

HOUJOU LAB.

[Crystal Engineering]



Department of Materials and Environmental Science

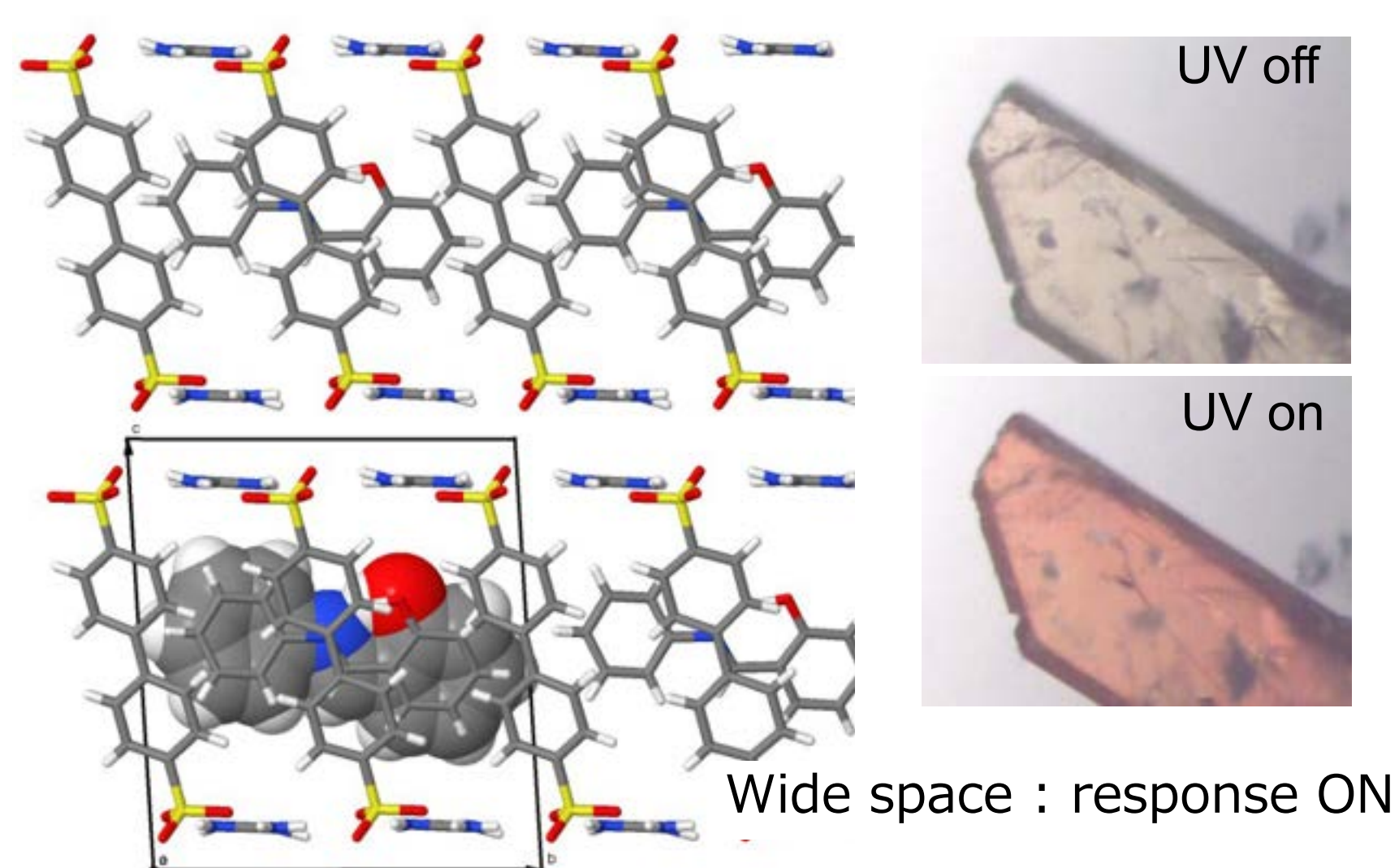
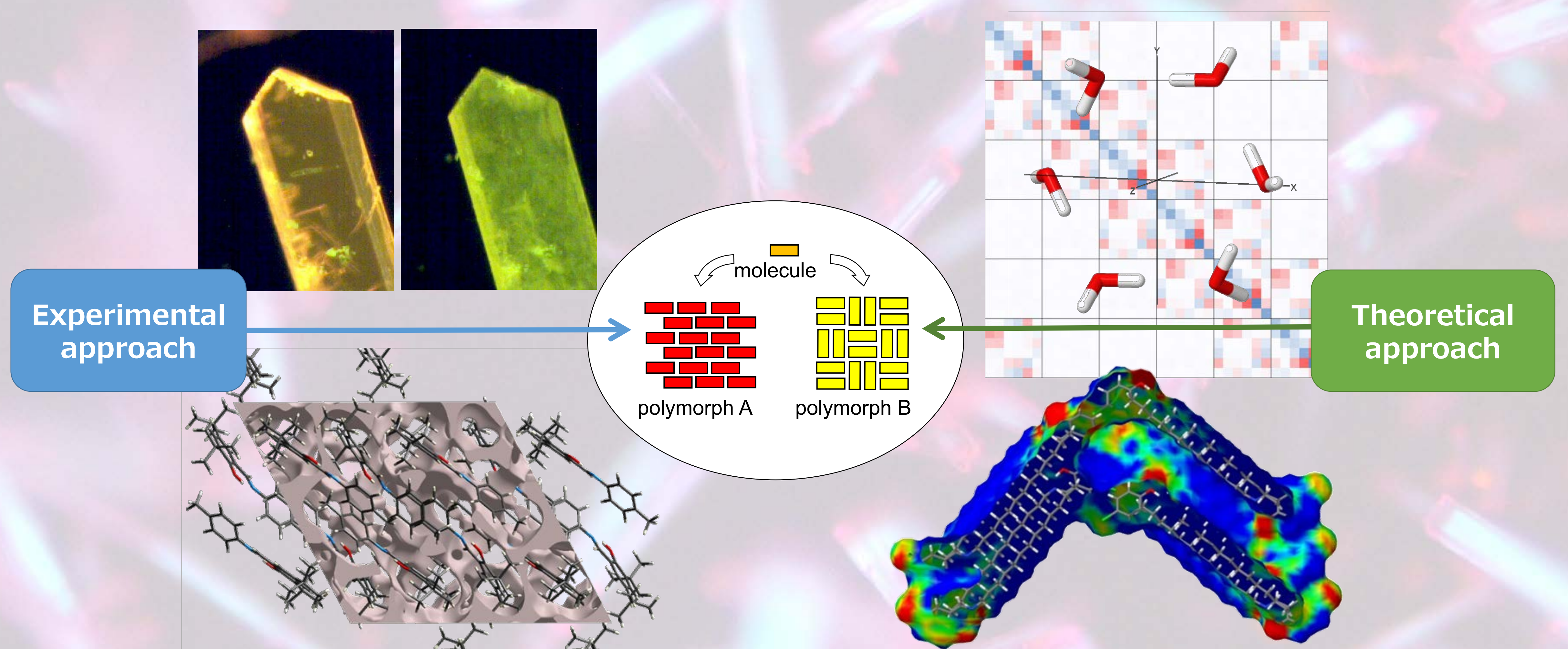
Molecular Integrated System Engineering

Department of Chemistry and Biotechnology

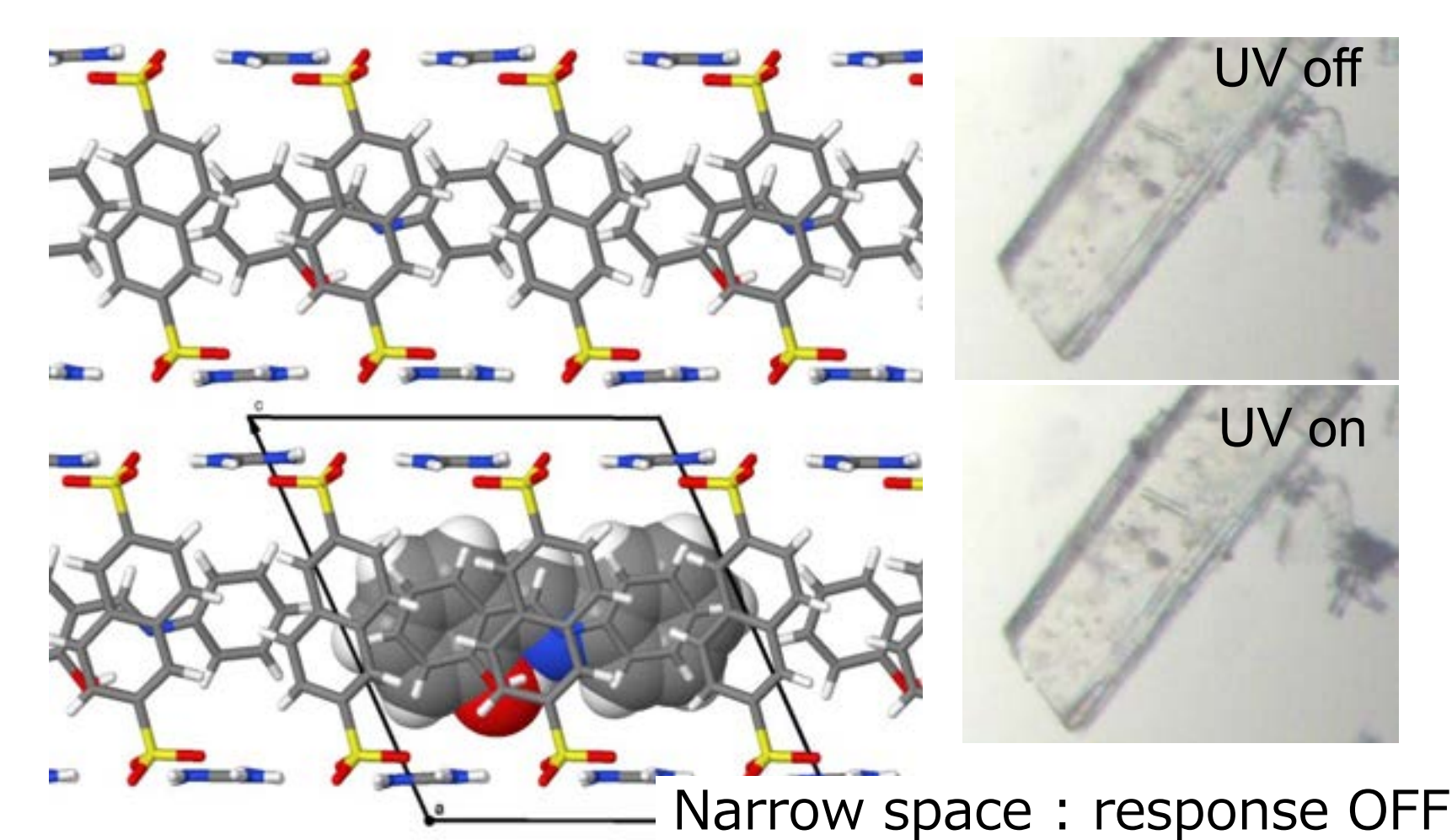
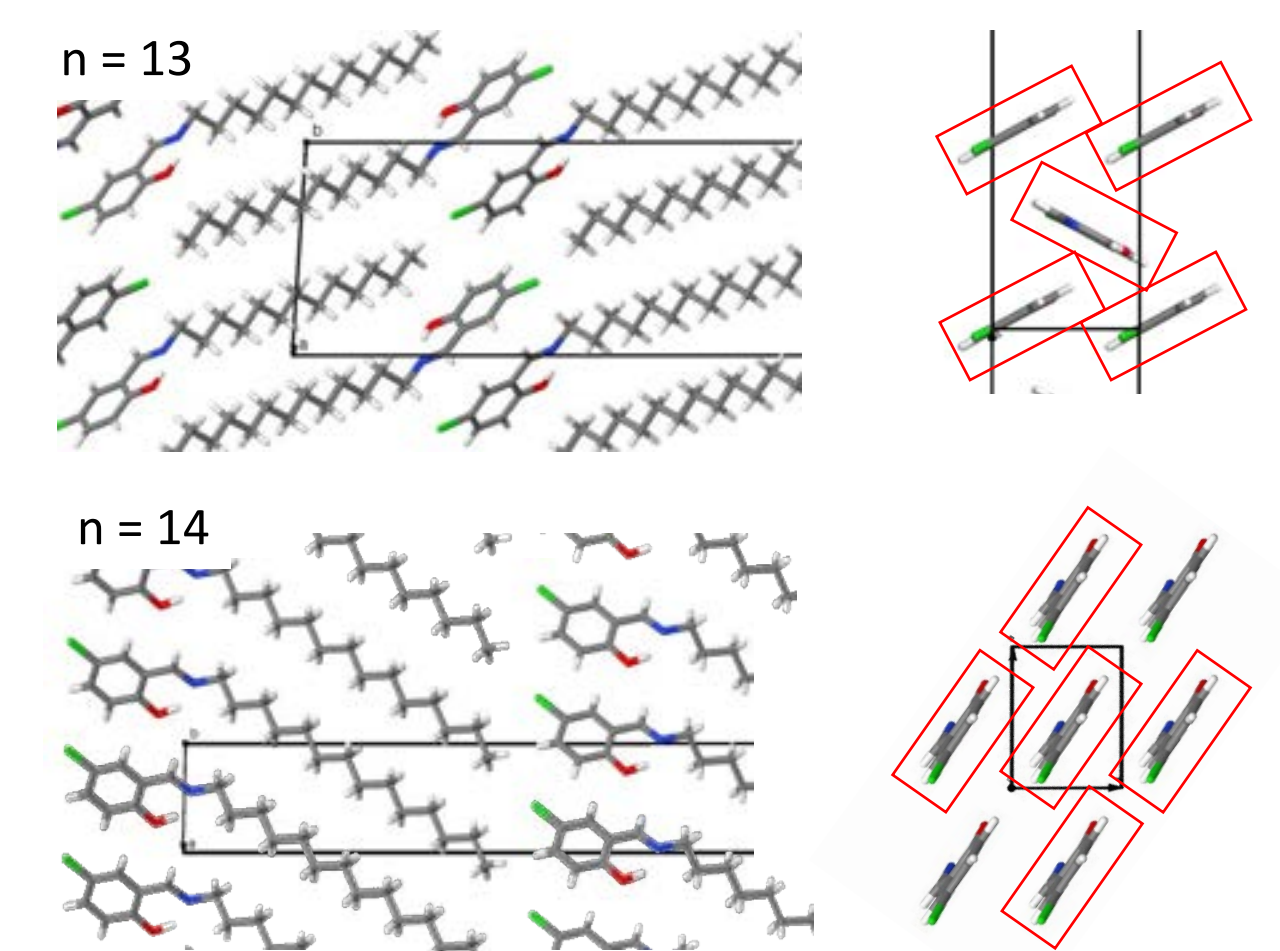
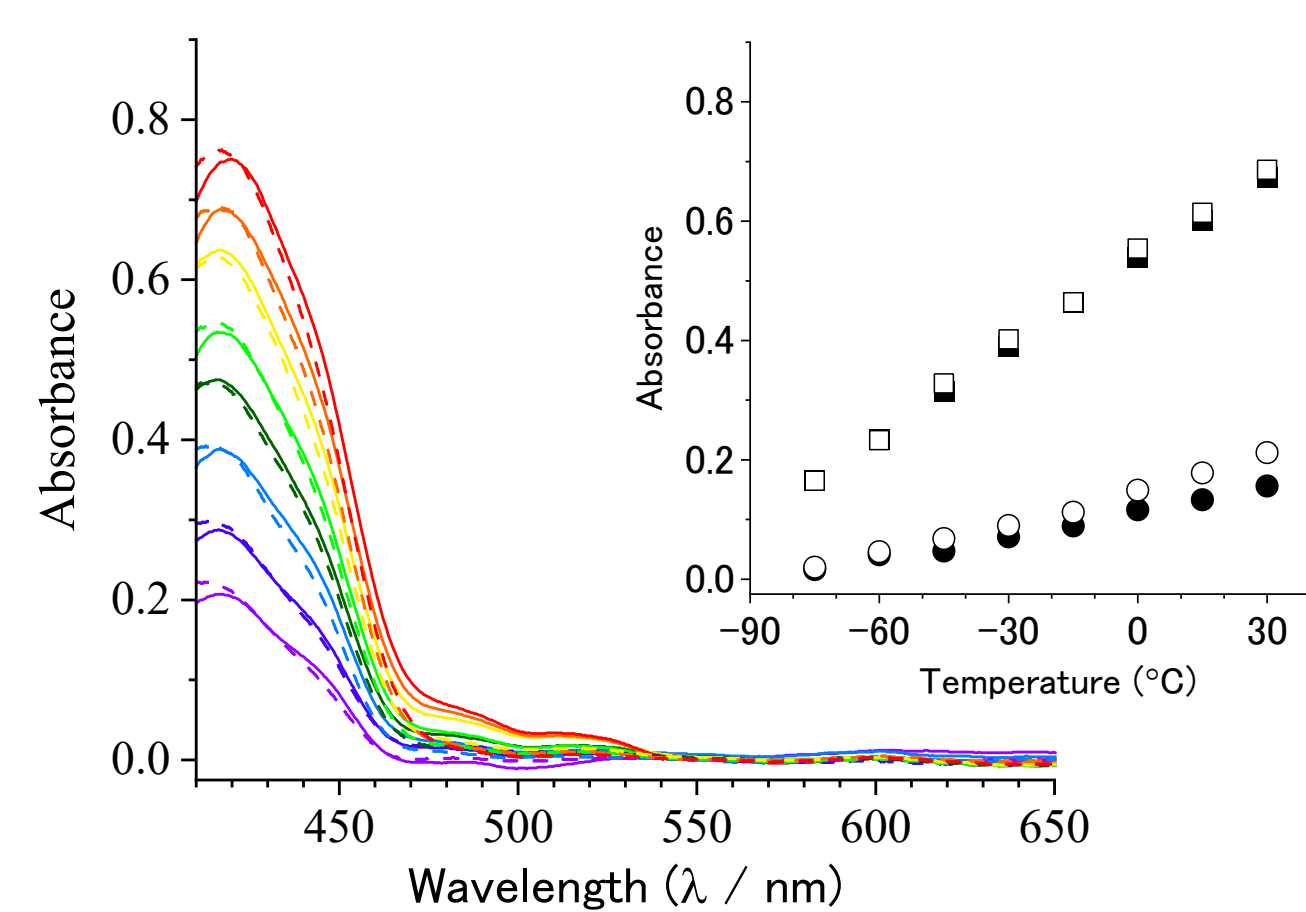
http://www.iis.u-tokyo.ac.jp/~houjou/hjlab_wiki/

Functions of Molecular Arrangement

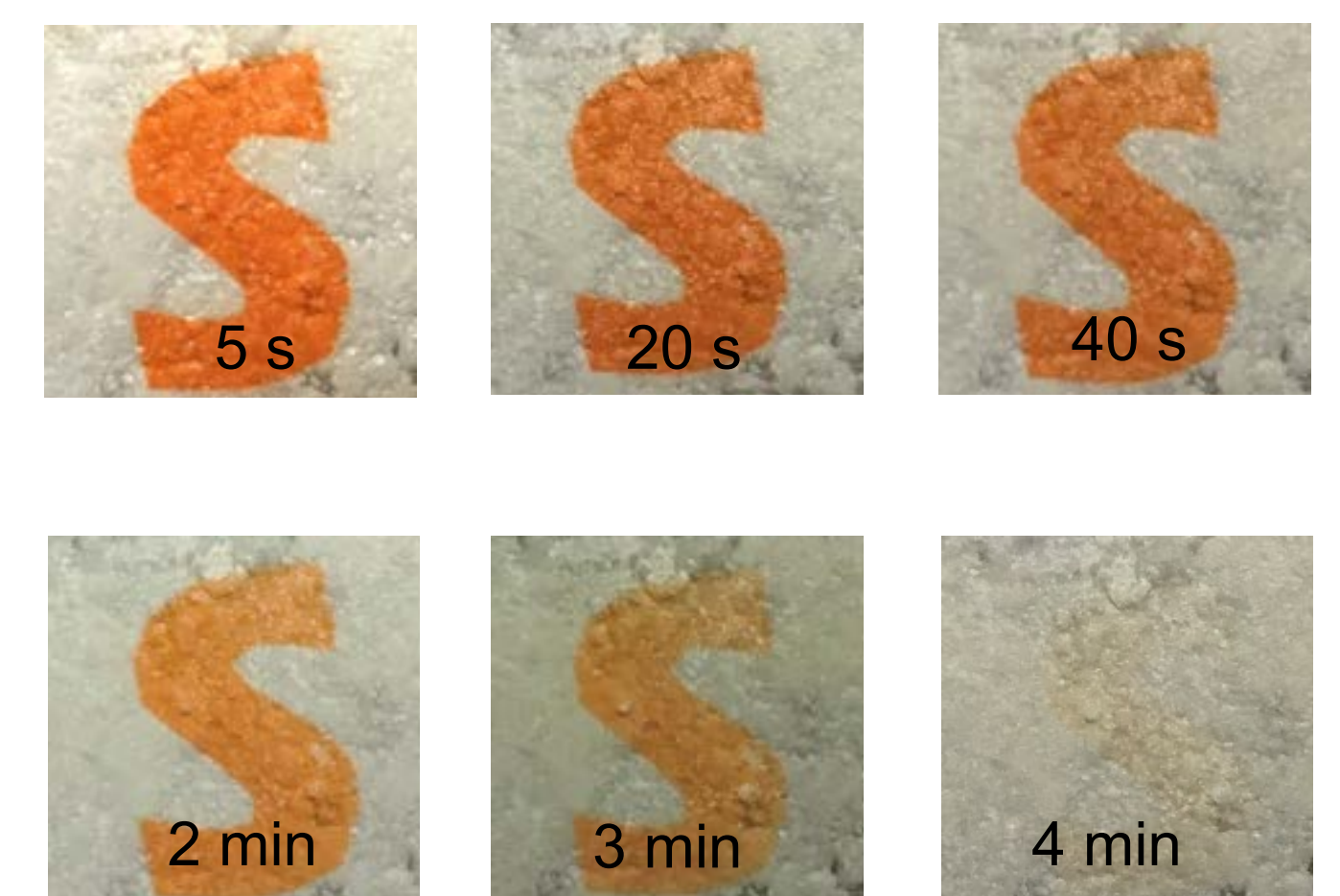
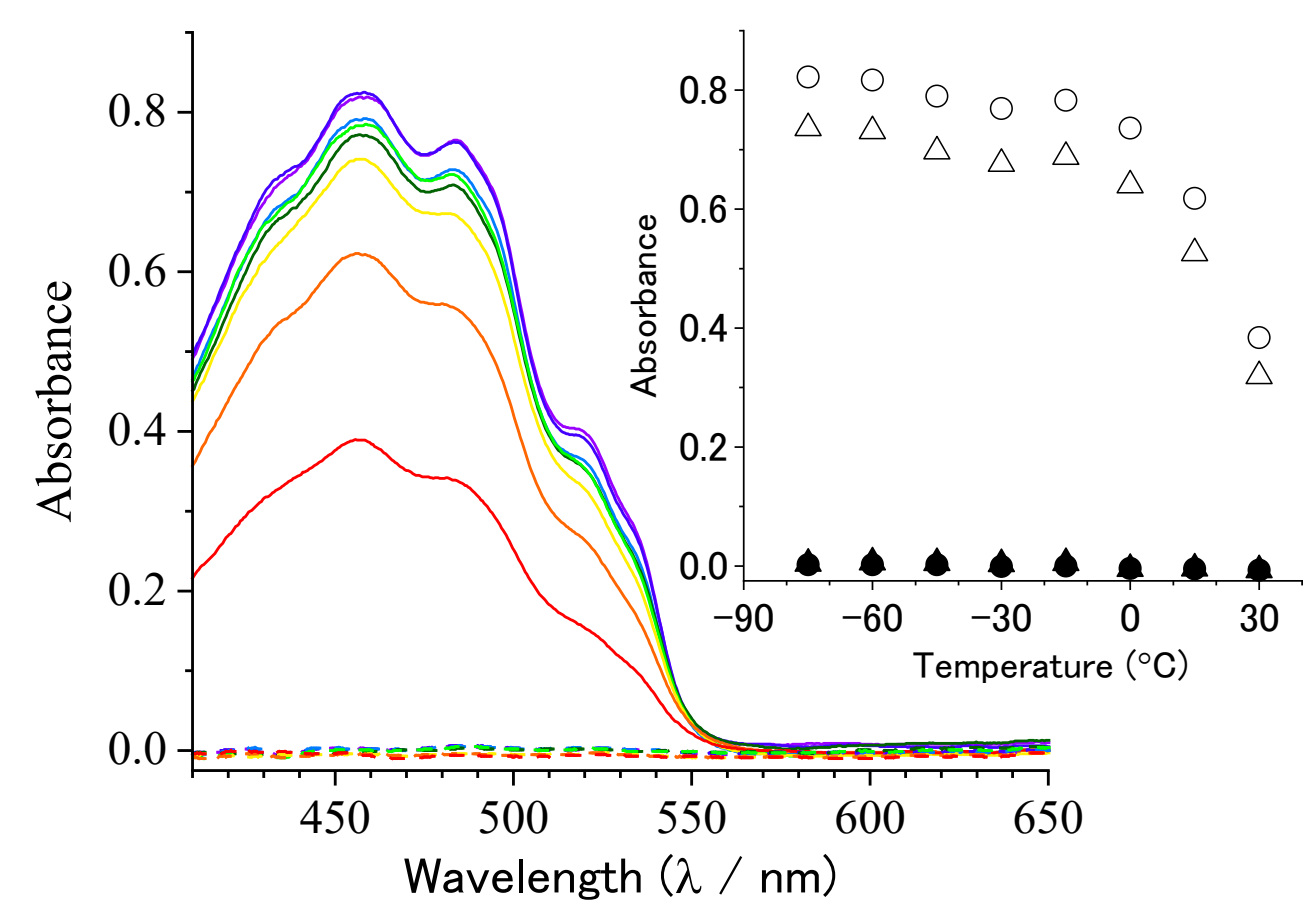
Polymorphism, a phenomenon that a single molecule crystallizes differently, has an impact on the materials' function, hence it is associated with pharmaceuticals, food science, dyes and pigments, and organic electronics. We are working on crystal engineering problems through experimental and theoretical approaches.



Odd number carbon atoms: thermo-responsive



Even number carbon atoms: photo-responsive



Encapsulation of molecules into crystal space modifies their photo-response. (*RSC Adv.* 2021)

A slight modification of molecular structure (i.e. homolog approach) had an impact on crystal packing, which realized hi-spec photochromic materials. (*Cryst. Growth Des.* 2021)