

Address by Director General, C-MET

Dr. N R Munirathnam, Director General, C-MET

Address by Guests of Honour

Dr. Vijayamohan K Pillai, Outstanding Scientist & Former Director, CSIR-CECRI

Prof. Roberto Gunnella, University of Camerino, Italy

Address by Corporate Dignitary

Dr. Raja Munusamy, Senior General Manager, Tata Motors Ltd., Pune

Address by Chief Guest

Shri Ajay Sawhney, IAS, Secretary, Ministry of Electronics & IT, Govt. of India

Release of Souvenir

Achievements of C-MET – Cursory Glance

Dr. N R Munirathnam, Director General, C-MET

Vote of Thanks

Dr. N C Pramanik, Convener, AFD & ICSEA-2019

High Tea

11.45-12.45 Foundation Day Lecture

“Electrochemical energy storage: Role of 2D materials for enabling a sustainable future”

Dr. Vijayamohan K Pillai, Outstanding Scientist & Former Director, CSIR-CECRI, Karaikudi, India

12.45-14.00 Lunch

TECHNICAL SESSIONS OF ICSEA-2019

8th March 2019: Session 1 (Main Hall)

SUPERCAPACITORS: APPLICATIONS & OPPORTUNITIES

Chair: Dr. Vijayamohan K Pillai

14.00-14.30	PL-01	Hussain O Md., Sri Venkateswara University, Tirupati, India “Nanostructured carbon-transition metal oxide composites for high performance supercapatteries”
14.30-15.00	IL-01	Ravinder Dahiya, University of Glasgow, UK “Flexible supercapacitor for energy autonomous E-skins”
15.00-15.30	IL-02	Sandip Chatterjee, Ministry of Electronics & Information Technology, Govt. of India “Market potential for energy storage materials and portable energy systems”
15.30-16.00	IL-03	Mani Karthik, International Advanced Research Centre (ARCI), Hyderabad, India “Opportunities & challenges of supercapacitor technologies for real-world applications”
16.00-16.10		Tea Break

8th March 2019: Session 2 (Main Hall)

ENERGY STORAGE MATERIALS

Chair: Prof. Ravinder Dahiya

16.10-16.40	PL-02	Roberto Gunnella, Camerino University, Camerino, Italy <i>"Physics of lithiation & delithiation processes in metal oxide nanoparticles"</i>
16.40-17.10	IL-04	M M Shaijumon, Indian Institute of Science Engineering & Research (IISER), Thiruvananthapuram, India <i>"Functional materials for hybrid ion capacitors"</i>
17.10-17.30	OP-01	Sachindranath Das, Jadavpur University, Kolkata, India <i>"Morphological ordering on electrochemical performance of metal oxide composites"</i>
17.30-17.50	OP-02	Chinnasamy Murugesan, Indian Institute of Science (IISc), Bangalore, India <i>"Realization of (de)intercalation chemistry in rechargeable hybrid Sodium-air batteries"</i>
18.00 hrs		Cultural Evening followed by Dinner at C-MET premises

9th March 2019: Session 3 (Main Hall)

POWER ELECTRONICS APPLICATIONS

Chair: Dr. S A Ilangovan

09.30-10.00	PL-03	P Sudhakar, OSD to Dept. of Atomic Energy Secretary & Former CMD, ECIL, Hyderabad, India <i>"Paradigm shift in power electronics with supercapacitors"</i>
10.00-10.30	IL-05	Shantanu Das, Bhabha Atomic Research Centre (BARC), DAE, Mumbai, India <i>"Interpreting supercapacitor behaviour by a new formula for "Charge-storage"</i>
10.30-11.00	IL-06	S Swapna Kumar, Vidya Academy of Science & Technology, Thrissur, India <i>"Supercapacitor applications in Power electronics domain"</i>
11.00-11.15		Tea Break

9th March 2019: Session 4A (Main Hall)

ADVANCED FUNCTIONAL MATERIALS FOR ENERGY STORAGE

Chair: Prof. Roberto Gunnella

11.15-11.45	IL-07	Manickam Minakshi, Murdoch University, Australia <i>"Magnesium molybdate hierarchical architectures for high performance devices"</i>
11.45-12.15	IL-08	S A Ilangovan, Vikram Sarabhai Space Centre (VSSC), Thiruvananthapuram, India <i>"Supercapacitor to supercapattery: Emerging trends"</i>
12.15-12.45	IL-09	S Sampath, Indian Institute of Science, Bangalore, India <i>"1-T MoSSe based supercapacitors for AC filtering applications"</i>
12.45-13.05	OP-03	S R Polaki, Indira Gandhi Centre for Atomic Research (IGCAR), Kalpakkam, India <i>"Super-wetting vertical graphene nanosheets for energy storage applications"</i>
13.05-13.45		Lunch Break

9th March 2019: Session 4B (Side Hall)

DESIGN & PROCESS FOR ENERGY STORAGE DEVICES

Chair: Dr. R L Sharma

11.15-11.45	IL-10	R N Basu, CSIR-Central Glass & Ceramic Research Institute (CGCRI), Kolkata, India <i>"A novel approach to produce ceramic separator for electrochemical device applications"</i>
11.45-12.15	IL-11	R Prasada Rao, Centre for Materials for Electronics Technology (C-MET), Pune, India <i>"Solid electrolytes for batteries"</i>
12.15-12.35	OP-04	Biplab Kumar Kuila, Banaras Hindu University (BHU), Varanasi, India <i>"Graphene based binary or ternary nanohybrids with PANI & MnO₂ for supercapacitor application"</i>
12.35-12.55	OP-05	Mrinmoy Kumar Chini, Indian Institute of Technology, Roorkee, India <i>"Hydrothermally reduced nanoporous graphene-polyaniline nanofiber composite for Supercapacitor"</i>
13.05-13.45		Lunch Break

9th March 2019: Session 5 (Poster Hall)

13.45 – 15.45

POSTER PRESENTATION : PP 101 – PP 175

15.45-16.00

Tea Break

9th March 2019: Session 6A (Main Hall)

AUTOMOTIVE APPLICATIONS

Chair: Shri P Sudhakar

- 16.00-16.30 **IL-12** Patrick Glynn, Queensland University, Australia
"High density thermal energy storage & applications"
- 16.30-17.00 **IL-13** R L Sharma, SPEL Technologies, Pune, India
"Supercapacitors - The future in-charge of energy storage"
- 17.00-17.30 **IL-14** V Raman, International Advanced Research Centre (ARCI), Chennai, India
"Hybridization of fuel cells and supercapacitors for electric vehicle applications"
- 17.30-17.50 **OP-06** A Bharathi Sankar, International Advanced Research Centre (ARCI), Hyderabad, India
"Design, development and real-time demonstration of supercapacitor powered electric bicycle"

9th March 2019: Session 6B (Side Hall)

EMERGING CONCEPTS FOR SUPERCAPACITORS

Chair: Dr. Patrick Glynn

- 16.00-16.30 **IL-15** M Sathish, CSIR-Central Electrochemical Research Institute (CECRI), Karaikudi, India
"Role of electrolytes in high energy supercapacitor fabrication using porous carbon electrodes"
- 16.30-16.50 **OP-07** N C Pramanik, Centre for Materials for Electronics Technology (C-MET), Thrissur, India
"Indigenization of aerogel supercapacitors for energy storage applications"
- 16.50-17.10 **OP-08** Himadri Tanaya Das, Pondicherry University, Pondicherry, India
"Reinforcing performance of hybrid supercapacitors with magnetic electrodes"
- 17.10-17.30 **OP-09** Vidyanand Vijayakumar, CSIR-National Chemical Laboratory (NCL), Pune, India
"UV induced in-situ synthesis of polymer electrolytes for Supercapacitors"

10th March 2019: Session 7A (Main Hall)

MATERIALS FOR HYBRID SUPERCAPACITORS

Chair: Prof. Minakshi Manickam

- 09.30-10.00 **IL-16** Rajan Jose, Renewable Energy Materials Laboratory, University of Malaysia, Malaysia
"Materials designs for battery–supercapacitor hybrid energy storage devices"
- 10.00-10.30 **IL-17** Bharat B Kale, Centre for Materials for Electronics Technology (C-MET), Pune, India
"Strategies of nano-structured materials for energy storage"
- 10.30-10.50 **IL-18** Reshmi C Shende, Indian Institute of Technology (IIT), Chennai, India
"Carbon nanomaterials for advanced energy applications"
- 10.50-11.10 **OP-11** Sarigamala Karthik Kiran, Indian Institute of Technology (IIT), Mumbai, India
"Fab. of 3D-flower like nanostructures using graphene-based core-shell for supercapacitor Application"
- 11.10-11.30 **OP-12** G Binitha, Amrita Centre for Nanoscience and Molecular Medicine, Cochin, India
"Surface engineered Li₄Ti₅O₁₂ for ultra-fast lithium ion batteries"
- 11.30-11.40 **Tea Break**

10th March 2019: Session 7B (Side Hall)

RELATED MATERIALS & APPLICATIONS

Chair: Dr. Bharat B Kale

- 09.30-10.00 **IL-19** M Kamruddin, Indira Gandhi Centre for Atomic Research (IGCAR), Kalpakkam, India
"Vertical Graphene Nano-walls for supercapacitor applications"
- 10.00-10.30 **IL-20** S R C Reddy, Electronics Corporation of India Limited (ECIL), Hyderabad, India
"Supercapacitors modules for applications in VVPAT & other power electronic devices"

10.30-10.50	OP-13	Vasu Shanmugam, International Advanced Research Centre (ARCI), Chennai, India <i>"In-situ C-coating on MO-based cathodes for improved electrochemical properties of Li-ion battery"</i>
10.50-11.10	OP-14	Katchala Nanaji, International Advanced Research Centre (ARCI), Hyderabad, India <i>"Graphene sheet derived from agricultural bio-waste as electrode for high performing supercapacitor"</i>
11.10-11.30	OP-15	Pratibha R Nikam, M J College, Jalgaon, India <i>"CdSe nanoparticles sensitized ZnO nanorods photoanode for solar energy application"</i>

11.30-11.40 **Tea Break**

10th March 2019: Session 8 (Poster Hall)

11.40-13.15 POSTER PRESENTATION : PP 176 – PP 247

13.15-14.00 **Lunch Break**

10th March 2019: Session 9 (Main Hall)

PRODUCTS / INDUSTRY INTERACTION

Chair: Dr. R Ratheesh

14.00-14.30	IL-21	Arunkumar Chandrasekhar, Vellore Institute Technology, Vellore, India <i>"Tribo-electric nanogenerators for self-powered systems"</i>
14.30-14.45	IND-1	R Hariharan, Bry-Air (Asia) Pvt. Ltd. <i>"Dry Rooms for Lithium Battery Production"</i>
14.45-15.00	IND-3	M Venkatesh, Research Supports India, Chennai <i>"Energy research solutions"</i>

15.00-15.30 **Tea Break**

10th March 2019: Session 10 (Main Hall)

PANEL DISCUSSIONS

Chair: Dr. N R Munirathnam

15.30-16.15	PD	Panel Discussions & Future Roadmap
16.15-16.30	CS	Concluding Session