Fundamental Mechanisms of Charge Transport in Organic Semiconductors

Organic semiconductors are important materials for a variety of applications including display devices and solar cells.

Infrared active vibrations (IRA Vs) of organic semiconductors are studied using advanced ultrafast time-resolved infrared spectroscopies.

 IRA Vs originate from the strong coupling of charge redistribution to nuclear motion.

Organic semiconductor structures can be endlessly fine-tuned to change their properties.

A better understanding of structure-property relationships is required to exploit the versatility of organic semiconductors.

Infrared active vibrations (IRA Vs) of organic semiconductors are studied using advanced ultrafast time-resolved infrared spectroscopies.

Time-resolved infrared (TRIR) and two-dimensional infrared (2D-IR) spectroscopies

Ultrafast time-resolved infrared spectroscopy can be used to study structure-property relationships in organic semiconductors and related molecules.

Chemical Science

Mechanisms of IR Amplification in Radical Cation Polarons

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