

WIN-CoE/QuRP Workshop on Cavity Quantum Materials



05th-06th March 2026 ; Venue: RBM Hall, IISc Bengaluru

Important Dates

Registration Deadline

13-Feb-2026

Workshop Dates

March 05th- 06th, 2026

Invited Speakers

David Hagenmuller (CNRS France)
Venu Gopal Achanta (TIFR Mumbai)
Srihari Keshavamurthy (IIT Kanpur)
Himadri Shekhar Dhar (IIT Bombay)
Sajal Dhara (IIT Kharagpur)
Jino George (IISER Mohali)
Shailendra K Varshney (IIT Kharagpur)
Parinda Vasa (IIT Bombay)
Rajesh V. Nair (IIT Ropar)
Usha Devi (Bangalore University)
Manabendra Chandra (IIT Kanpur)
Anshuman Kumar (IIT Bombay)

Organizers

Anoop Thomas
Manukumara Manjappa
Shubhadeep Biswas
Akshay Singh

For queries, please write to

quantumcavity.physics@iisc.ac.in

The 2-day workshop on 'Cavity Quantum Materials' will be organized at IISc, Bengaluru on 5th-6th March 2026. The exciting field of 'Cavity Engineered Quantum Materials' is emerging as one of the forefronts of modern condensed matter physics and quantum optics, exploring how strong light-matter interactions and vacuum fluctuation fields inside optical cavities can reshape the physical/chemical properties of quantum materials. This workshop will serve as a platform to bring together experts, early-career researchers and students from the fields of cavity-QED, condensed matter physics, polaritonic chemistry, and quantum/nanophotonics.

The program will consist of invited talks along with the tutorial sessions from the national and international experts in the field. This workshop will foster interdisciplinary collaborative discussions and provide an encouraging ground for generating innovative research directions in the multidisciplinary and applied research, especially in cavity-engineered quantum technologies, sustainable chemical processes, quantum sensing and information science/technology.

Topics of Interest

- Cavity engineered 2D materials
- Cavity QED with atoms, ions, transmons
- Ultrastrong/Deepstrong Polaritonics
- Polaritonic chemistry
- Purcell effects in quantum emitters
- Emerging topics in cavity quantum materials: Cavity driven phase transitions, correlated electronic states
- Cavity QED effects in quantum sensing, computing and information science

Expected Outcomes

- Identifying key challenges, open questions and application opportunities in cavity-engineered quantum technologies.
- Inspire and establish collaboration across atomic/condensed matter physics, chemistry, quantum optics, and nanophotonics.

Register here:

<https://iqti.iisc.ac.in/cavity-quantum-materials-a-two-day-workshop/>

PS: Registration is first-come, first-served basis with limited seats. Students from Karnataka are highly encouraged to apply.

Supported by,

Wadhvani Innovation Network-Center of Excellence (WIN-CoE) and
Quantum Research Park (QuRP), IISc Bengaluru.