

Students' Annual Webinar

Doping of Organic Semiconductors with Deep Homo Level

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Organic semiconductors (OSCs) have attracted a lot of attention because of their advantages over inorganic semiconductors. Molecular doping of OSCs is a significant technological process for controlling the electrical conductivity of optoelectronic devices and improving their performance. In our study, we used thianthrene radical cation as a dopant for OSCs with a deep HOMO level. We have confirmed the doping of these OSCs by various techniques such as EPR, UV visible spectrometry, IV and Hall measurements. I will discuss the importance of doping an OSC with a deep HOMO level, the challenges in doping OSCs, the effect of different counter-anions on the doping efficiency of OSCs and the methods to overcome these difficulties to make efficient optoelectronic devices.

Wednesday, May 4th 2022

4:00 PM