ASHIHARA LAB.

[Ultrafast&Nano Optical Science]

Department of Fundamental Engineering

http://www.ashihara.iis.u-tokyo.ac.jp

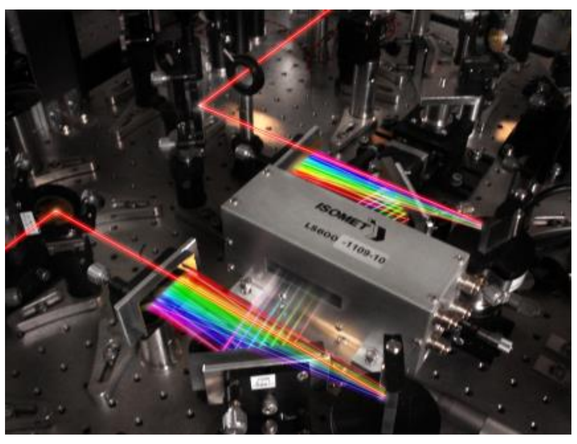
Ultrafast Optics

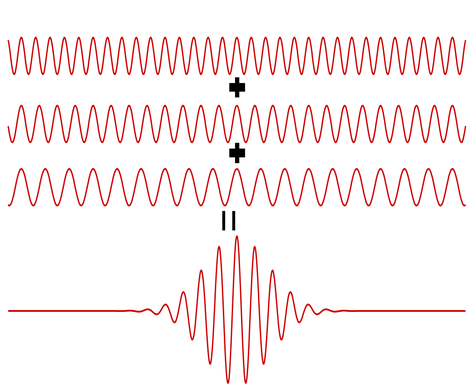
Department of Applied Physics

Watching/Controlling Matter by Tailored Light

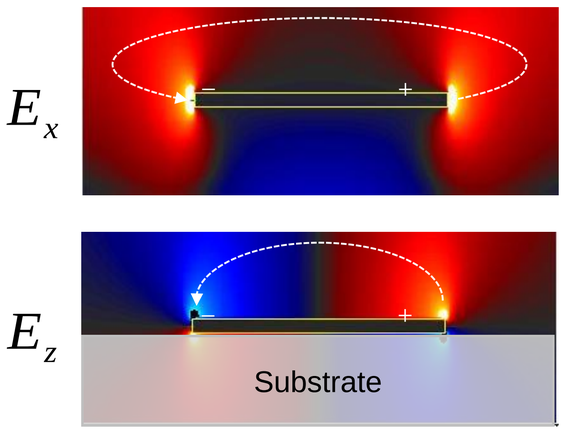
Experimental studies in the field of optical science. Based on the ultrafast laser and nano-optical technologies, we develop advanced spectroscopy and coherent control schemes.
(1) Generation and control of ultrashort optical pulses
(2) Quantum control of condensed-phase matter using advanced laser technologies
(3) Infrared plasmonics and its applications to spectroscopy and opto-electronics.
(4) Advanced laser spectroscopy (multi-dimensional spectroscopy, nano-spectroscopy)

◆ Arbitrary-shaping of Ultrashort Pulses

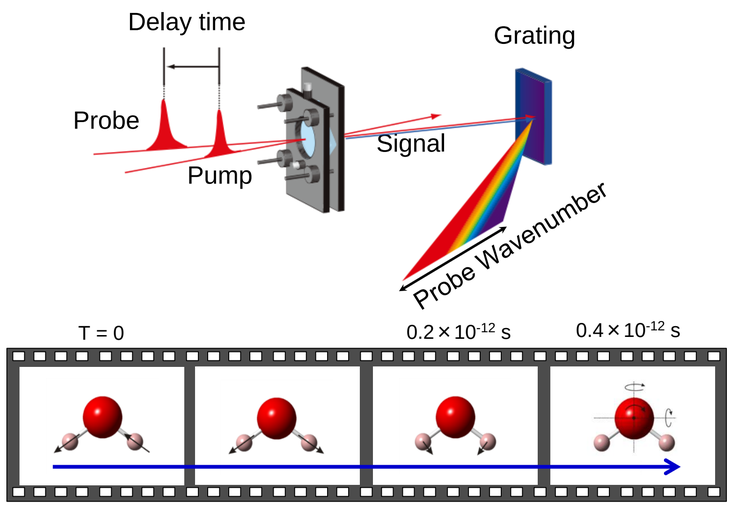




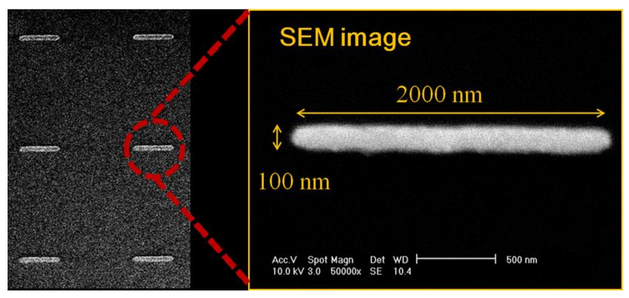
◆ Field Enhancement at Nano-scale

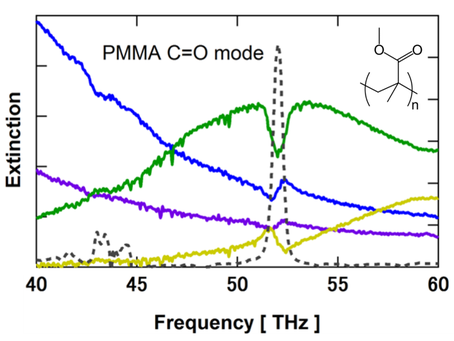


♠ Ultrafast and Nonlinear Spectroscopy

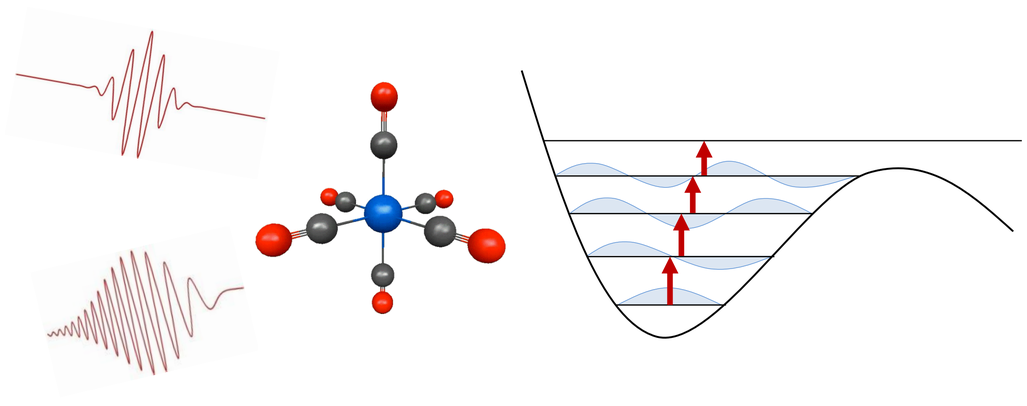


♠ Surface-enhanced Spectroscopy





♣ Laser Quantum Control



♣ Light-wave Electronics