

# HOUJOU LAB.

## Designing Organic Crystals



Department of Materials and Environmental Science

Molecular Integrated System Engineering

Department of Chemistry and Biotechnology, Graduate School of Engineering

[https://www.iis.u-tokyo.ac.jp/~houjou/hjlab\\_wiki/](https://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.

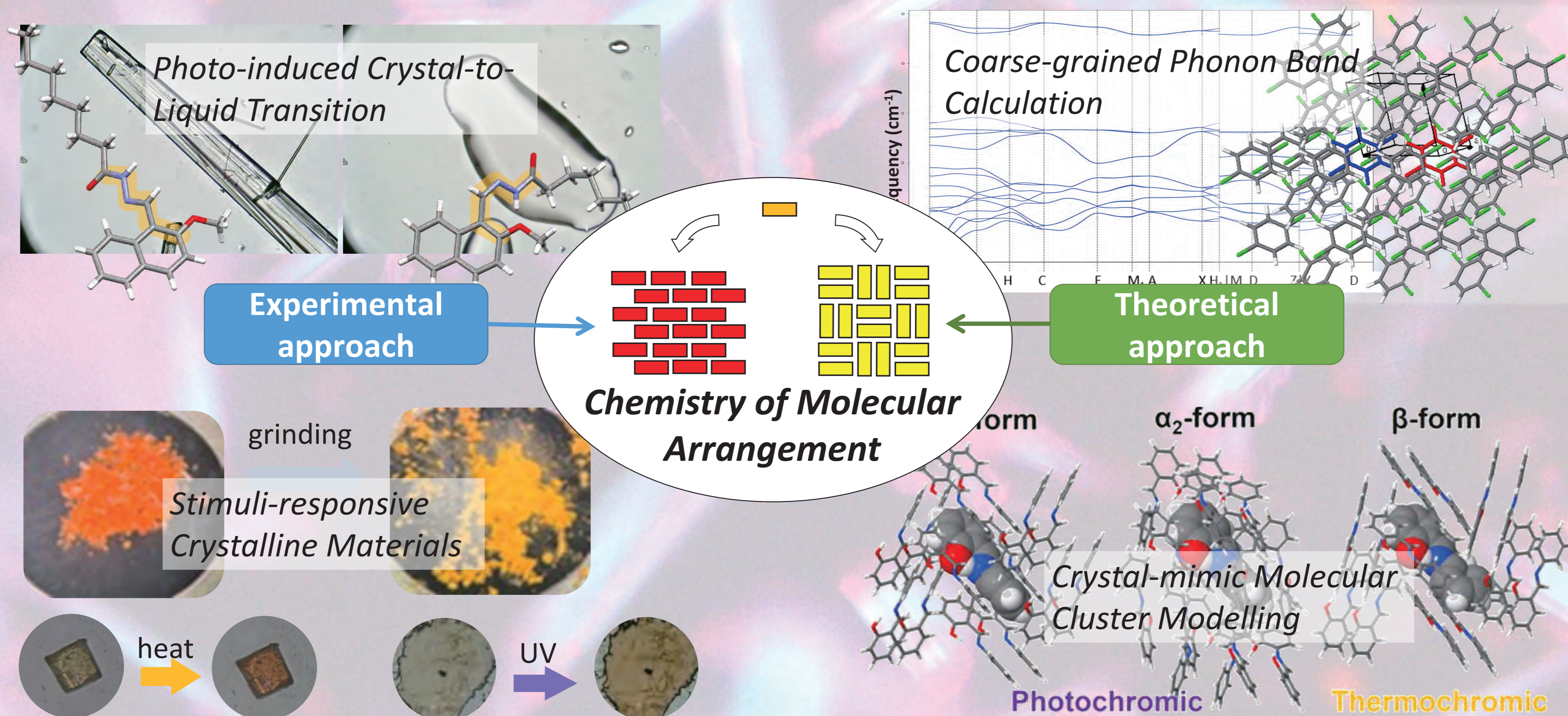
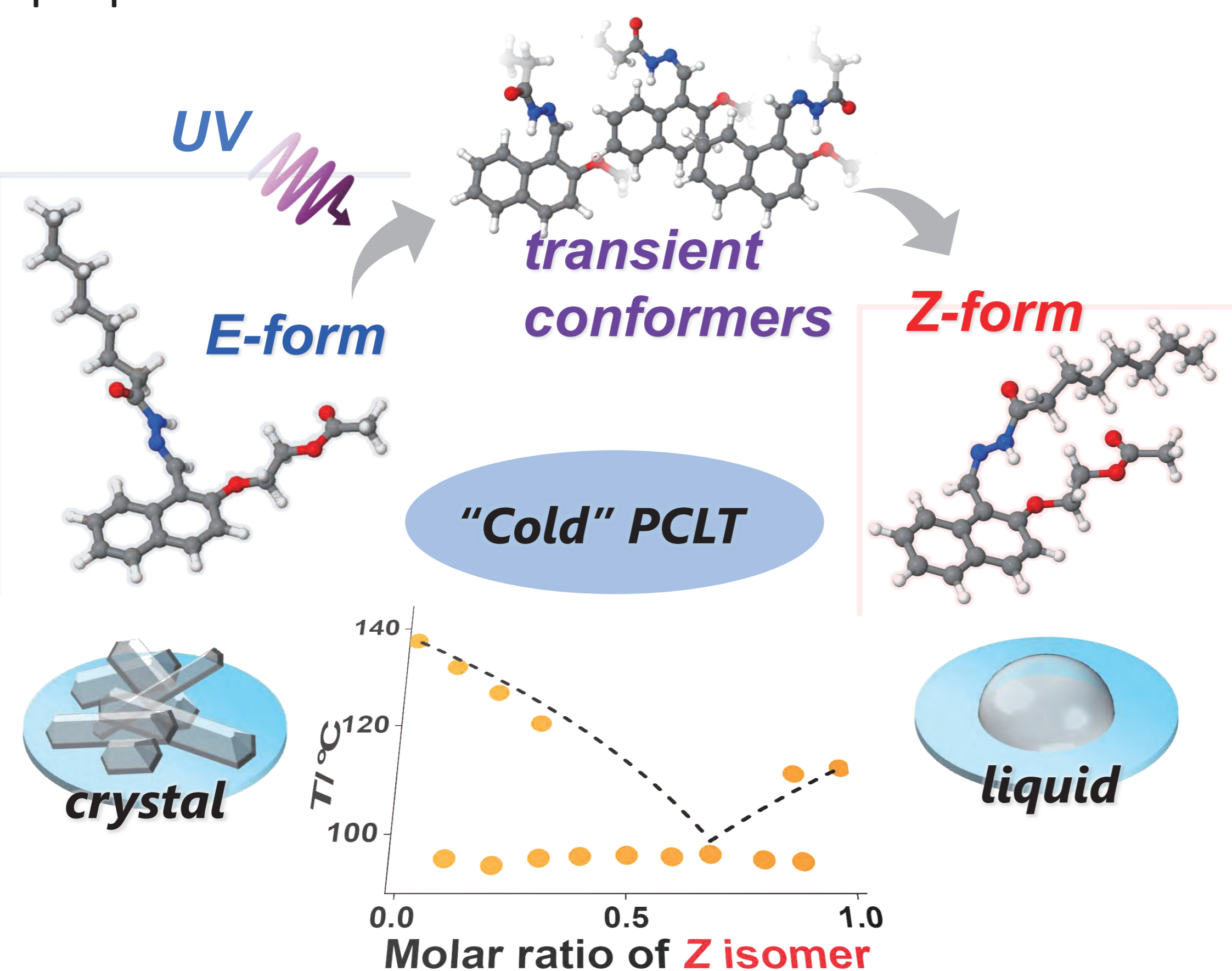
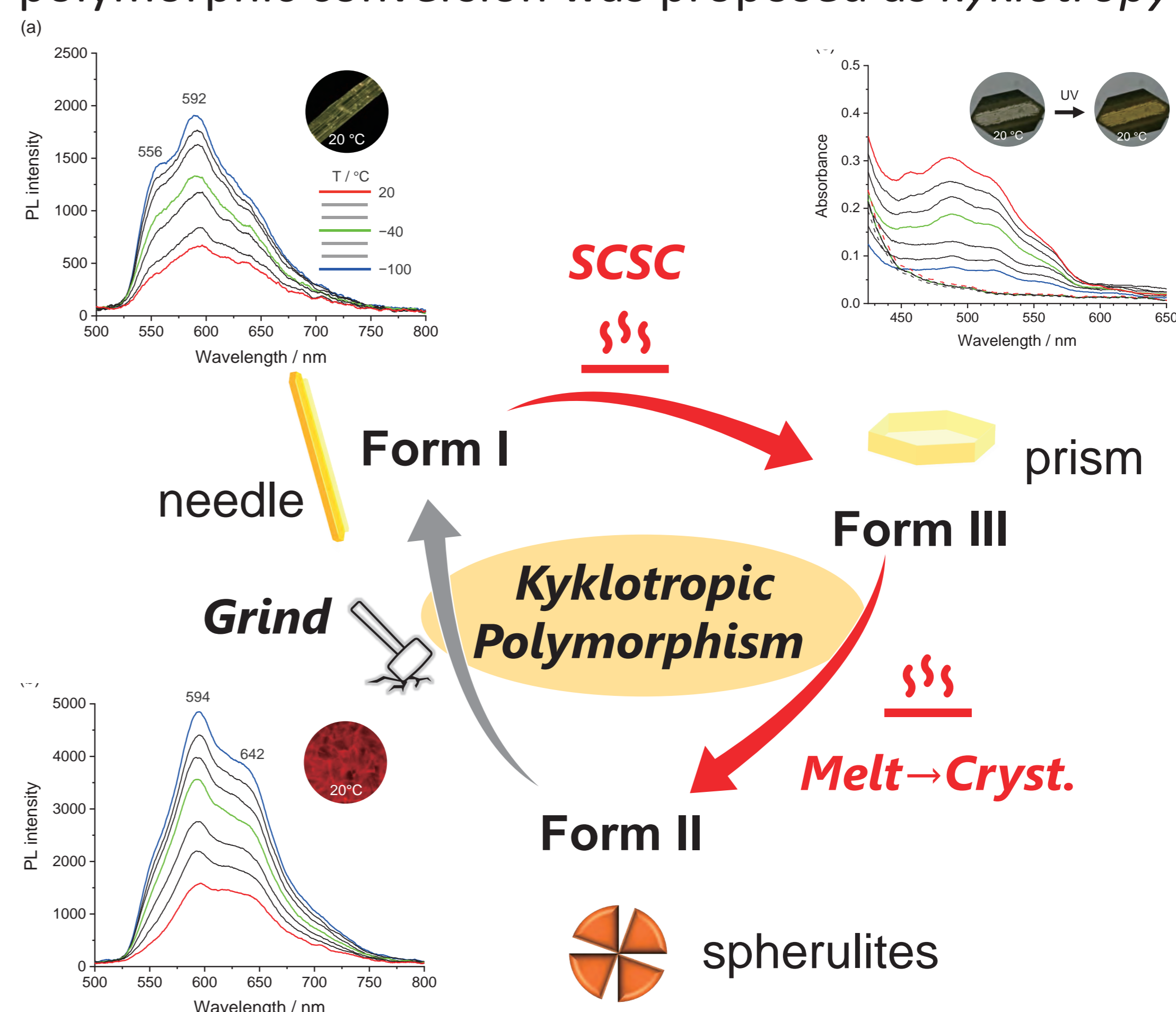


Photo-induced Crystal-to-Liquid Transition (PCLT) occurring at temperatures lower than expected was proposed as "Cold" PCLT.



R. Koibuchi, et al., *J. Mater. Chem. C* (2025)

A single-component system that shows a cyclic inter-polymorphic conversion was proposed as *kyklotropy*.



K. Omasa, et al., *Cryst. Growth Des.* (2026)