CPEC

SHIMURA LAB.

[Manipulation of light and matter via their interaction]

Centre for Photonics Electronics Convergence

http://qopt.iis.u-tokyo.ac.jp

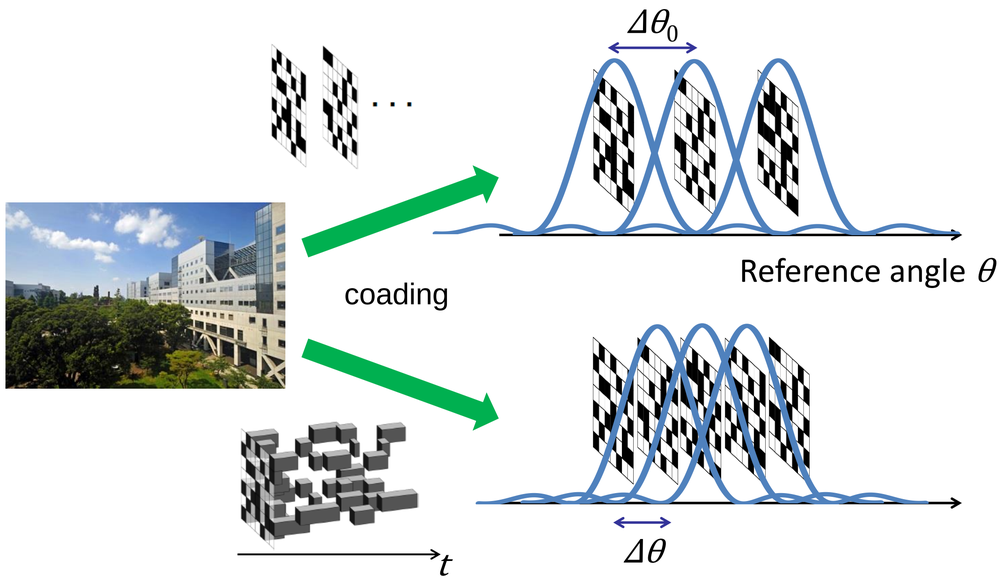
Applied Nonlinear Optics

Department of Applied Physics

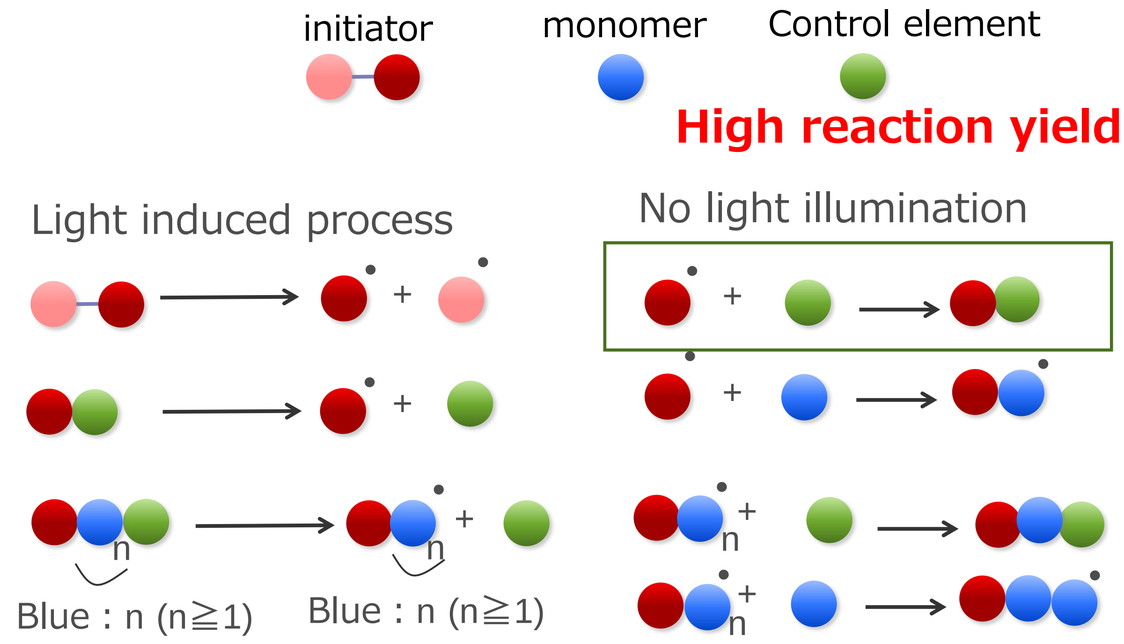
Holographic Memory

Holographic technology allows multiplex recording and parallel access different from conventional optical memory. Our aim is to develop next generation holographic memory with large capacity and high transfer rate. We research the following projects in both experimental and simulation methods.

■Time sequential signal holographic memery



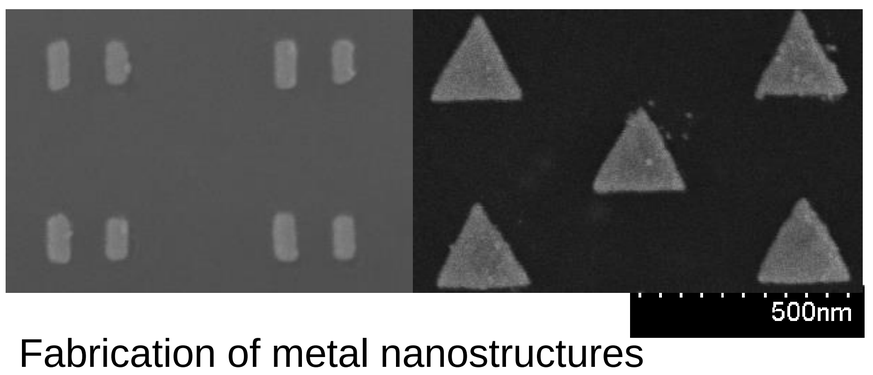
■Modeling of photopolymerization



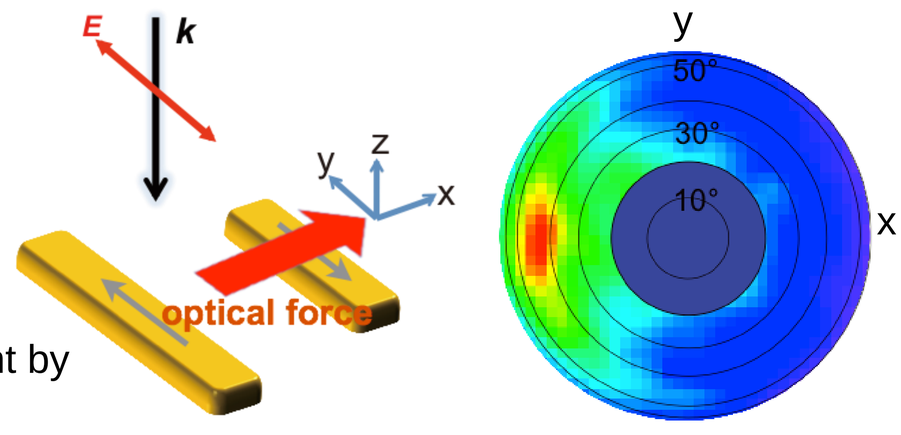
Control of optical wave by nanostructures

We investigate controlling optical properties of nanostructures with tailored plasmonic modes.

Furthermore, we also focus on optical force exerted on nanostructures by the plasmonic control and aim for developing a novel method to manipulate various motions of nanomachines with its plasmonic force.



Fabrication of metal nanostructures



Directional side scattering of light by plasmonic nanostructures