

## **Students' Annual Webinar**

### **Doping of Organic Semiconductors for efficient optoelectronic devices**

#### **Brijesh Kumar Patel**

Organic semiconductors (OSCs) have attracted a lot of attention because of their applications in various optoelectronics devices such as solar cells, OLEDs, etc. Electronic doping of OSCs is essential for the progress of optoelectronic device performances. In our study, we use radical cations as a dopant for different OSCs. These doped OSCs are useful as HTL (Hole Transport Layer) in Solar cells and LED applications. We confirmed the doping of these OSCs by various characterisation techniques. I will discuss the importance and the challenges in doping OSCs, the effect of different counter-anions on the doping efficiency of OSCs, and the methods to overcome these challenges to make efficient optoelectronic devices.

***Friday, Feb 24<sup>th</sup> 2023***

***5:00 PM (Tea / Coffee 4.45 PM)***

***Seminar Hall, TIFR-H***