

**Scientific Programme**  
**16<sup>th</sup> National Symposium on Radiation and Photochemistry**  
**January 23 - 25, 2025**  
**Venue: Pathani Samanta Auditorium, NISER, Bhubaneswar, Odisha**

**Day 1: Thursday, 23<sup>rd</sup> January, 2025**

9:00-9:30 Registration

9:30-10:00 Inauguration

<b>Session-I: (10:00-11:00) <i>Radiation &amp; Photochemistry</i></b>			
<i>Chair: Prof. J. P. Mittal</i>			
10:00-10:30	IT-01	Yatender K. Bhardwaj <i>BARC Mumbai</i>	<i>Radiation induced synthesis and modification of materials</i>
10:30-11:00	IT-02	Amitava Das <i>IISER Kolkata</i>	<i>Stimuli-responsive molecular assemblies for theranostic applications</i>
<b>11.00-11.15 TEA</b>			
<b>Session-II: (11:15-13:15) <i>Radiation Chemistry &amp; Chemical Dynamics</i></b>			
<i>Chair: Prof. A. C. Bhasikuttan</i>			
11:15-11:40	IT-03	Atanu Barik <i>BARC Mumbai</i>	<i>Radiation chemistry: An unequivocal tool for studying free radical reaction</i>
11:40-12:05	IT-04	Pramod Sharma <i>BARC Mumbai</i>	<i>Ionization of molecules and clusters under influence of laser and electric-discharge pulse</i>
12:05-12:30	IT-05	Rajib Ghosh <i>BARC Mumbai</i>	<i>Ultrafast dynamics of singlet fission: Mechanistic insights from femtosecond and nanosecond transient absorption spectroscopy</i>
12:30-13:00	<i>Session in honour of Prof. J. P. Mittal</i>		
<i>Chair: Prof. H. N. Ghosh</i>			
<b>13:00-14:00 LUNCH</b>			
<b>Session-III: 14:00-15:00 <i>Gas Phase Reaction Dynamics and Atmospheric Chemistry</i></b>			
<i>Chair: Prof. P. D Naik</i>			
14:00-14:30	IT-06	Aloke Das <i>IISER Pune</i>	<i>Sequence of protein alphabets prescribes the secondary structures of peptides: A comprehensive picture from condensed and gas phase studies</i>
14:30-15:00	IT-07	Sachin S. Gunthe <i>IITM</i>	<i>Oxidation unveiled: Bridging atmospheric chemistry and human physiology</i>
15:00-16:30	<b>Poster Session I (PC 01-PC 34) &amp; TEA</b>		
<b>Session-IV: 16:30-18:00 <i>Supramolecular Chemistry &amp; Applications</i></b>			
<i>Chair: Prof. T. Mukherjee</i>			
16:30-17:00	IT-08	A. Srinivasan <i>NISER Bhubaneswar</i>	<i>Porphyrins &amp; its analogues: Application as a chemosensor</i>
17:00-17:30	IT-09	Jyotirmayee Mohanty <i>BARC Mumbai</i>	<i>Macrocyclic host-based functional supramolecular assemblies: Applications in catalysis, separation, and therapeutics</i>
17:30-18:00	IT-10	Suhrit Ghosh <i>IACS</i>	<i>Redox-activable heavy atom free photodynamic therapy</i>
18:00-19:00	<b><i>ANNUAL GENERAL BODY MEETING OF ISRAPS</i></b>		
19:30	<b><i>DINNER</i></b>		

Day 2: Friday, 24<sup>th</sup> January, 2025

Session-V: 9:00–11:30		<b><i>Spectroscopy in Sensor Development</i></b>	
		<i>Chair: Prof. S. K. Sarkar</i>	
9:00-9:30	IT-11	Amrita Chatterjee <i>BITS Pilani, K K Birla Goa Campus</i>	<i>Unlocking the potential of 10,12-pentacosadiynoic acids as multifunctional dual-output chemosensors</i>
9:30–9:45	ST-01	Suvankar Dasgupta <i>NIT Patna</i>	<i>Pseudorotaxane, metastable rotaxane and rotaxane-based molecular switches for anion responsive studies</i>
9.45-10.45	<b><i>Oral Presentation</i></b> OP1-OP6		<i>Chair: Prof. J. Mohanty</i>
10:45-11:15		TEA	
Session-VI: 11:15–13:00		<b><i>Frontiers in Radiation and Photochemistry</i></b>	
		<i>Chair: Prof. J. Mohanty</i>	
11:15–11:45	IT-12	Juby K Ajish <i>BARC Mumbai</i>	<i>Radiation induced synthesis of polymeric systems for various biomedical applications</i>
11:45–12:00	ST-02	Ravi K. Kanaparthi <i>Central University Kerala</i>	<i>A highly sensitive colorimetric and fluorometric sensor for the detection of cyanide</i>
12.00-13.00	<b><i>Oral Presentation</i></b> OP7-OP12		
13:00-14:00		LUNCH	
Session-VII: 14:00-16:00		<b><i>Ultrafast Spectroscopy</i></b>	
		<i>Chair: Prof. A. K. Ganguly</i>	
14:00-14:30	IT-13	Chayan K Nandi <i>IIT Mandi</i>	<i>Single molecule spectroscopy of emerging nanomaterials for super resolution optical imaging</i>
14:30-15:00	IT-14	Jino George <i>IISER Mohali</i>	<i>Photophysics of hybrid light-matter states</i>
15:00–15.30	IT-15	Sayan Bagchi <i>CSIR-NCL Pune</i>	<i>Water-enhanced DES electrolytes for stable zinc-ion batteries</i>
15.30-16.00	ST-03	Somen Mondal <i>ICT Jalna Campus</i>	<i>Vision of fundamental proton and electron transfer: Advancing from spectroscopy to bioelectronics</i>
16:00–16:15	<b>Technical session (ATOS Instruments Marketing Services)</b>		
16:15–16:30		TEA	
16:30–18:00	<b>Poster Session II (PC 35-PC 77; RC 01-RC 14)</b>		
18:00–19:00	CULTURAL PROGRAM		
19:00	<b>BANQUET DINNER (Cloud Hill Resort)</b>		

Day 3: Saturday, 25<sup>th</sup> January, 2025

<b>Session-VIII: 9:00-10:30</b>			
		<b><i>Radiation Chemistry: Application in Materials and Medicine</i></b>	
		<i>Chair: Prof. S. Nembenna</i>	
9:00-9:30	IT-16	R. Puspallata <i>BARC Facilities Kalpakkam</i>	<i>Role of radiation chemistry in nuclear technology &amp; beyond</i>
9:30-10:00	IT-17	Kiran K. Sharma <i>Shivaji University Kolhapur</i>	<i>Study of gold nanoparticles interaction with N, N, N', N' –tetramethyl-p-phenylenediamine radical cation using steady state radiolysis</i>
10:00-10:30	IT-18	Gayathri N. Banerjee <i>VECC Kolkata</i>	<i>Optimizing ion irradiation techniques to simulate neutron-induced damage in nuclear reactor core materials: Insights from VECC through experimental and simulation studies</i>
10:30-10:45	ST-04	Rohit Sharma <i>BARC Mumbai</i>	<i>Radioimmunotherapeutic agents for targeting HER2 over expressing cancers</i>
<b>10:45-11:15</b> TEA			
<b>Session-IX: 11:15-13:00</b>			
		<b><i>Spectroscopy in Materials for Energy</i></b>	
		<i>Chair: Prof. P. Mal</i>	
11:15-11:45	IT-19	Subhadip Ghosh <i>NISER Bhubaneswar</i>	<i>Facet engineer for tailoring photophysical processes in perovskite nanocrystals</i>
11:45-12:15	IT-20	Santanu Bhattacharya <i>IISER Berhampur</i>	<i>Sustainable nanomaterials for solar to chemical energy conversions through complete metal free approach</i>
12:15-12:45	IT-21	Yatendra S. Chaudhary <i>CSIR-IMMT Bhubaneswar</i>	<i>Design of intrinsic white light emitting phosphors and their W-LEDs</i>
12:45-13:00	ST-05	Palas Roy <i>IIT Bhubaneswar</i>	<i>Resolving the role of solvent polarity, viscosity and hydrogen-bonding in thermally activated delayed fluorescence</i>
<b>13:00-14:00</b> LUNCH			
<b>Session-X: 14:00 - 16:00</b>			
		<b><i>Spectroscopy in Biophysical Chemistry</i></b>	
		<i>Chair: Prof. S. Bagchi</i>	
14:00-14:30	IT-22	Jatish Kumar <i>IISER Tirupati</i>	<i>Chiral light emitting nanomaterials: From fundamentals to applications</i>
14:30-15:00	IT-23	Priyadip Das <i>SRM Inst. Sci. Technol., Chennai</i>	<i>Zn coordinated self-assembled dipeptide based fluorescent nanoparticles facilitate cellular imaging &amp; targeted drug delivery</i>
15:00-15:30	IT-24	Harekrushna Sahoo <i>NIT Rourkela</i>	<i>Perturbation of protein conformation and kinetics by polyethylene glycol: A correlation between ensemble and single-molecule approach</i>
15:30-16:00	IT-25	Hirak Chakraborty <i>Sambalpur University</i>	<i>Mechanism of membrane fusion: Interplay of lipid and peptide</i>
<b>Session-XI: 16:00-16:45</b>			
		<b><i>Thesis Presentation</i></b>	
		<i>Chair: Prof. A. Ghosh</i>	

<b>Session-XII: 16:45-17:45</b> <i>Concluding session</i>	
<b>16:45-17:45</b>	<b>Poster Award Distribution &amp; Concluding Session</b>
<b>17:45-18:00</b>	<b>TEA</b>
<b>19: 30:</b>	<b><i>DINNER</i></b>