International Workshop on Renewable Energy and Storage Devices for Sustainable Development

(@ VIRTUAL PLATFORM)

12th – 14th January, 2021

Jointly Organized By

Amity Institute for Advanced Research and Studies (Materials & Devices)
Amity University Uttar Pradesh, Noida, INDIA
&
Centre for Science and Technology of the Non-Aligned and Other Developing Countries
(NAM S&T Centre)

TECHNICAL PROGRAM

Tuesday, January 12, 2021 (Day 1)		
10:00 - 10:10 AM **HALL 1**	**Welcome & Opening Remarks** ***by* Dr. V. K. Jain & Dr. Amitava Bandopadhyay & W. Selvamurthy**	
10:10 - 10:40 AM **HALL 1**	**Plenary Lecture 1 – Dr. Anjan Ray, CSIR-IIP** *City Gas Distribution in India - Supply-side and demand-side interventions for economic and ecological benefits*	
10:40 - 11:10 AM **HALL 1**	**Plenary Lecture 2 – Dr. R. K. Kotnala, NPL** *Hydrogen Economy Inevitable to Do Away Global Warming with the Usage of Hydroelectric Cell !*	
11:10 - 11:35 AM **HALL 1**	**Invited Lecture 01 – Dr. A. Subrahmanyam, IIT Madras** *Recycling of renewable energy waste for sustainable future – Challenges and opportunities*	
Technical Sessions ***(Parallel sessions)***	**HALL 1**	**HALL 2**
	Session Chair	Session Chair
11:40 - 12:05 AM	**IT 02 – Dr. S.S Chandel, Shoolini University, Himachal** *Passive Solar Technologies for enhancing Thermal Comfort and Power Generation in Buildings in Developing Countries*	**IT 04 –Dr. P. K. Bhatnagar, Delhi University** *Comment on An Efficient MEH-PPV/ZnO Nanorod Based OLED*
12:05 - 12:30 PM	**IT 03 – Dr. T. V. Ramchandra, IISc, Bangalore** *Exploration of Environmentally Sound Energy Alternatives*	**IT 05 – Dr. Kuldeep Singh, CSIR-CECRI** *Manufacturing of Next Generation Indigenous Lithium-ion Cells: Innovation and challenges for Electric Vehicles & Energy Storage Systems*
12:30 - 1:30 PM *(OT-15 mins each)*	**OT 01 – Mr. Joaquin Guillamon, Texas A&M University** *Electrolyte conditions in Li-ion Batteries in presence of a Thermal Gradient* **OT 02 – Dr. Asha Anish Madhavan, Amity Haryana** *Thermal analysis of molten salt synthesized TiO_2 nanoparticles embedded in Palmitic acid as phase change material* **OT 03 – Ms. Omita Nanda, Amity Noida** *Humidity Enabled Graphene based Bilayer Device for Power Generation* **OT 04 – Ms. Shivangi Jha, BHEL** *Fine line Printing for Solar Cells with Knotless Screens*	**IT 06 – Dr. Amit Kumar, Central University Haryana** *Metal oxide nanoparticles embedded magnesium nitrate hexahydrate based nanocomposites for solar thermal energy storage application* **OT 05 – Mrs. Tamalika Panda, IIEST, Shibpur** *Theoretical Exploration of front grid pattern of c-Si solar cells for reduced metallization cost* **OT 06 – Ms. Mohini Singh, Solar Industry** *Floating Solar- Another step towards sustainable Green Energy* **OT 07 – Mr. Sohail Shaikh Nazim, Amity Dubai** *A Study of electric vehicles in UAE and its impact on the contemporary world*

1:30 - 2:30 PM	***Lunch Break***	
2:30 - 4:00 PM **HALL 1**	**Inaugural Ceremony**	
4:00 - 4:30 PM **HALL 1**	**Plenary Lecture 3 – Dr. Vikram Kumar, Emeritus Professor, IIT Delhi** *Photovoltaic Research - Indian Perspective*	
Technical Sessions ***(Parallel sessions)***	**HALL 1**	**HALL 2**
	Session Chair	Session Chair
4:30 - 4:50 PM	**IT 07 – Dr. Mohamed Bayoumy AbdelKader Zahran, EGYPT** *Si SC Fab. Lab. Demonstration and Energy Storage Devices*	**IT 12 – Dr. O. P. Sinha, Amity Noida** *Nanocomposites based high performance electrode material for the Supercapacitor Applications*
4:50 - 5:10 PM	**IT 08 – Dr. Hla Myo Aung, MYANMAR** *Technical and Economic Characteristic Analysis of Solar PV Mini-Grid System for Off-Grid Rural Electrification*	**IT 13 – Dr. Subhra Das, Amity Haryana** *Long Term performance Analysis of Solar Collectors*
5:10 - 5:30 PM	**IT 09 – Mr. Basel Yaseen, PALESTINE** *Renewable Energy Applications in Palestine, Opportunities and Challenges*	**IT 14 – Dr. Kanchan Saxena, Amity Noida** *Design of a compact, low cost and robust solar simulator using phosphors and high power blue LEDs*
5:30 - 5:50 PM	**IT 10 – Mr. Orseer Tsutsu, Nigeria** *The Pilot Solar Powered Storage Facilities to Curtail Post Harvest Loses in Nigeria*	**IT 15 – Dr. Suman, Amity Noida** *Self-Sustained System to Clean Industrial Waste-Water and Generate Electricity Without any External Source of Energy*
5:50 - 6:10 PM	**IT 11 – Dr. Carlos F.O. Graeff, UNESP, Brazil** *Advances in Niobium Oxide Films for Electron Transport Layers in Perovskite Solar Cells*	**IT 16 – Dr. H. Dhasmana Amity Noida** *A Study on Passivated Emitter Rear Totally Diffused Bifacial Silicon Solar Cell Device Fabrication Technology*
6:15 PM	**Closing Today's Sessions**	**Closing Today's Sessions**

Wednesday, January 13, 2021 (Day 2)		
Technical Sessions *(Parallel sessions)*	**HALL 1**	**HALL 2**
	Session Chair	Session Chair
10:00 - 10:05 AM	**Welcome & Opening Remarks**	**Welcome & Opening Remarks**
10:05 - 10:30 AM	**IT 17 – Dr. Rajendra Singh, Clemson University, USA** *Materials & Processing Challenges and Opportunities for Providing Nearly Free and Sustainable Electric Power To All*	**IT 25 – Dr. Siva Karuturi, ANU, Australia** *Advanced Semiconductor Materials for Solar-to-Hydrogen Production*
10:30 - 10:55 AM	**IT 18 – Dr. V. K. Jain, Amity University Noida** *Rapid Solar Thermal Energy Harvesting Systems using Plasmonic Nanoparticles*	**IT 26 – Dr. S.A. Hashmi, Delhi University** *Carbon Electrodes for Solid State and Flexible Supercapacitors*
10:55 - 11:20 AM	**IT 19 – Dr. A. K. Saxena, BHEL** *Thin film and Si solar cell technologies*	**IT 27 – Dr. S. Sundar Kumar Iyer, IIT-K** *Advances in Organic Photovoltaic Devices*
11:20 - 11:45 AM	**IT 20 – Dr. Chetan J. Panchal, The Maharaja Sayajirao University of Baroda** *Fabrication Process of CIGS Thin Film Solar Cell*	**IT 28 – Dr. D.S.M. De Silva, University of Kelaniya, Sri Lanka** *Exploring cost-effective manufacture of CdS/CdTe solar cell*
11:45 - 12:10 PM	**IT 21 – Dr. Bhaskar Bhattacharya, BHU** *Polymer Electrolyte Based 3rd Gen Solar Cells*	**IT 29 – Dr. Vineet Tyagi, Shri Mata Vaishno Devi University** *PCM and Nano-PCM for Solar Thermal Energy Storage Systems for Energy Efficient Buildings*
12:10 - 12:35 PM	**IT 22 – Dr. R. Bhattacharya, IIEST, Shibpur** *Mitigation of Soiling of Solar Panels by applying Superydrophobic Aluminum Oxide thin films and Dry Cleaning by EDS*	**IT 30 – Dr. C. S. Solanki, IIT-B** *Rethinking Energy for Sustainability*
12:35 - 1:00 PM	**IT 23 – Dr. Ritu Srivastava, NPL** *The role of the charge transport layers in organic/perovskite solar cells*	**IT 31 – Dr. H. Saha, IIEST, Shibpur** *Evolution of Crystalline Silicon Solar Cells for Industry Applications*
1:00 - 1:25 PM	**IT 24 – Dr. Udai P. Singh, Kalinga, Bhubaneswa** *Recent Developments in Thin Film Photovoltaic*	**IT 32 – Dr. Sandeep Chandril, BHEL** *On-site Detection and Mitigation of Potential Induced 2 Degradation at Photovoltaic Power Plants*
1:30 - 2:30 PM	***Lunch Break***	

2:30 - 3:30 PM	***e-Poster Session 1***	
3:30 - 4:00 PM **HALL 1**	**Plenary Lecture 4 – Prof. Chandima Gomes, SOUTH AFRICA** *Battery Powered, Hydrogen Fuel Cell and Hybrid EVs: The Challenges in Developing a National Policy*	
Technical Session- I ***(Parallel sessions)***	**HALL 1**	**HALL 2**
	Session Chair	Session Chair
4:00 - 4:20 PM	**IT 33 – Dr. A.S. Prakash, CSIR-CECRI** *Materials Development for Efficient Energy Storage in Batteries: From Consumer Electronics to Renewable Energy Storage*	**IT 37 – Dr. Soteris A. Kalogirou, Cyprus** *Renewable Energy Systems: Current status and Prospect*
4:20 - 4:40 PM	**IT 34 – Dr. Subarna Maiti, CSIR-CSMCRI** *Solar Thermal Energy for Livelihood Expansion & Sustainability*	**IT 38 – Dr. Awadesh Kumar Mallik, Belgium** *Sustainable laboratory grown diamonds for GaN power devices*
4:40 - 5:00 PM	**IT 35 – Dr. Roshan Pandey, Tribhuwan University, Katmandu, Nepal** *Small Hydro Power (SHP) and its Challenges in Nepal*	**IT 39 – Mr. Maximilian Vorast, Fraunhofer ISE, Germany** *Agrivoltaics: Experiences from Germany and Europe*
5:00 - 5:20 PM	**IT 36 – Dr. B. Prasad, Chief Consultant - Solar PV** *An Overview of Recycling Technologies for PV Modules in Indian Context*	
5:30 - 6:45 PM	**Industry Session – *Industry-Academia-Ministry Meet*** **"Panel Discussion – The Future of Renewable Energy Generation and Harvesting – *The Road Map*"**	
6:45 - 6:50 PM	**Closing Today's Sessions**	

Wednesday, January 14, 2021 (Day 3)	
10:00 - 10:05 AM **HALL 1**	**Welcome & Opening Remarks**
10:05 - 10:35 AM	**IT 40 – Dr. Rick Navarro, Texas, United States** *Poseidon Hydroelectric System*
10:35 - 11:00 AM	**IT 41 – Shri. Ravindra Kumar, DLJ, DRDO** *Title*
11:00 - 11:25 AM	**IT 42 – Dr. Sushil Kumar, NPL** *Photovoltaic Metrology: Solar cell calibration & measurement procedures*
11:25 - 11:50 AM	**IT 43 – Dr. Viresh Dutta, IIT Delhi** *Highly transparent ZnO based TCO layer fabrication using RF magnetron sputtering for solar cell applications*
11:50 - 12:15 PM	**IT 44 – Dr. Adarsh Kumar Pandey, Sunway University, Malaysia** *Role of Thermal Energy Storage in Achieving Sustainable Development Goals*
12:15 - 12:40 PM	**IT 45 – Dr. Ahteshamul Haque, Jamia Millia Islamia University** *Intelligent Control of Converters for Electric Vehicle Charging Station*
12:40 - 1:25 PM *(OT-15 mins each)*	**OT 08 – Mr. Vikas Kashyap, Panjab University** *The Antireflection Coating Effect in Semiconducting SiNWs With Band Gap Modification* **OT 09 – Ms. Debashrita Mahana, CSIR-NPL** *Synthesis and characterization of Cupric oxide (CuO) and Cuprous oxide (Cu2O) thin films deposited by PVD Process* **OT 10 – Dr. Apurv Yadav, Amity Dubai** *Designing of Photovoltaic System for Cooling Chiller Plant at Amity University Dubai Laboratory*
1:30 - 2:30 PM	***Lunch Break***
2:30 - 3:30 PM	***e-Poster Session 2***

3:30 - 3:55 PM	**IT 46 – Dr. Alessandro Romeo, Universita' di Verona, Italy** *A new era for thin film solar cells*
3:55 - 4:15 PM	**IT 47 – Dr. Haslenda Hashim, Universiti Teknologi Malaysia** *Spatial Explicit Bioenergy Decision System for Reshaping Climate-Resilient Energy System*
4:15 - 4:35 PM	**IT 48 – Mrs. Kifah Fayad, Renewable Energy Directorate, Baghdad** *The Implementation of the Family-sized Biogas Plant to Achieve a Sustainable Lifestyle: Case Study a Farm in Village 37*
4:35 - 4:55 PM	**IT 49 – Mr. Mohammad Matlabi Naser, Palestinian Elect. Transmission** *Renewable Energy and Storage Devices for Sustainable Development*
5:00 - 5:30 PM	**NAM Countries' Delegates' *Group Discussion***
5:30 - 6.00 PM	**Valedictory Ceremony**