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on

ADVANCED LITHIUM-ION BATTERY FOR EV

6th to 10th December 2021

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## Advanced Lithium-ion Battery for EV

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<td>Day 1 6th Dec (4.15pm to 4.30pm)</td>
<td>Inaugural Session</td>
<td>Mr. R.A. Armstrong, Chairman, SAEISS &amp; Dr Rahul Walawalkar President &amp; MD of Customized Energy Solutions India Pvt. Ltd.</td>
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<td>Day 1 6th Dec (4.30 pm to 6.30 pm)</td>
<td>Introduction to Advanced Lithium-ion Battery for EV (50 Minutes)</td>
<td>Dr Abhik Banerjee</td>
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<td>Fundamentals of Advanced Lithium-ion Battery (50 Minutes)</td>
<td>Dr Abhik Banerjee</td>
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<td>Day 2 7th Dec (4.30 pm to 6.30 pm)</td>
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<td>Mr Raghavendra Gupta</td>
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<td>Performance Parameters of LIB in EV Application (60 Minutes)</td>
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<td>Day 3 8th Dec (4.30 pm to 6.30 pm)</td>
<td>Different Form Factors of Lithium-ion Batteries (60 Minutes)</td>
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<td>Future Advancement of Lithium-ion Battery (60 Minutes)</td>
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<td>Day 4 9th Dec (4.30 pm to 6.30 pm)</td>
<td>Overview of EV Pack Design (60 Minutes)</td>
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<td>Battery Management System (60 Minutes)</td>
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<td>Day 5 10th Dec (4.30 pm to 6.30 pm)</td>
<td>Safety Standards (60 Minutes)</td>
<td>Dr Shweta Soam</td>
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<td>Recycling Options (60 Minutes)</td>
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Dr. Abhik Banerjee received a BSc and MSc in chemistry from University of Calcutta. He completed PhD in chemistry from National Chemical Laboratory Pune,(2015), where his thesis work focused on novel nanostructure materials for energy, Later he joined postdoc at University of California, San Diego (UCSD) with Professor Shirley Meng where his research focused on fundamental interfacial charge transfer limitation of solid state battery technology. Abhik currently holds the position of team leader of Research Institute of Sustainable Energy (RISE) under TCG CREST. The RISE will work on underlying causes that are currently hindering solid state battery, Silicon and Li metal anode, while providing practical approaches towards enabling safety, higher energy density and fast charging batteries. Dr Abhik Banerjee has more than 10 years of experience in the design, novel chemical synthesis, characterization.
Speakers Profile

Mr Raghavendra Gupta is a research scholar in Mechanical Engineering Department in IIT Delhi and working on Lithium-ion batteries. Before coming to IIT Delhi, he did his M.Tech. from NIT Meghalaya and his research was on detection of breast cancer in humans using thermal means. He has completed B.Tech in 2014 from UPTU in Mechanical Engineering as a topper. The current research on Lithium-ion batteries covers thermal parameter estimation of commercial cylindrical cells, core temperature estimation, state of charge estimation, fabrication of coin cells, and use of machine learning concepts such as Surrogate modelling and Genetic algorithm for optimization and inverse analysis in lithium-ion cells.

Dr Milind V. Kulkarni presently working as ‘Senior Scientist’ and ‘Group Head’ at Nanocomposite Laboratory, Centre for Materials for Electronics Technology (C-MET), Pune, He has received his Ph.D. on “Conducting Polymer Based Sensors”, in 2002 from University of Pune, Pune, India. Recently, he is developing ‘Li - S’ batteries and ‘Li- air’ batteries for Automobile applications (Hybrid Electrical Vehicles). He also have developed and demonstrated Polyaniline based thin, flexible, light weight and ultra-low cost battery. His main field of current scientific interest is Nanomaterials and Polymer nanocomposites for multifunctional applications, Development of conducting/electroactive polymers and their nanocomposites, ‘Flexible and Wearable’ electronics devices, Nanomaterials for ‘ink-jet printed, ‘flexible electronics devices’. Dr. Kulkarni has published more than 105 research paper in international journals of high repute. He has filed more than 20 patents (including 1 US Patent & 1 PCT). He is the recipient of the prestigious “Young Associate” award in 2009 and “Fellow” of Maharashtra Academy of Sciences in Year 2013.
Dr Yashodhan Gokhale is Vice President, Business development at Octillion Power Systems India Pvt. Ltd.

He has worked on the liquid cooled Lithium-ion battery packs and BMS deployment in India (200Mwh +) for Electric Buses and Cars. Dr Yashodhan Gokhale received the Impact champion Award, EPSRC Research Associate for Silica Nano process, Uni. of Strathclyde, Glasgow; Brian Scarlett award for Outstanding Contribution by Royal Society of Chemistry (RSC) for Titanium dioxide & Silver nanoparticles research, and the DFG & Marie Curie Actions Scholarship for innovation research.

Dr. Shweta Soam joined CES in September 2021. Her focus is on research & development and infrastructure development of Hydrogen Energy and Fuel Cells Technology. Shweta has depth knowledge of various Emerging technologies owing to her many years of experience in the research and development of Hydrogen Energy and Fuel Cells. Additionally, she has experience of extraction of chemicals, synthesis of polymers, formulations of polymeric films, degradation and analytical research development. She has a PhD in Chemistry from CCS University Meerut. She worked with Parabolic Drugs limited, CCS University, Bulgarian Academy of Sciences (under MOU), University of Calcutta and Ministry of New and Renewable Energy and National Institute of Solar Energy.

Dr Dhamodaran Santhanagopalan is an Associate Professor at Centre for Nanosciences, Amrita Vishwa Vidyapeetham, Kochi Campus (Kerala). He completed his PhD in Physics from University of Hyderabad in 2007.

He was part of Laboratory for Energy Storage and Conversion (LESC) headed by Professor Ying Shirley Meng and his major research activity at UCSD was on focused ion beam fabrication of electrochemically active nano-scale solid-state Li-ion batteries for in situ STEM observation of interfacial phenomena. During this period he was part of the US-DOE funded EFRC Centre for batteries headed by 2019 Nobel Laureate in Chemistry, Prof. Stanley M. Whittingham. Major focus of his research group at Amrita is on energy storage technologies from lab-scale to translation (with both liquid and solid state electrolytes). His research group is also interested in second-life Li-ion batteries and active materials recycling/regeneration from end-of-life Li ion batteries.
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