

Photonics, nonlinear optics, and condensed matter:

- We work on novel organic materials for adding active functionalities—such as electro-optic modulation and all-optical switching—to integrated photonics platforms.
- We pursue fundamental research in organic semiconductors, excitons, and light-matter interaction.

Pulsed lasers, pump & probe gratings, fluorescence:

- Pump & probe transient grating experiments with high spectral resolution
- Fluorescence dynamics by time-correlated single-photon counting
- Development and fabrication of organic materials for photonics

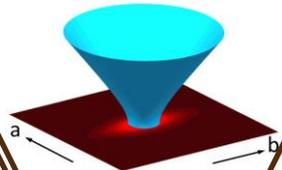
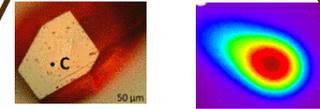
Fundamental and applied research

- Fundamental research on organic molecular crystals and semiconductors. These materials and systems work in a relatively unexplored region of condensed matter physics..
- Development of new paradigms and materials. The flexibility of organics added modern integrated photonics will lead to “best of both worlds” ultra-high-speed data processing.

Controlling electromagnetic radiation: from nonlinear optics to photonics and optoelectronics

[DOI: 10.1103/PhysRevLett.107.017402](https://doi.org/10.1103/PhysRevLett.107.017402)

Exciton transport

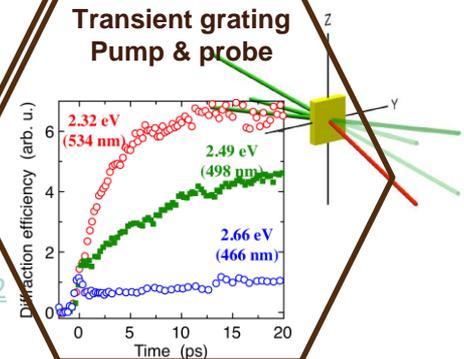


Organics for integrated photonics



[DOI: 10.1364/OL.452742](https://doi.org/10.1364/OL.452742)

Transient grating Pump & probe



[DOI: 10.1063/1.5020652](https://doi.org/10.1063/1.5020652)