# The University of Queensland and IIT Delhi Research Academy

## KNOWLEDGE NEXUS

*SEMINAR SERIES*


**Dr. Soumik Siddhanta**

Assistant Professor
Department of Chemistry,
Indian Institute of Technology, Delhi


# Role of Raman spectroscopic techniques in decoding nano-bio interfaces and precision medicine

### ABOUT THE TALK

The scientific interests of Dr. Soumik Siddhanta's group have revolved around the intricate interaction between light and matter, with a particular emphasis on the development of nanoscale optical and plasmonic probes for the investigation of biological systems. Furthermore, our study is centered on using plasmonic nanostructures to improve sensing and imaging capabilities. Importantly, we integrate machine learning with molecular spectroscopy, hence improving the sensitivity of experiments for identifying essential chemical constituents in biological systems.
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### ABOUT THE SPEAKER

Dr. Soumik Siddhanta is an Assistant Professor at the Department of Chemistry, IIT Delhi, India. Before joining IIT Delhi, he was a post-doctoral fellow at the Johns Hopkins University, USA. He completed his undergraduate studies at the University of Delhi and enrolled in an integrated master's and Ph.D. program in Materials Science from JNCASR, Bangalore, India. His research interests include molecular imaging, vibrational spectroscopy, plasmonics, and biophotonics. His research is focused on harnessing the potent combination of engineered plasmonic nanoprobes and label-free plasmon-enhanced vibrational spectroscopy for diagnosis, imaging, manipulation, and control of biological structure and function. He received the Indo-US Science and Technology Forum (IUSSTF) Student Research Fellowship 2014 and the American Society for Laser Medicine & Surgery (ASLMS) Research Grant 2016-'17. At IIT Delhi, he has received research grants from the Science and Engineering Research Board (SERB) and the Council of Scientific and Industrial Research (CSIR), Govt. of India. He was also chosen as one of the Emerging Journal of Materials Chemistry B-2023 investigators.

***Thursday, 19 September, 2024***

Time: **10:30 am** IST / **3:00 pm** AEST onwards

Venue: **LH212, First Floor, Lecture Hall Complex, IIT Delhi**

**LINK TO ATTEND ONLINE**

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