

Students' Annual Seminar

STM study of self-organizing organic molecules on Au (111) / mica surface

Saurabh Chaudhary

To cut the dependency on liquid Helium, we are integrating the world's first cryogen-free UHV-STM with cryogen-free superconducting vector magnet (5T/1T) using the cryogen-free cryocoolers. These refrigerators produce vibrations which are detrimental to obtain the atomic resolution. Hence, the challenges include the elimination of these vibrations and obtaining the atomic resolution at the surface of widely studied systems like HOPG and Au (111). Here, I am going to present the strategies we used to tackle these challenges and demonstrate improvements in our STM imaging. We have investigated the topography, and tunnelling spectroscopy with the organic molecules deposited on Au (111)/mica surface at 13K in the presence of high magnetic fields.

Friday, Apr 5th 2019

12:30 PM (Tea/Coffee at 11:45 AM)

Seminar Hall, TIFR-H