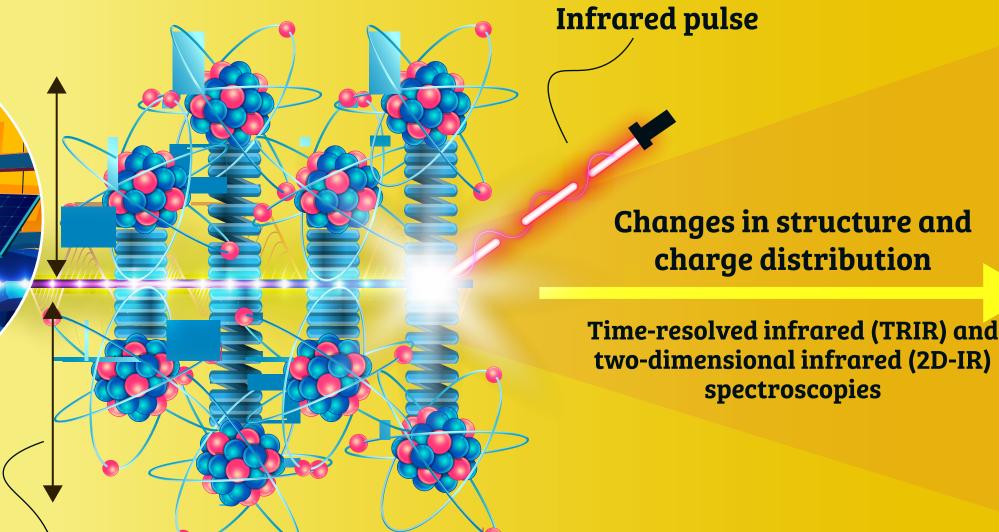
Fundamental Mechanisms of Charge Transport in Organic Semiconductors

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

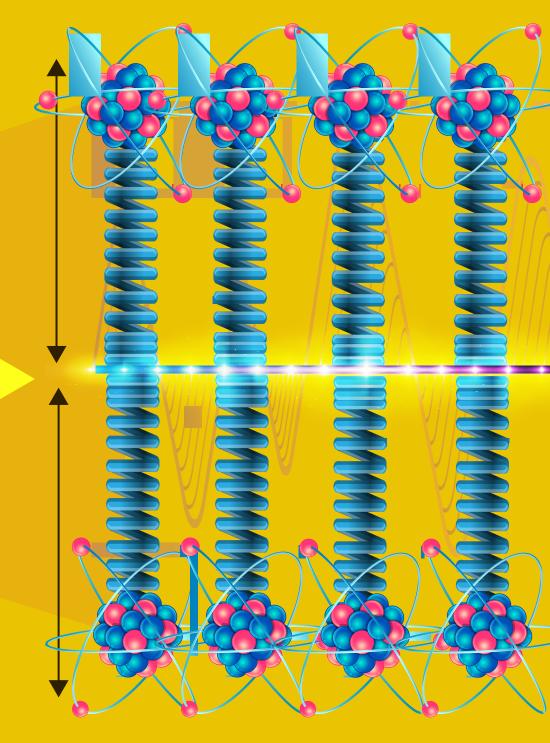
Organic semiconductors **Photovoltaics OLEDs Atomic vibration**

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 (IRAVs) of organic semiconductors are studied using advanced ultrafast time-resolved infrared spectroscopies



two-dimensional infrared (2D-IR)



IRAVs originate from the strong coupling of charge redistribution to nuclear motion

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



Mechanisms of IR Amplification in Radical **Cation Polarons**

