

Seminar

Spectroscopy, Dynamics and Control

Susanta Mahapatra

UoH, Hyderabad

Spectroscopy, dynamics and control in chemistry of polyatomic molecules involves the association of excited electronic states. The association emerges as a result of coupling among the states and is caused either by suitable symmetry allowed nuclear vibrations or by the spin-orbit interactions. In the former case the energetic proximity of electronic states outweighs the huge mass effect of the nuclei that allows the separation of electronic and nuclear motion in the celebrated Born-Oppenheimer approximation. In this presentation, I shall give a general overview of the ongoing research in our group and discuss the dynamics of chemical systems mediated by electronic excited states and electronic nonadiabatic interactions. Representative results illustrating variety of nonadiabatic molecular processes studied by us during the past years in particular, spectroscopy of molecules and photoisomerization/dissociation dynamics driven by optimally controlled laser pulses will be presented.

Thursday, Oct 5th 2017

4:00 PM (Tea/Coffee at 3:45 PM)

Auditorium, TIFR-H (FReT-B)