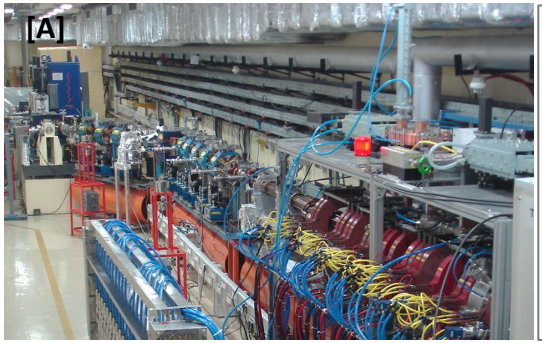
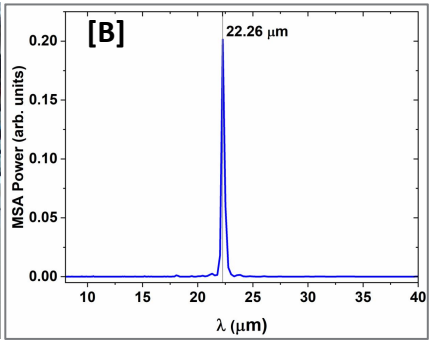
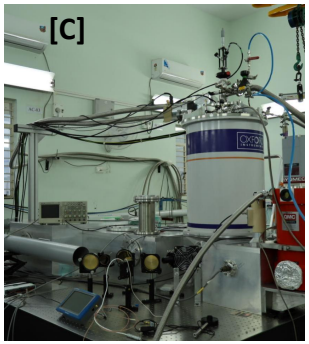
2nd User Interaction Meeting
Science with Infrared/ THz Free Electron Lasers
November 19- 20, 2026
Raja Ramanna Centre For Advanced Technology, Indore
Under the Aegis of
Indian Society for Particle Accelerator (ISPA)







- The IR-FEL (Fig. [A]) provides continuously tunable but monochromatic (Fig. [B]) radiation from 12.5 to 50 micrometer wavelength with a CW average photon flux ~10^{14} photons/s and a peak photon flux of ~10^{18} photons/s over 10 ps micropulses at the user stations.
- Three experimental stations are in regular use for (i) FEL Physics experiments with the scope for setting up experimental station for studies in Chemistry/Biology, (ii) frequency domain spectroscopy in low temperature and high magnetic field environment (Fig. [C]), and (iii) wavelength selective scanning, imaging and absorption studies at room temperature .
- Three more user stations are in advanced stage of commissioning for studies including IR-FEL based single colour pump-probe and photoconductivity.
- The IR-FEL is not only complementary to the Indus Synchrotron facilities of RRCAT, but also to the Delhi Light Source, the THz-FEL facility at IUAC, New Delhi.

About RRCAT

RRCAT, situated at Indore, Madhya Pradesh, is a unit of the Department of Atomic Energy, Government of India. It is engaged in R&D in front line research areas of Lasers, Particle Accelerators & related technologies. It houses two Synchrotron Radiation Sources, several accelerators, advanced laser systems, and the IR-FEL.

Themes

- IR/THz FELs and associated user facilities
- Time domain studies using IR/THz FELs
- Application of IR/THz FEL as a Tunable Bright Source
- IR/THz FEL light based studies in the frequency domain
- IR-FEL based studies in Chemistry, Biology and other areas

- The meeting focuses on enhancing the scope of utilization of the IR/THz FELs in the country.
- Participation in the meeting is by invitation only, and registration is free for all participants. However, the participants are expected to arrange for their own travel and lodging expenses.

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