

## Development of optoelectronic functions in organic semiconductors

Organic semiconductors are used in commercially available organic light emitting diodes (OLEDs) and organic solar cells, which are the next-generation energy conversion devices. We are focusing on clarifying the photo-electric conversion process in organic semiconductors, and developing new functions such as photon upconversion from infrared to visible light and OLED operated by a 1.5 V battery.



Photon upconversion from near-infrared to visible light on a flexible thin film.



Organic light-emitting diode is operated by a 1.5 V battery.