


Technical Programme Schedule


February 12-14, 2025

February 12, 2025			
8.00 - 9.30	Conference – Registration		
9.30 - 10.15	Opening session		
10.15 - 10.45	High Tea and networking		
Session Chair	Prof. M K Jayaraj		
10.45 - 11.45	Special Invited Talk S1 Prof. Chandrabhas Narayana Director, Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram <i>“Nano materials and Raman spectroscopy help through light on Biomaterial properties”</i>		
11.45 - 12.45	Plenary Talk P1 Dr. Philippe Poulin Centre de Recherche Paul Pascal, French National Centre for Scientific Research, France <i>“Additive Manufacturing of Carbon Based Materials”</i>		
12.45 - 13.45	Lunch Break		
Parallel Sessions	SYM. A: Energy Harvesting and Storage (Hall-A)	SYM. B: Bio materials & Engineering (Hall-B)	SYM.C: 2D Materials & Devices (Hall-C)
Session Chairs	Prof. Jayalekshmi S Dr. Vineeth Mohanan P	Prof. Sajeewan T P Dr. G. S. Sailaja	Dr. Philippe Poulin Dr. Saji K J
13.45 - 14.30	Keynote: A1 Prof. M M Shaijumon Indian Institute of Science Education & Research, Thiruvananthapuram <i>“Emerging Materials for Hydrogen and Battery Technologies”</i>	Keynote: B1 Prof. Renu John Indian Institute of Technology, Hyderabad <i>“Smart and Intelligent Microscopy for Clinical Applications”</i>	Keynote: C1 Prof. Nripan Mathews Nanyang Technological University, Singapore <i>“Halide perovskites- from solar cells, light emitters to memristors”</i>
14.30 - 15.05	Invited Talk (IT) - A2 Dr. Aruna Ivaturi University of Strathclyde, Glasgow, United Kingdom <i>“Role of metal oxide electron transport layers in dictating nanoscale heterogeneities in all inorganic perovskites”</i>	IT - B2 Dr. Asifkhan Shanavas Scientist-D, DST-INST, Mohali <i>“Monotherapy and combination therapy with nanoparticles for breast tumour management”</i>	IT - C2 Dr. T. N. Narayanan Tata Institute of Fundamental Research, Hyderabad <i>“Two Dimensional Heterostructures based Photo-Rechargeable Batteries”</i>
15.05 -15.40	IT – A3 Dr. Joaquim Puigdollers Gonzalez Universitat Politècnica de Catalunya, Spain <i>“Selective interdigitated contacts for improved</i>	IT – B3 Dr. Aravind Kumar Rengan Indian Institute of Technology, Hyderabad <i>“Bio-degradable/disintegrable Nanosystems for theranostic applications”</i>	IT – C3 Prof. Reji Philip Raman Research Institute, Bengaluru <i>“Nonlinear optical applications of 2D materials”</i>

	photocatalytic systems: TiO2 case study”		
Oral/Flash Presentations	15.40 - 16.20 OSA01 – OSA04	15.40 – 16.20 OSB01 – OSB03, OSB05	15.40 - 16.10 OSC01 – OSC03
			16.10 - 16.15 FSC01
16.20 - 16.30	Tea Break		
16.30 - 18.00	Poster Sessions (Symposia: Energy Harvesting & Storage, Biomaterials & Engineering, 2D Materials & Devices)		
18.00 - 19.30	<div></div> <div>FUSION OF CULTURAL ART FORMS presented by RLV College of Music and Fine Arts, Thripunithura</div>		
19.30 onwards	Conference dinner		

February 13, 2025			
Session Chair	Prof. Rajeev Pattathil		
9.00 - 10.00	Plenary Talk P2 Prof. M Krishnamurthy Centre Director, Tata Institute of Fundamental Research, Hyderabad “Laser driven microdroplet for efficient electron acceleration”		
10.00 - 10.15	Tea break		
Parallel Sessions	SYM. A: Energy Harvesting and Storage (Hall-A)	SYM. D: Quantum Materials (Hall-B)	SYM. E: Thin Films and Coatings (Hall-C)
Session Chairs	Dr. Anil Kottantharayil Dr. Asha A S	Prof. K J Thomas Dr. Senoy Thomas	Prof. Nripan Mathews Dr. Aneesh P M
	10.15 - 10.50 IT – A4 Dr. Rakhi R B CSIR - National Institute for Interdisciplinary Science and Technology, Thiruvananthapuram “Unveiling the Catalytic Potential of Molybdenum Dichalcogenides for Hydrogen Evolution Reaction”	10.15 - 11.00 Keynote: D1 Dr. Madhu Thalakulam Indian Institute of Science Education and Research, Thiruvananthapuram “Superconducting and metallic states in two-dimension: Two-sides of the same coin”	10.15 - 11.00 Keynote: E1 Dr. R Ramaseshan Indira Gandhi Centre for Atomic Research, Kalpakkam, Tamilnadu “Review of pristine and doped AlN thin films for piezoelectric applications”

	10.50 - 11.25 IT – A5 Dr. Dinesh Kabra Indian Institute of Technology, Bombay “Interfacial Engineering at Charge Transport Layers and Perovskite for High Efficiency 4-T Tandem solar cells”	11.00 - 11.35 IT – D2 Dr. Sijo K. Joseph GITAM University, Bangalore “Continuous Variable Quantum Computing: A Path to Practical, Scalable, and Fault-Tolerant Quantum Processors”	11.00 - 11.50 OSE01-OSE05
	11.25 - 12.00 IT – A6 Dr. Elyes Nefzaoui ESIEE Paris school of engineering, University Gustave Eiffel, France “Silicon Meta-materials for Thermal Radiation Engineering: Fabrication, Properties and Applications”	11.35 - 12.10 IT – D3 Dr. Soham Manni Indian Institute of Technology, Palakkad “Magnetism and spin-lattice coupling in single crystalline quasi-2D chromium tellurides”	11.50 - 12.00 FSE01-FSE02
	12.00 - 13.00 OSA05 - OSA10	SYM. F: Nanomaterials and Devices	12.00 - 12.20 Technical talk 1 HHV
		12.10 - 12.50 OSF01 – OSF04	12.20 - 12.40 Technical talk 2 Atos
			12.40 – 13.00 Technical talk 3 Lab India
13.00 - 14.00	<i>Lunch break</i>		
	SYM. F: Nanomaterials and Devices (Hall-A)	SYM. A: Energy Harvesting and Storage (Hall-B)	SYM. G: Ultrafast Laser Technologies (Hall-C)
Session chairs	Prof. John Philip Dr. Elyes Nefzaoui	Prof. Jatin Rath Dr. Kala R	Prof. Reji Philip Dr. Riju C Issac
	14.00 - 14.45 Keynote: F1 Prof. Philip J. Camp University of Edinburgh, Scotland “Insights on Surface-Adsorbed Organic Friction Modifiers from Experiments and Molecular Simulations”	14.00 - 14.35 IT – A7 Dr. Anil Kottantharayil Indian Institute of Technology, Bombay “Energy Yield Loss in PV Powerplants due to Soiling: The Problem and Solutions”	14.00 - 14.45 Keynote: G1 Prof. Rajeev Pattathil Rutherford Appleton Laboratory, Chilton, United Kingdom “Plasma accelerators coming of age”
	14.45- 15.20 IT – F2 Dr. Anas Abdulaziz CSIR-National Institute of Oceanography	14.35- 15.10 Technical IT –A8 Dr. Prabir Kanti Basu Sr. Vice-President, Reliance New Solar Energy Ltd (RNSEL), Reliance Industries Ltd	14.45 - 15.20 IT – G2 Dr. Mark Wiggins University of Strathclyde, Glasgow, United Kingdom

		“A Journey of Industrial Crystalline Silicon Wafer Solar Cell Technology till date”	“Application of Intense Laser Light at SCAPA”
	15.20 - 16.10 <i>OSF05 – OSF07</i> <i>OSF09 – OSF10</i>	15.10 – 15.45 Technical IT-A9 Dr. S Saravanan Emmvee Photovoltaic Power Private Limited “Overview of the Different Process Routes for Manufacturing Mono Crystalline Silicon Solar Cells”	15.20- 16.10 <i>OSG01-OSG05</i>
		15.45- 16.05 <i>OSA11- OSA12</i>	
16.15 - 16.30	<i>Tea Break</i>		
16.30 Onwards			<i>Tour : Sunset Backwater Cruise</i>

February 14, 2025			
Session Chair	Prof. John Philip		
9.00 - 10.00	Plenary P3 Prof. Srinivasa R. Raghavan University of Maryland, United States “Colloidal Design at the Nano, Micro, and Macro Scales: Materials that Can Move, Morph, Protect and Heal”		
10.00 - 10.15	<i>Tea break</i>		
Parallel Sessions	SYM. A: Energy Harvesting and Storage (Hall-A)	SYM. B: Bio materials & Engineering (Hall-B)	SYM. G: Ultrafast Laser Technologies (Hall-C)
Session chairs	Prof. Manoj N Dr. K P Surendran	Dr. Baby Chakrapany P S Dr. Sreeja Narayanan	Dr. Anoop K K Dr. Priya Rose
10.15 -10.50	IT – A10 Prof. Cristobal Voz Universitat Politecnica de Catalunya, Spain “Semitransparent solar cells for distributed photovoltaic applications: new chance for amorphous silicon light absorber”	IT – B4 Dr. Barid Baran Lahiri Indira Gandhi Centre for Atomic Research, Kalpakkam, TamilNadu “Magnetic fluid hyperthermia: Potentials, advances and challenges”	IT – G3 Dr. Rajeev N Kini Indian Institute of Science Education and Research, Thiruvananthapuram “THz phonon amplification via the Cerenkov mechanism in an acoustic cavity”

	10.50 - 11.25 IT – A11 Prof. Jatin Rath Indian Institute of Technology, Madras “Flexible Tandem Solar Cell Development: need for ALD”	10.50-11.25 IT – B5 Prof. Heinrich Christoph Neitzert University of Salerno, Italy “Electrical and optical methods for the determination of important process parameters during food production and quality control”	10.50- 11.10 Technical talk 4 Laser Science
	11.25- 11.35 FSA01-FSA02	11.25-12.00 IT – B6 Prof. Deepthy Menon Amritha Centre for Nanosciences & Molecular Medicine, Kochi “Innovative nanobiomaterials for controlled drug delivery and regenerative engineering”	11.10- 11.30 Technical talk 5 Edmund Optics
11.30 - 13.00	12.00 – 12.40 OSB04, OSB06 – OSB08 Poster Sessions (Nanomaterials & Devices, Quantum Materials, Ultrafast Laser Technologies, Thin Films & Coatings)		
13.00 - 14.00	Lunch break		
Session Chairs	Prof. Honey John Dr. Suja Haridas		
	SYM. F: Nanomaterials and Devices (Hall-A)		
14.00 - 14.35	IT – F3 Dr. Achu Chandran CSIR - National Institute for Interdisciplinary Science and Technology, Thiruvananthapuram “Next-Generation Flexible and Printed Devices for Energy, Healthcare, and Sustainability”		
14.35 - 15.15	OSF08, OSF11-OSF13		
15.15 - 15.25	FSF01-FSF02		
15.30 - 16.30	Closing session		
16.30 onwards	Certificate distribution		
	Tea		

Symposium Code

A - Energy Harvesting & Storage

B - Biomaterials & Engineering

C - 2D Materials & Devices

D - Quantum Materials

E - Thin Films & Coatings

F - Nanomaterials & Devices

G - Ultrafast Laser Technologies

S -Symposium

OSA01 → **Presentation number**

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Symposium Code

Mode of presentation (O- Oral, F- Flash and P- Poster)