2nd User Interaction Meeting on Science with Infrared/ THz Free Electron Lasers

November 19- 20, 2026

Raja Ramanna Centre For Advanced Technology, Indore
Vikram Sarabhai Hall, Convention Centre, RRCAT Indore.

PROGRAM SCHEDULE

Day-1: Thursday, November 19, 2026	
Registration	**09:00 – 10:00**
INAUGURAL SESSION	**10:00 – 10:30**
INAUGURATION OF INDUSTRIAL EXHIBITION	**10:30 - 10:45**
DIRECTOR'S HIGH TEA	**10:45 - 11:15**
TS-1: IR-THz FELs & Associated Experimental Facilities	
11:15 – 11:45	Shri Bhaskar Biswas, RRCAT. IR-FEL User Facility: The Machine & its Operational Scenario.
11:45 – 12:15	Dr. Shilpam Sharma, RRCAT. From Probe to Process: Tunable IR-FEL Light for Functional Thin Films & Devices
12:15 - 12:45	Dr. Praveen Kumar Velpula, UGC-DAE CSR, Indore. UGC–DAE CSR User Station at RRCAT: Ultrafast Spectroscopy Prospects Enabled by the IR Free-Electron Laser.
12:45 - 13:15	Dr. Bhuban Kumar Sahu, IUAC, New Delhi. A Compact Free Electron Laser based THz facility at IUAC, New Delhi.
TALKS BY INDUSTRY PARTNERS	**13:15 - 13:45**
LUNCH	**13:45 – 14:45**
TS-2: Application of IR/THz FEL as a Tunable Bright Source	
14:45 - 15:15	Prof. S. S. Prabhu, TIFR Mumbai. Room-Temperature Experiments at the RRCAT IR-FEL: Strong-Field Nonlinear Optics, Degenerate Pump–Probe Spectroscopy, and Resonant Condensed Matter Physics Across 12.5 to 50 Micrometers.
15:15 - 15:45	Dr. Soumen Bhattacharya, BARC, Mumbai. Probing Geometric and Electronic Effects in Doped Metal Clusters: Opportunities for IR-FEL-Based Vibrational Spectroscopy.
15:45 - 16:15	Dr. K. Prabakar, IGCAR Kalpakkam. Photothermal Spectroscopy using Micro-sensors for Sensitive and Selective Chemical Sensing.
TEA	**16:15 - 16:30**

Thursday, November 19, Contnued TS-3: Spectroscopy with the help of IR/THz FELs	
16:30 - 17:00	Dr. Vivek Dwij, Radboud University, The Netherlands. Photoinduced effects in Ferroic Materials.
17:00 - 17:30	Prof. Dipanshu Bansal, IIT Mumbai. Probing the Coupling between Charge Carriers, Spontaneous Polarization, and Polar Phonon in Prototypical Ferroelectric $BaTiO_3$
17:30 - 18:00	Prof. N. Yogesh, NIT Calicut. IR-FEL RRCAT Facility for Three Avenues of Metamaterial Research: Near-zero Refractive Index Platform, Bul-Dirac Semi-Metal-Based Ultrafast THz Optics and Chiral-Fingerprint Detection.
18:00 - 18:45	**ISPA EVENT** **followed by** **TEA BREAK**
19:30 Onwards	**DINNER**

Day-2: Friday, November 20, 2026	
TS-4: FEL based Studies on Materials & Devices	
09:30 – 10:00	Prof. Sivarama Krishnan, IIT Madras Coherent Dynamics and Imaging of Nanoscale Quantum Systems using X-ray Free Electron Laser Pulses.
10:00 – 10:30	Prof. Pankaj B. Agarwal, CEERI Pilani Indigenously Developed Pyroelectric Detectors for IR-THz FEL Beam Detection and Profiling Applications.
10:30 - 11:00	Prof. Braj Bhusan Singh, HBTU, Kanpur. Investigation of Thermally Evaporated Sb and Bi_2Se_3 Thin Films Using Free Electron Laser Radiation.
TEA BREAK 10:30 – 11:00	
TS-5: IR-FEL based Studies in Biological Sciences	
11:00 – 11:30	Prof. Rajib Mitra, SNBNCBS, Kolkata. Role of Hydration in Biomolecular Condensation: Insight from THz Spectroscopy and the Potential Effect of High Intensity Radiation.
11:30 - 12:00	Dr. Rashmi Shrivastava, RRCAT, Indore. IR FEL–Biomacromolecule Interactions: From Fundamental Mechanisms to Biological Applications.
TALKS BY INDUSTRY PARTNERS **12:00 - 13:15**	

Day-2: Friday, November 20, Continued	
13:15 – 14:00	**CLOSING SESSION**
LUNCH 14:00 – 15:00	
15:15 – 16:30	**Visit to IR-FEL Facility & Tea**