## **Program Schedule**

Schedule for National Workshop on Advanced Carbon Materials for Next Generation Energy Solutions (NWCM2025) Day-1: February 20, 2025 (Thursday) Time Location [in hrs] 8:00-9:30 Registration Reception 9:30-10:00 Inauguration 9:30-9:35 Lighting of Lamp IIP Audi 9:35-9:40 Welcome Address by President The Indian Carbon Society: Dr. O.P. Bahl IIP Audi IIP Audi 9:40-9:45 Address by Chairman NWCM2025: Dr. H.S. Bisht, Director, CSIR-IIP, Dehradun 9:45-9:50 Address by Technical Committee Chairman NWCM2025: Dr. R.B. Mathur, Secretary, The Indian Carbon Society IIP Audi 9:50-9:55 Address by Dr. Hemant Madhukar Kulkarni, Chief Scientist, IIP Dehradun IIP Audi Vote of Thanks by Convenor: Dr Bhanu Pratap Singh, Chief Scientist, CSIR-NPL, New Delhi IIP Audi 9:55-10:00 Session I: Session Chair: Dr. O.P. Bahl, President The Indian Carbon Society 10:00-10:40 Plenary Lecture- Dr. H.S. Bisht, Director, IIP Dehradun, Towards Sustainable Energy, Environment and Carbon Materials IIP Audi 10:40-11:10 **High Tea** Session-II: Session Chair: Dr Pratik Swarup Dash, R&D, Tata Steel, Jamshedpur 11:10-11:40 | IL1- Prof. Swati Sharma, IIT Mandi, Laser-patterned carbon for flexible energy generation and storage devices IIP Audi IL2- Dr A. S. Prakash, CSIR-CECRI Chennai Unit, CSIR Madras Complex, Advancements in Sodium-Ion Battery Technology: 11:40-12:10 IIP Audi Novel Cathode Materials to Full-Cell Systems 12:10-12:30 OP1- Ms. Kirti Chhabra, CSIR-IIP Dehradun, Nitrogen-Rich Activated Carbon Prepared from SiO2-Templated Polyaniline as IIP Audi a High-Performance Anode Material for Sodium-Ion Batteries 12:30-12:50 OP2- Dr. Ravikiran Nowduru, ARCI Hyderabad, Novel Green Process of Making Multi/Few Layers Graphene and their IIP Audi Applications 12:50-13:10 OP3- Dr. Lekha Peedikakkandy, 6C NanoCarb Private Limited, Mumbai, Advancements in Industrial-Scale Production of IIP Audi Carbon Nanotubes 13:10-14:00 Lunch Session-III: Session Chair: Dr. Manoj Srivastava, CSIR-IIP Dehradun 14:00-14:30 IL3- Dr. Rajath Alexander, BARC Mumbai, Specialize Carbon Materials for Promising Nuclear and Beyond Energy IIP Audi 14:30-15:00 IL4- Dr. Priyanka Heda Maheshwari, CSIR-NPL, New Delhi, Carbon - Nature's solution to Energy Materials IIP Audi 15:00-15:20 OP4- Ms. Aarti, CSIR-NPL, New Delhi, Fabrication of a Hybrid Flexible Thermoelectric Device using Carbon-Nanotubes and IIP Audi **Bismuth Telluride** OP5- Ms. Deva Priya, CSIR-NAL, Banglore, Hybrid process derived C<sub>f</sub>/C - SiC composites for thermal energy storage based 15:20-15:40 IIP Audi on metallic phase change materials 15:40-16:10 TFA Session-IV: Session Chair: Prof. Swati Sharma, IIT Mandi 16:10-16:40 IL5- Dr. Kiran M Subhedar, CSIR-NPL, New Delhi, CNTs sheet and yarn based solid state linear supercapacitor for flexible IIP Audi and wearable devices 16:40-17:10 ILG- Dr. Santoshkumar D Bhat, CSIR-CECRI Chennai Unit, CSIR Madras Complex, Functionalized Carbon nanostructures IIP Audi incorporation in short-side chain to form composite membranes for improved ionic transport and restricted fuel crossover in polymer electrolyte fuel cells 17:10-17:30 OP6- Ms Shikha Thapa, CSIR-CECRI Chennai Unit, CSIR Madras Complex, Graphite based Flow Plates with different Cross-IIP Audi Sections Cathode Channels Designs for Open Cathode Fuel Cell Stack OP7- Mr. Sadhak Khanna, CSIR-NPL, New Delhi, Development of Asymmetric Supercapacitor with 17:30-17:50 IIP Audi Polythiophene/MWCNT Nanocomposite for Energy Storage 17:50-18:10 OP8- Dr. Sanjay R. Dhage, ARCI Hyderabad, Fabrication of a Inkjet Printing of Graphene and Carbon Nanotubes for IIP Audi **Advanced Applications** 18:10-18:40 **ICS Council Meeting** Conf. Room

Dinner

Cafeteria

19:00

## **Program Schedule**

Schedule for National Workshop on Advanced Carbon Materials for Next Generation Energy Solutions (NWCM2025)  Day-2: February 21, 2025 (Friday)		
Session-V: Ses	ssion Chair: Dr. A.S. Prakash, CSIR-CECRI Chennai Unit, CSIR Madras Complex	
9:30-10:00	<b>IL7-</b> Dr. A.K. Sahu, CSIR-CECRI Chennai Unit, CSIR Madras Complex, Porous carbon and graphite nanofibers as potential oxygen reduction catalyst for polymer electrolyte fuel cells	IIP Audi
10:00-10:30	IL8- Dr O.P. Khatri, CSIR-IIP Dehradun, Carbon Materials-Based Lubricant Systems to Minimize Energy Losses Associated with Friction and Wear	IIP Audi
10:30-11:00	IL9- Dr. Bhanu Pratap Singh, CSIR-NPL, New Delhi, Carbon nanotube macroassemblies: synthesis and their engineering applications	IIP Audi
Session-VI: Po	oster Session: Chair: Dr. R.B. Mathur, Secretary, The Indian Carbon Society	
11:00-13:00	Poster Session + Tea	In front of Cafeteria
13:00-14:00	Lunch	
Session-VII: S	ession Chair: Dr. P.K. Jain, ARCI Hyderabad	
14:00-14:30	<b>IL10-</b> Dr. Ajay Singh, BARC Mumbai, Free-standing flexible carbon nanotubes films for thermoelectric power generation	IIP Audi
14:30-15:00	<b>IL11-</b> Dr Pratik Swarup Dash, R&D, Tata Steel, Jamshedpur, Carbon Materials from Coal Tar: Opportunities and Challenges	IIP Audi
15:00-15:20	<b>OP9-</b> Dr. Uttam Saha, DMSRDE, Kanpur, Harnessing Manganese Dioxide (MnO₂)/Activated Carbon Fabric (ACF) Composites for Enhanced Supercapacitor Performance in Future Energy Solutions	IIP Audi
15:20-15:40	<b>OP10-</b> Mr. Rohan Rohilla, BARC, Mumbai, Engineered Hybrid nanostructures: Fabrication of Metal Oxide-Modified CNT Films for Next-Generation Sensors and Energy Harvesting	IIP Audi
15:40-16:00	<b>OP11-</b> Dr. Ruchi K. Sharma, CSIR-NPL, New Delhi, Highly Stable and Efficient Hybrid PEDOT: PSS/Si Solar Cells via applying the Graphene Oxide Top Capping Layer	IIP Audi
16:00-16:20	<b>OP12-</b> Ms. Vanshika Gairola, Shri Guru Ram Rai University, Dehradun, Rapid microwave-assisted activation of synthesized carbon nanoparticle for symmetrical supercapacitor electrode	IIP Audi
16:20-16:40	<b>OP13-</b> Mr. Nitesh Choudhary, IIT Roorkee, Fabrication of Symmetric Supercapacitor Device using MnO <sub>2</sub> /Cellulose nanocrystals/Graphite electrode by Sputtering for Energy Storage	IIP Audi
16:40-17:00	<b>OP14</b> -Dr. Santosh Kumar Tripathy, DRDO, Kanpur, Photodegradation of Organic Contaminants from Carbon Nanostructure	IIP Audi
17:00-17:30	Panel Discussion	IIP Audi
17:30-18:00	Valedictory and Awards Distribution	IIP Audi
18:00-18:30	TEA	