

**National conference on Smart and Sustainable Functional Materials 2026  
(SSFM – 2026) Programme Schedule**

**March 19 - 21, 2026**

**Institute of Physics, Bhubaneswar**

<b>Time</b>	<b>Programme</b>
<b>08:30 – 09:30 am</b>	<b>Registration</b>
09:30 – 10:15 am	<p style="text-align: center;"><u><b>Inaugural Session</b></u> Guest of Honour: Prof. P. K. Nanda (Vice Chancellor, Siksha 'O' Anusandhan University, Bhubaneswar)</p> <p style="text-align: center;"><b>Introductory lecture on Role of O<sub>2</sub> in Materials</b> (Prof. K.K. Nanda, Director of Institute of Physics, Bhubaneswar)</p>
10:15 – 10:45 am	<b>Tea Break</b>

Day 1: March 19, 2026

**Technical Session – I**

**Session Chair: Shaibal Sarkar**

Time	Speaker & Affiliation	Title
10:45 – 11:15 am (IT - 01)	<b>Anindya Datta</b> INST Mohali	Exciton dynamics in semiconductor nanocrystals: from curiosity to applications
11:15 – 11:45 am (IT - 02)	<b>Kulamani Parida</b> S'O'A University, Bhubaneswar	Co-Catalysts in Photo catalysis: MXene, A Sustainable Materials for Energy and Environmental Application
11:45 – 12.15 pm (IT - 03)	<b>Atikur Rahman</b> IISER Pune	From Substitutional Doping to Screw Dislocations: Defect-Controlled Optoelectronics in 2D TMDs
12:15 – 12:30 pm	<b>Tea Break</b>	

**Technical Session – II**

**Session Chair: Udai P. Singh**

12:30 – 01:00 pm (IT - 04)	<b>Narayan Pradhan</b> IACS Kolkata	Crystal Engineering in Ionic Semiconductor Nanostructures for Light Harvesting
01:00 – 01:30 pm (IT - 05)	<b>Chandana Rath</b> IIT BHU	Tailoring Magnetic and Electrochemical Properties of $\alpha$ -MnO <sub>2</sub> Nanorods via Dy Doping
01:30 – 02:45 pm	<b>Lunch</b>	

Day 1: March 19, 2026

**Technical Session – III**

**Session Chair: Binaya K. Panigrahi**

Time	Speaker & Affiliation	Title
02:45 – 03:15 pm (IT - 06)	<b>Pratap Kumar Sahoo</b> NISER, Bhubaneswar	Influence of Fano Asymmetry and Electron-Phonon Coupling in Photocatalytic Properties of TiO <sub>2</sub> Micro flowers
03:15 – 03:45 pm (IT - 07)	<b>Neeraj Shukla</b> NIT Patna	Defect and Strain Induced Ferromagnetism in 1.2 MeV Proton Implanted ZnO Nanostructures: An Experimental and DFT Study
03:45 – 04:15 pm (IT - 08)	<b>Prasanta Karmakar</b> VECC Kolkata	Ion-Solid Interaction Induced Functional Control in Semiconductors for Energy and Neuromorphic Applications
04:15 – 04:30 pm	<b>Tea Break</b>	

**Technical Session – IV**

**Session Chair: Debakanta Samal**

04:30 – 05:00 pm (IT - 09)	<b>Simantini Nayak</b> CSIR IMMT, Bhubaneswar	2D heterostructured materials and organic network membranes for hydrogen generation
05:00 – 05:30 pm (IT - 10)	<b>Surajit Hazra</b> JUIT, Wagnaghat	Solid-state hydrogen storage advances and the potential of reduced graphene oxide as a storage material
05:30 – 07:00 pm	<b>Poster Session</b>	
07:00 pm onwards	<b>Dinner</b>	

Day 2: March 20, 2026

**Technical Session – V**

**Session Chair: Prasanta Karmakar**

Time	Speaker & Affiliation	Title
09:30 - 10:00 am (IT - 11)	<b>U.P. Singh</b> KIIT University, Bhubaneswar	Inorganic Thin Film Photovoltaics Progress and Future ahead
10:00 - 10:30 am (IT - 12)	<b>Somobrata Acharya</b> IACS Kolkata	Dimension Controlled Ferroelectricity and Bulk Photovoltaic Effect in CsPbBr <sub>3</sub> Perovskite Nanocrystals
10:30 – 11:00 am (IT - 13)	<b>Pitamber Mahanandia</b> NIT Rourkela	Application of Graphene for Energy Harvesting and Storage
11:00 - 11:15 am	<b>Tea Break</b>	

**Technical Session – VI**

**Session Chair: Dinesh Topwal**

11:15 – 11:45 am (IT - 14)	<b>Prabeer Barpanda</b> IISc Bangalore	Vanadate Oxide Cathodes for Secondary Zn-ion Batteries
11:45 - 12:15 pm (IT - 15)	<b>Debashis Panda</b> Sri Sri University, Bhubaneswar	Memristor-Based Artificial Nociceptor and Neuromorphic Accelerator for Next-Generation Energy-Efficient AI
12:15 - 12:45 pm (IT - 16)	<b>Lily Mandal</b> TCG CREST, Kolkata	The Impact of Evolving Interface and Interphase on the performance of Halide solid electrolyte based ASSB
12:45 - 02:00 pm	<b>Lunch Break</b>	

*Day 2: March 20, 2026*

**Technical Session – VII**

**Session Chair: Pratap K. Sahoo**

<b>Time</b>	<b>Speaker &amp; Affiliation</b>	<b>Title</b>
<b>02:00 – 02:30 pm</b> (IT - 17)	<b>Shiv Poojan Patel</b> Delhi University	Growth of polycrystalline-Si and -Ge under ion irradiation in metal/a- semiconductor bilayer thin films
<b>02:30 – 03:00 pm</b> (IT - 18)	<b>Kaushalya Jhuria</b> IIT Delhi	Lasers and Ion beams for solid-state quantum technologies
<b>03:00 – 03:30 pm</b> (IT - 19)	<b>Shaibal Sarkar</b> IIT Bombay	Metal Oxide on Halide Perovskites: A Journey from ~4% to >35% Bifacial Perovskite Photovoltaic Device
<b>03:30 – 03:45 pm</b> (Tech. Talk - 01)	<b>Vikas Sharma, Raman Product Manager, Horiba India</b>	
<b>03:45 – 04:00 pm</b> (Tech. Talk - 02)	<b>Subhabrata Mukhopadhyay &amp; Paramita Banerjee, Wiley</b>	
<b>04:00 – 04:15 pm</b> (Tech. Talk - 03)	<b>Sahil Preshad, GEEBEE International</b>	
<b>04:15 – 04:45 pm</b>	<b>Tea Break</b>	

*Day 2: March 20, 2026*

**Technical Session – VIII**

**Session Chair: Shyamal Chatterjee**

<b>04:45 – 05:15 pm</b> (IT - 20)	<b>Syed Minhaz Hossain</b> IEST Shibpur	White EL from rGO-capped Silicon Quantum Rods
<b>05:15 – 05:45 pm</b> (IT - 21)	<b>Ritu Srivastava</b> NPL, New Delhi	Advanced Nanostructured Functional Materials for Next-Generation Optoelectronic Devices
<b>05:45 – 06:15 pm</b> (IT - 22)	<b>Piraviperumal Malar</b> SRMIST Chennai	Optoelectronic applications of binary chalcogenide thin films
<b>06:15 – 07:00 pm</b>	<b>Bus to the Suryansh Hotel &amp; Resort</b>	
<b>07:00 pm onwards</b>	<b>Cultural Programme and Dinner at Suryansh Hotel &amp; Resort</b>	

<b>Technical Session – IX</b>		<b>Session Chair: Biplab Patra</b>
<b>Time</b>	<b>Speaker &amp; Affiliation</b>	<b>Title</b>
<b>09:30 – 10:00 am</b> (IT - 23)	<b>Madhu Thalakulam</b> IISER TVM	Van der Waals Josephson-junction-based Superconducting diodes
<b>10:00 – 10:30 am</b> (IT - 24)	<b>Chiranjib Mitra</b> IISER Kolkata	Pulse schemes for increasing coherence time in an ensemble of nitrogen vacancy centres in diamond
<b>10:30 – 11:00 am</b> (IT - 25)	<b>Arup Ghosh</b> SVNIT Surat	A cadmium metal organic framework for in gas, organic and aqueous phase iodine adsorption
<b>11:00 – 11:15 am</b>	<b>Tea Break</b>	
<b>Technical Session – X</b>		<b>Session Chair: Satyaprakash Sahoo</b>
<b>11:15 – 11:45 am</b> (IT - 26)	<b>Shobha Shukla</b> IIT Bombay	High refractive index materials nano-patterning using direct laser lithography
<b>11:45 – 12:15 pm</b> (IT - 27)	<b>Bikash Jena</b> CSIR IMMT, Bhubaneswar	Designing Materials for Multifunctional Energy Storage applications
<b>12:15 – 12:45 pm</b> (IT - 28)	<b>Asutosh Rath</b> CSIR IMMT, Bhubaneswar	Two-Dimensional (2D) Layered Materials for Next -Generation Optoelectronics
<b>12:45 – 02:00 pm</b>	<b>Lunch Break</b>	
<b>02:00 – 03:00 pm</b>	<b>Panel Discussion</b> → Bridging the Gap: Scaling Sustainable Materials from Research to Commercial Realities	
<b>03:00 – 03:30 pm</b>	<b>Closing and Award Ceremony</b>	