

# **Students' Annual Seminar**

## **Efficient p-type dopants for electronic devices**

### **Shubham Gupta**

Organic semiconductors (OSCs) are organic compounds that are either conjugated molecules or polymers. OSCs are preferred over inorganic semiconductors because of their attractive properties like lightweight, low-cost production, low-temperature processing, mechanical flexibility, and abundant availability. OSCs are used in various electronic devices like organic light-emitting diodes (OLEDs), solar cells, transistors and photodetectors. Because of the low conductivity of OSCs compared to inorganic semiconductors, there is often a need for precise electronic doping.

In this talk, I will discuss efficient p-type dopants required for the doping of OSCs. These dopants will be based on chemically synthesised cation radicals, oxoammonium salt-based dopants, adduct systems and UV light-induced doping using an acid.

***Friday, Mar 8<sup>th</sup> 2024***

***14:00 Hrs (Tea / Coffee 13:45 Hrs)***

***CR-4, TIFR-H***