



VIT[®]
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

ICNAN '25

3rd International Conference on Nanoscience and Nanotechnology

16th to 19th December 2025



Organised by
**Centre for Nanotechnology Research,
VIT, Vellore, TN, India**

ICNAN'25 Conference Schedule

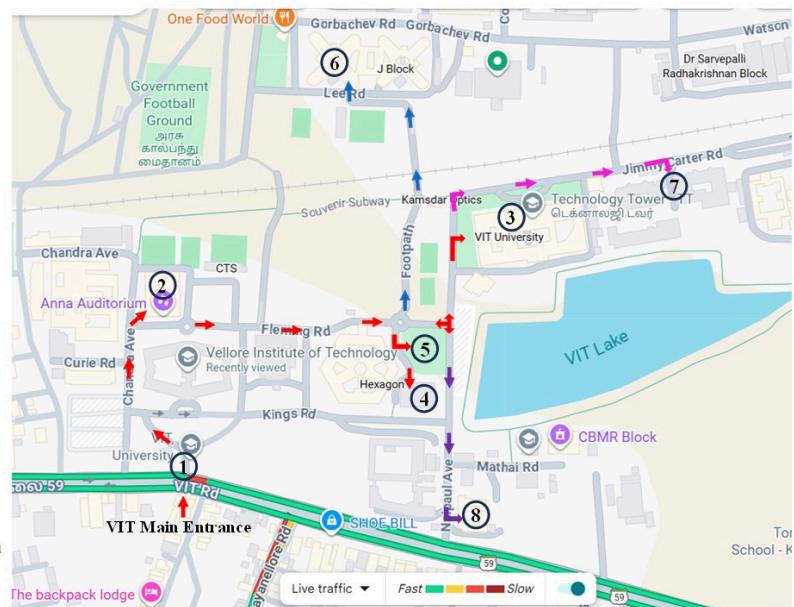
16/12/2025 (Tuesday)

Venue	Anna Auditorium		
9:30 to 11 AM	Inaugration		
11 to 11:15 AM	Tea Break		
11:15 to 12:45 PM	<p>Special Inaugural talk</p> <p>Dr. Moungi G. Bawendi, Nobel Laureate, Massachusetts Institute of Technology, USA Quantum Dots: from Curiosity to Technology</p>		
12:45 to 2:00 PM	Lunch Break (Foodys)		
16/12/2025 (Tuesday)			
Venue	Ambedkar Auditorium (TT018)	Shakespere Gallery (TT028)	TT312
Session Chair	Dr. Shakthivadivel D.	Dr. Manikandan M.	Dr. Velmurugan V.
2 to 2:45 PM	<p>Dr. Ajayan Vinu University of Newcastle, Australia Functional Carbon Nitride Based Nanostructures for Clean Hydrogen Production</p>	<p>Dr. Anuradha Ashok PSG Institute of Advanced Studies, India Pathways for the enhancement of thermoelectric efficiency in oxide materials</p>	<p>Dr. Saikat Talapatra Southern Illinois University, Carbondale, USA A Perspective on Emerging Nano Porous and Layered Materials & their Related Applications</p>
2:45 to 3:30 PM	<p>Dr. Sudhagar Pitchaimuthu Heriot Watt University, UK From Water Splitting to Sustainable Solutions: Expanding the Horizons of Photoelectrocatalysis</p>	<p>Dr. Cornelius Nielisch Technische Universität Dresden (TUD), Germany Tailored Interface Engineering of Thermoelectric Materials via Atomic Layer Deposition</p>	<p>Dr. R. Jayavel Anna University, Chennai- India Two-Dimensional Quantum Materials for Sustainable Energy Storage Applications</p>
3:30 to 3:45 PM	Tea Break (in-front of Shakespeare Gallery)		
Session Chair	Dr. Senthil Kumar Annamalai	Dr. Amit Jaiswal	Dr. Ethiraj K. R.
3:45 to 4:30 PM	<p>Dr. D. D. Sarma IISc, Bengaluru, India Why does Mn glow when doped into semiconductor quantum dots?</p>	<p>Dr. Manoj Gupta National University of Singapore, Singapore Magnesium Based Nanocomposites and Relevance of Cryogenic Treatment</p>	<p>Dr. John V. Kennedy GNS Science, New Zealand Ion Beam Engineered Catalytic Materials for Low Carbon Future</p>
4:30 to 5:15 PM	<p>Dr. Suman Singh CSIR-CSIO, Chandigarh, India Nano-inspired Biosensing Technologies</p>	<p>Dr. Muthukumaran Packirisamy Concordia University, Canada Energy harvesting from photosynthesis of blue green algae</p>	<p>Industrial Talk HHV, Bangalore</p> <p>Industrial Talk SINSIL, Bangalore</p>
6:00 to 7:00 PM	Culturals (Greeno)		
7:30 to 8:30 PM	Conference Dinner (Foodys/Greeno)		

Venue	Ambedkar Auditorium (TT018)	Shakespeare Gallery (TT028)	TT312	TT311
Session Chair	Dr. Geetha Manivasagam	Dr. Zachariah C. Alex	Dr. Bagubali A.	
9.30 to 10:15 AM	Dr. James Chapman Griffith University, Australia Engineered Nanomaterials for Selective Capture and Killing of Pathogens and Removal of Biofilms	Dr. Jayan Thomas University of Central Florida, USA Structural Energy Storage: Building the Future of Electrified Mobility	Dr. Ahmad R. Kirmani Rochester Institute of Technology, USA Perovskites for Space Power: From Defect Physics to Mission-Ready Qualification	
10:15 to 11:00 AM	Dr. Unyong Jeong Pohang University of Science and Technology, South Korea Soft Ion-Electronic Tactile Sensors for Practical Artificial Skins	Dr. Adam Lee Griffith University, Australia Thermal and photocatalytic routes to sustainable chemicals and fuels	Dr. Lorenzo Pavesi University of Trento, Italy Neuromorphic Photonics: From Neural Interfaces to Computing Paradigms	
11 to 11:15 AM	Tea Break (in-front of Shakespeare Gallery)			
Session Chair	Dr. Dhirtiman Gupta	Dr. Vijayaraghavan R.	Dr. Cheralathan K. K.	
11.15 to 12 PM	Dr. Manish Chhowalla University of Cambridge, UK Ultra-clean interfaces in atomically thin materials for electronics	Dr. Deepa Khushalani Tata Institute of Fundamental Research (TIFR), India From Sun to Storage: Next-Gen Solar Batteries Using Earth Abundant Elements	Dr. Santanu Das IIT- BHU, India Advances in 2D Materials: From Nanoelectronics to Energy Applications	
12 to 12.45 PM	Dr. Sudarsanam Putla Putla IIT-Hyderabad, India Morphology-tuned metal-based nanocatalysts for plastic waste recycling and biomass valorization	Dr. Kothandaraman R IIT- Madras, India Inside the Layered Lattice: Structure-Property Rules for Next-Gen Li-Ion Cathodes	Dr. Anandan S NIT, Trichy, India Zinc tailored Cobalt Prussian Blue Analogue (PBA) as a Prospective Candidate for Supercapacitor Applications	
12:00 to 2 PM	Lunch Break (Foodys)			
Session Chair	Dr. James Jebaseelan Samuel E.	Dr. Rajan Babu	Dr. Ahmad R. Kirmani	
2:00 to 2:45 PM	Dr. Karen Wilson Griffith University, Australia Nanoengineering multifunctional heterogeneous catalysts for biorefining	Dr. Michael Naguib Tulane University, USA Engineering 2D Materials from the Atomic to Nano Scales for Energy Applications	Dr. K. S. Narayan JNCASR, India Low Melting Alloy Electrodes For Flexible Electronics	
2:45 to 3:30 PM	Dr. Nanaaheb Devappa Thorat University of Limerick, Ireland Lipid Nanomedicine and Artificial Intelligence-Driven Cancer Theranostics	Dr. A Manuel Stephan CSIR-CECRI, India Anodeless lithium batteries: Materials and Challenges	Dr. Wim Deferme Hasselt University, Belgium Droplet-based deposition of OLED Applying Ultrasonic Spray Coating and Spray-on-Screen for large-area ultra-thin coatings and devices	
3.30 to 3:45 PM	Tea Break (in-front of Shakespeare Gallery)			
Session Chair	Dr. S. Asha Devi	Dr. Rajasekaran C	Dr. Anupma Thakur	
3:45 to 4:30 PM	Dr. David Jenkins University of Plymouth, UK The Role of Nanotechnology in Early Disease Diagnostics and Disease Prevention- for Health and Well-Being	Dr. P. Saravanan DRDO - DMRL, Hyderabad, India Interfacial Engineering of Sm-Co Magnetic Thin Films on Si(100) for MEMS Applications	Dr. Seiichi Takamatsu State University of New York, Binghamton, USA Soft ultrasound imager toward wearable hospital grade diagnostic tools	
4:30 to 4:45 PM	O -1	O -5	O -9	O -13
4:45 to 5:00 PM	O-2	O -6	O-10	O-14
5:00 to 5:15 PM	O-3	O-7	O -11	O -15
5:15 to 5:30 PM	O -4	O -8	O -12	O -16
5: 45 to 7:00 PM	Poster Presentation (Foodys)			
	Conference Dinner (Foodys/Greeno)			

Venue	Ambedkar Auditorium (TT018)	Shakespere Gallery (TT028)	TT312
Session Chair	Dr. Vasudevan R.	Dr. Senthilkumar S.	Dr. Ruban Kumar
9.30 to 10:15 AM	Dr. Aravind Vijayaraghavan University of Manchester, UK Graphene surface engineering and applications in sensors, composites and water purification	Dr. Roland Kádár Chalmers University of Technology, Sweden What if we could control long-range arbitrary nanostructure alignment in polymer nanocomposites?	Dr. Cheong Kuan Yew Universiti Sains Malaysia, Malaysia Design and Development of Bio-Organic Resistive Switching Memory
10:15to 11:00 AM	Dr. Tiju Thomas IIT-Madras, India From materials design to system implementation: glimpses from sustainability research	Dr. K. Selvaraj NCL- Pune, India Powering India's Green Hydrogen Future: The Journey to the Nation's First Indigenous AEM Electrolyser Technology	Dr. V. Ganapathy ARCI-Hyderabad, India Design and Development of Alkaline Electrolyzers for Sustainable Green Hydrogen Production
11 to 11:15 AM	Tea Break (in-front of Shakespeare Gallery)		
Session Chair	Dr. Rasool M.	Dr. Kannadasan D.	Dr. Narendra Kurra
11.15 to 12 PM	Dr. Sarathlal Koyiloth Vayalil Deutsches Elektronen-Synchrotron (DESY), Germany In-situ GISAXS real-time growth investigation of metallic nanostructures on self-organized templates	Dr. Raman Singh Monash University, Australia Circumventing Challenges in Developing CVD Graphene on Steels for Extraordinary and Durable Corrosion Resistance	Dr. Kuan Eng Johnson Goh IMRE, A*STAR, Singapore 2D Semiconductors for Quantum Devices
12:00 to 12.45	Dr. Muthu Senthil Pandian SSN Institutions, India Development of Technologically Important Unidirectional NLO Materials for Device Applications	AMETEK Hands-on Workshop	Dr. Anupma Thakur IISc, Bengaluru, India Atomistic Design and Engineering of Two-dimensional MXenes for Electrocatalysis
12.45 TO 2 PM	Lunch Break (Foodys)		
Session Chair	Dr. Krishna Chandar	Dr. Rajasekar N.	Dr. Sathyanaarayanan P.
2 to 2.45 PM	Dr. Venkata D.B.C. Dasireddy Grifith University, Australia Development of Ru-based catalysts for the CO2 reduction: power to gas process	Dr. Balakumar S. University of Madras, Chennai, India Rational Design and Nanoarchitectonics of Metal-Organic Frameworks for Energy Storage	Dr. V. Swaminathan Industrial Talk Memfill Tech Private Ltd., Industrial India
2.45 to 3.30 PM	Dr. C. V. Yelamaggad CeNS, Bangalore, India	Dr. R. Ilangoan University of Madras, Chennai, India. Magnetoresistance study on ferromagnetic application	Dr. Pratap Kollu University of Hyderabad, India From Abundance to Energy: Powering Tomorrow with Sodium
3.30 to 3.45 PM	Tea Break (in-front of Shakespeare Gallery)		
Session Chair	Dr. Arivazhagan N.	Dr. Uma Sathyakam	
3.45 to 4.30 PM	Dr. S. Dhanalakshmi DRDO-CVRDE, India Nanotechnology for Futuristic Armored Fighting Vehicles - An Overview	Dr. K. Pandian University of Madras, Chennai, India Emerging Light Emitting Diodes: Synthesis of Perovskite Nanocrystals and Fabrication of multicolour LED	
4.30 to 5.15 PM	Dr. Chamil Abeykoon University of Manchester, UK Synthetic to Sustainable Composites –Role of Nano and Sustainable Fillers	Dr. Bruno D'Aguanno Lincoln College, UK Thermodynamic equilibrium and stability of systems - From simulation to experimental validation	
5.45 to 7:00 PM	Poster Presentation (Foodys)		
7.30 to 8.30 PM	Confrerence Dinner (Foodys/Greeno)		

Venue	Ambedkar Auditorium (TT018)	Shakespere Gallery (TT028)	TT312	TT311
Session Chair	Dr. Chandra Sekaran N.	Dr. Mary Saral	Dr. Christina J. Malathi	
9.30 to 10:15 AM	Dr. Pranab Goswami IIT- Guwahati, India Advancing Power Generation in Microbial Fuel Cells Towards Practical Applications	Dr. Narendra Kurra IIT-Hyderabad, India Design of Two-dimensional MXene-Organic Hybrids for Advanced Energy Storage Device	Dr. G. Arthanareeswaran NIT, Trichy, India Emerging developments in organic frameworks nanocomposites for next generation membrane manufacturing and sustabilble applications	
10:15 to 11:00 AM	Dr. Prasad P. Phadnis BARC, Mumbai, India Development of luminescent nanoparticle-based formulations for theragnostic applications in cancer treatment	Dr. Ajay Thakur IIT- Patna, India Sustainable and Responsive Hydrogels: Wearable Energy Harvesting and Soft Microforce Sensing	Dr. Prasanta Kumar Sahoo NIT -Roorkee, India Expanding Horizons with Elastomeric 3D Graphene-Metal Nanocomposites: Multifunctional Materials for Energy Storage, Electrochemical Sensing.	
11 to 11:15 AM	Tea Break (in-front of Shakespeare Gallery)			
Session Chair	Dr. Sridhar S.	Dr. Sathya Swaroop N. R.	Dr. Gowtham Sanjai S.	
11:15 AM to 12:00 PM	Dr. Marc-Olivier Coppens University College London, UK Nature-inspired engineering of functional materials via a systematic design methodology	Dr. Ashish Arora IISER Pune, India Experiments on low-dimensional semiconductors using light and magnetic field	Dr. N. Ponpandian Bharathiar University, India Bifunctional Effects of Strong Metal-Support Interaction andHydrogen Spillover in Boosting Hydrogen Evolution	
12 to 12:15 PM	O-17	O-21	O-25	O-29
12:15 to 12:30PM	O-18	O-22	O-26	O-30
12:30 to 12.45	O-19	O-23	O-27	O-31
12:45 to 1:00PM	O-20	O-24	O-28	O-32
1.00 to 2:00PM	Lunch Break (Foodys)			
2:00 to 2:15 PM	O-33	O-37	O-41	O-45
2:15 to 2:30PM	O-34	O-38	O-42	O-46
2:30 to 2:45 PM	O-35	O-39	O-43	O-47
2:45 to 3:00PM	O-36	O-40	O-44	O-48
3:00 to 3:45 PM				
3:45 to 4:30 PM	Valedictory (Ambedkar Auditorium - TT018)			
4:30 to 5:15 PM	Research Award Ceremony			



Main Gate



Anna Auditorium



Technology Tower



Foodys & Greenos



Male Accommodation



Female Accommodation



Guest House

Publications Partners



Sponsors



Sinsil International

Anusandhan
National
Research
Foundation

SRS



AMETEK®

Specialise
Instruments
INTELLIGENT SOLUTIONS

HIV



NANO-TEC



IKA®

HOLMARC
OPTO-MECHATRONICS LTD

supertek®

Contact Details

cnricnan@vit.ac.in

0416 2202461, 62

www.vit.ac.in/centres/cnr
www.icnan.vit.ac.in

Room No. 102, Technology Tower,
Vellore Institute of Technology,
Vellore - 632014

Dr. A. Nirmala Grace
Director
Centre for Nanotechnology Research
director.cnr@vit.ac.in