

Scientific Programme
18th DAE - BRNS Trombay Symposium on Radiation & Photochemistry
January 6 - 10, 2026
Venue: DAE Convention Centre, Anushaktinagar, Mumbai-94

Day 1: Tuesday, 6th January, 2026

10:00-12:30 Registration

12:30–13:30 LUNCH

13:45-14:30 Opening Session

Session-I : (14:30-16:00)			
Chair: Prof. J. P. Mittal			
14:30-15:00	IT-01	Prof. R. J. Dwayne Miller <i>Canada</i>	<i>"What is Life?" Imaging the Molecular Machinery Driving Living Systems</i>
15:00-15:30	IT-02	Prof Ralf Zimmermann <i>Germany</i>	<i>Resonance-Enhanced Laser-Ionisation Single-Particle Mass Spectrometry (SPMS) for a new Perspective on Aerosols: Application to Photochemical Aging of Wildfire Emissions</i>
15:30-16:00			<i>ISRAPS Felicitation and Group photo</i>

16:00-16.30 HIGH TEA

Session-II : (16:30-18:00)			
Chair: Prof. T. Mukherjee			
16:30-17:00	IT-03	Prof. Sophie Le Caër <i>France</i>	<i>Delayed molecular hydrogen production in portlandite under irradiation: Reaction mechanisms and consequences for the storage of radioactive waste</i>
17:00-17:30	IT-04	Prof. David M. Bartels <i>USA</i>	<i>Reaction of $^{\bullet}\text{OH}$ with $\text{O}_2^{\bullet-}$ and $\text{HO}_2^{\bullet}$ vs. temperature: A re-investigation of the mechanism by pulse radiolysis</i>
17:30 – 18:00	IT-05	Dr. Laboni Das <i>RPCD, BARC</i>	<i>High temperature pulse radiolysis of Borate buffer relevant to nuclear reactors</i>

18:00-18:15 TEA

18:15-19:15 Annual General Body Meeting of ISRAPS

19:30– Dinner

Day 2: Wednesday, 7th January, 2026

Session-III : 9:30-11:00 Chair: Prof. A. K. Singh			
09:30 - 10:00	IT-06	Prof. Santhosh Chidangil <i>Manipal</i>	<i>Raman Tweezers for Single-Cell Assessment of Storage Lesions in Blood Cells</i>
10:00 - 10:30	IT-07	Prof. Syoji Ito <i>Japan</i>	<i>Upconverting photoexcitation of molecular systems and its application to super-resolved measurements</i>
10:30 - 11:00	IT-08	Prof. Manabendra Chandra <i>IIT, Kanpur</i>	<i>Harnessing Plasmon Hybridization for Efficient Light-Driven Chemical Transformations</i>

11:00–11:30 TEA

Session-IV: 11:30 – 13:00 Chair: Prof. C. T. Arvindakumar and Prof A. Kumbhar			
11:30 – 12:00	IT-09	Prof. Koichi Iwata <i>Japan</i>	<i>Energy relaxation of carotenoids in ionic liquids, lipid bilayer membranes and protein matrix recorded with time-resolved near-IR spectroscopy</i>
12:00 – 12:30	IT -10	Prof. Stephen Meech <i>UK</i>	<i>Remote Control of the Reversibly Switchable Fluorescent Protein Response</i>
12:30 – 13:00	IT -11	Prof. Oleg S. Vasyutinskii <i>Russia</i>	<i>Polarization-Modulation Pump-and-Probe Femtosecond Spectroscopy of Biomolecules</i>

13:00–14:00 LUNCH

14:00 – 16:00 Poster Session I (PC 01-46) & TEA Chair (Photochemistry): Prof. J. Mohanty & Prof. P. Mathi Evaluators: Dr. S. Dutta Choudhury, Dr. S. Sengupta, Dr. J. A. Mondal, Dr. N. Maiti, Dr. A. K. Mora, Dr. P. Sharma

Session-V : 16:00 – 18:00 Chair: Dr. S. K. Sarkar and Prof. S. Wategaonkar			
16:00 – 16:30	IT-12	Prof. Akihiro Morita <i>Japan</i>	<i>Mechanism of surface-specific ultrafast photochemical reaction on water</i>
16:30 – 17:00	IT-13	Prof. Akio Kawai <i>Japan</i>	<i>Pulsed EPR spectroscopic study on the kinetics of photo-generated free radical reactions</i>
17:00 – 17:30	IT-14	Prof. Hikaru Sotome <i>Japan</i>	<i>Visualizing Spin-Dependent Exciton Transport and Negative Diffusion in Thermally Activated Delayed Fluorescence Materials</i>
17:30 – 18:00	IT-15	Prof. Hideaki Shirota <i>Japan</i>	<i>Superior Electrically Conductive Deep Eutectic Solvents Composed of Organic Halide and Iodine</i>

19:00– Banquet Dinner

Day 3: Thursday, 8th January, 2026

Session-VI : (9:30-11:00) Chair: Prof. T. Chakraborty and Prof. D. K. Maity			
9:30-10:00	IT-16	Prof. Anindya Datta <i>IIT, Bombay</i>	<i>Photosensitization of molecular catalysts by semiconductor nanocrystals</i>
10:00-10:30	IT-17	Prof. Andreas Hennig <i>Germany</i>	<i>Towards a New Generation of Supramolecular Host-Dye Reporter Pairs for Biosensing Applications</i>
10:30 – 11:00	IT-18	Prof. Seiji Akimoto <i>Japan</i>	<i>Responses of Energy Transfer Processes in a Chlorophyll F-Possessing Cyanobacterium to Light Conditions</i>

11:00–11:30 TEA

Session-VII: 11:30 - 13:00 Chair: Prof. A. K. Tyagi and Prof. Sudhir Kapoor			
11:30-12:00	IT-19	Prof. Zhi-Heng Loh <i>Singapore</i>	<i>Spatially resolved ultrafast dynamics of two-dimensional materials probed by time-resolved photoemission electron microscopy</i>
12:00 - 12:30	IT-20	Prof. Munira Khalil <i>USA</i>	<i>Capturing coupled electronic and atomic motions in ultrafast photochemical processes</i>
12:30 - 13:00	IT-21	Prof. Atasi Pal <i>CGCRI, Kolkata</i>	<i>Advances in Ultrafast Fiber Laser Architectures for Real-time Elemental Analysis</i>

13:00–14:00 LUNCH

Session-VIII: 14:00 -16:00 Chair: Prof. P. D. Naik and Prof. Awadhesh Kumar			
14:00 - 14:30	IT-22	Prof. Himanshu Biswal <i>NISER</i>	<i>From Molecules to Materials: How Vibrational Spectroscopy Connects Scientific Disciplines</i>
14:30 - 15:00	IT-23	Prof. Dalip Kumar <i>BITS Pilani</i>	<i>Cascade Annulation of Benzotriazolyl Porphyrins to Access Diverse N-Heterocycle-Fused Porphyrinoids with Enhanced NIR Absorption</i>
15:00 - 15:30	IT-24	Prof. E. Gnanamani <i>IIT Roorkee</i>	<i>Ultrafast Formation of C-C, C-N, C-P and C-S in Water Microdroplets via radical intermediate</i>
15:30 – 15:45	ST-01	Dr. Prasanta Das <i>Ganpat Uni, Guj</i>	<i>HX elimination in the photolysis of mono-halo-benzenes at 266 nm: A repetitive scan FT-IR spectroscopy and DFT calculations</i>
15:45 – 16:00	ST-02	Dr Tufan Ghosh <i>VIT-AP</i>	<i>Two-Dimensional Lead Halide Perovskite Thin Films: Probing Hot Carrier Cooling Dynamics and Electron-Phonon Coupling</i>

16:00 - 18:30 Poster Session II (PC 47-78; RC 01-20) & TEA

Chair (Photochemistry): Prof. C. Majumder & Prof. D. B Naik

Evaluators: Dr. S. Dutta Choudhury, Dr. S. Sengupta, Dr. J. A. Mondal, Dr. N. Maiti, Dr. A. K. Mora, Dr. P. Sharma

Chair (Radiation Chemistry): Prof. M. C. Rath

Evaluators: Dr. B. G. Singh, Dr. Apurav Guleria, Dr Laboni Das and Dr. V. S. Tripathi

19:00 20:00 Cultural Program

20:00– Dinner

Day 4: Friday, 9th January, 2026

Session-IX: 9:30 - 11:00 Chair: Prof. Anunay Samanta and Prof. K. I. Priyadarsini			
9:30 – 10:00	IT-25	Prof. K. Tominaga <i>Japan</i>	<i>Tera Hz Molecular Science in Condensed Phases</i>
10:00–10:30	IT-26	Prof. V. Sudarsan <i>RPCD, BARC</i>	<i>Luminescent properties of lanthanide ions doped in Non-lanthanide based inorganic hosts</i>
10:30 –10:45	ST-03	Prof. Somnath Biswas <i>TIFR, Mumbai</i>	<i>Detecting Photoinduced Polarons using Coherent Wavepacket and Ultrafast XUV Spectroscopy</i>
10:45 –11:00	ST-04	Dr. Maharooof Koyakkat <i>Japan</i>	<i>Intermolecular Vibrational Dynamics of Lithium Salt-Acetamide Deep Eutectic Solvents: Anion Dependence</i>

11:00–11:30 TEA

Session-X: 11:30 -13:15 Chair: Prof. E. Arunan and Prof. S. K. Ghosh			
11:30 -12:00	IT-27	Prof. C. N. Patra <i>ACD, BARC</i>	<i>Dynamics of Large Molecules in Solution: Multiscale Modeling and Simulation</i>
12:00 - 12:30	IT-28	Prof. Saptarshi Mukherjee <i>IISER, Bhopal</i>	<i>Intracellular Subdegree Temperature Sensing and Dynamics by Thermoresponsive Silver Nanoclusters as Molecular Probes</i>
12:30 – 13:00	OP1-3		<i>Oral Presentation</i>
13:00 – 13:15			<i>Technical presentation by Anatech Instruments</i>

13:15–14:15 LUNCH

14:15 – 16:45 Poster Session III (PC 79-110; RC 21-41) & TEA	
Chair (Photochemistry): Prof. M. Kumbhakar & Prof. S. Nath	
Evaluators: Dr. S. Dutta Choudhury, Dr. S. Sengupta, Dr. J. A. Mondal, Dr. N. Maiti, Dr. A. K. Mora, Dr. P. Sharma	
Chair (Radiation Chemistry): Prof. R. Pushpalata and Prof. S. Chatterjee	
Evaluators: Dr. B. G. Singh, Dr. Apurav Guleria, Dr. Laboni Das and Dr. V. S. Tripathi	

Session-XI : 16:45–18:25 Chair: Prof. Y. K. Bharadwaj and Prof. K. Dash			
16:45 – 17:15	IT-29	Prof. Virendra Kumar <i>RTDD, BARC</i>	<i>From Radiation to Remediation: Designing Functional Materials for a Sustainable Water Future</i>
17:15 – 17:45	IT-30	Prof. Soumen Bhattacharyya <i>AMPD, BARC</i>	<i>Decoding Geometric and Electronic Structures and Reactivity of Isolated Metal Clusters: Insights from Mass Spectrometry, Laser Spectroscopy, and Computation</i>
17:45 – 18:25	OP4-7		<i>Oral Presentation</i>

20:00–

Dinner

Day 5: Saturday, 10th January, 2026

Session-XII: 9:30–11:00 Chair: Prof. D. K. Palit and Prof. R. K. Vatsa			
09:30 – 10:00	IT-31	Prof. Frederick Currell UK	<i>Theragnostic personalised radiopharmaceuticals and the Manchester Inhomogenous Radiation Chemistry by Linear Expansion (MIRaCLE) software toolkit</i>
10:00–10:30	IT-32	Prof. P. A. Hassan BSG, BARC	<i>Radiation technology for Sustainable Agriculture</i>
10:30 –11:00	IT-33	Dr. Amit Kunwar RPCD, BARC	<i>Radio-modulatory Activities of Selenium Functionalized Biopolymers</i>

11:00–11:30 TEA

Session-XIII: 11:30-13:15 Chair: Prof. H Pal and Prof. S. Adhikari			
11:30 -12:00	IT-34	Dr. Neeraj Agarwal CEBS, Mumbai	<i>Tailoring Excited States to Modulate the Fluorescence, Delayed Fluorescence and Phosphorescence in Metal Free Organics</i>
12:00 -12:30	IT-35	Dr. B. Manna RPCD, BARC	<i>Molecular Structural Correlation with Singlet Fission Dynamics and Yield: Case Studies Anthracene Based Singlet Fission Materials</i>
12:30 -13:00	IT-36	Prof. K. K. Pant RRCAT, Indore	<i>An Infra-red Free Electron Laser based User Facility at RRCAT</i>
13:00 - 13:15	ST-05	Dr. Debashis Majhi NIT Tiruchirappalli	<i>Ionic Liquids as Functional Media: Spectroscopic Insights and Biomedical Applications</i>

13:15-14:15 LUNCH

14:15-15:15 ISRAPS Poster Award Distribution & Concluding Session

19:00- Dinner