

HOUJOU LAB.

[Functional Organic Materials]

Department of Materials and Environmental Science

Molecular Integrated System Engineering

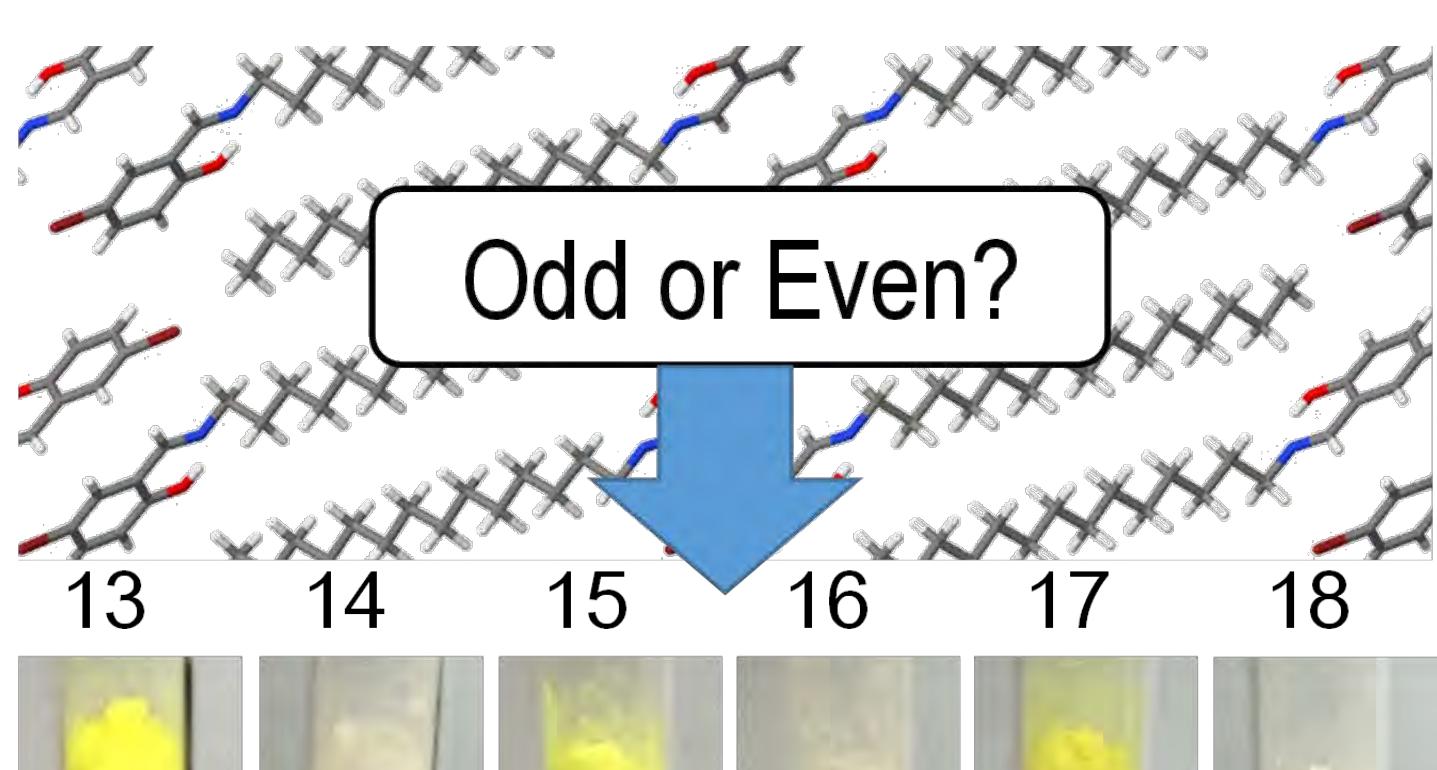
Department of Chemistry and Biochemistry

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

Functional Organic Crystals

Our research aims for creating new functional materials originating not only in molecular structure, but also in molecular arrangement in organic crystal.

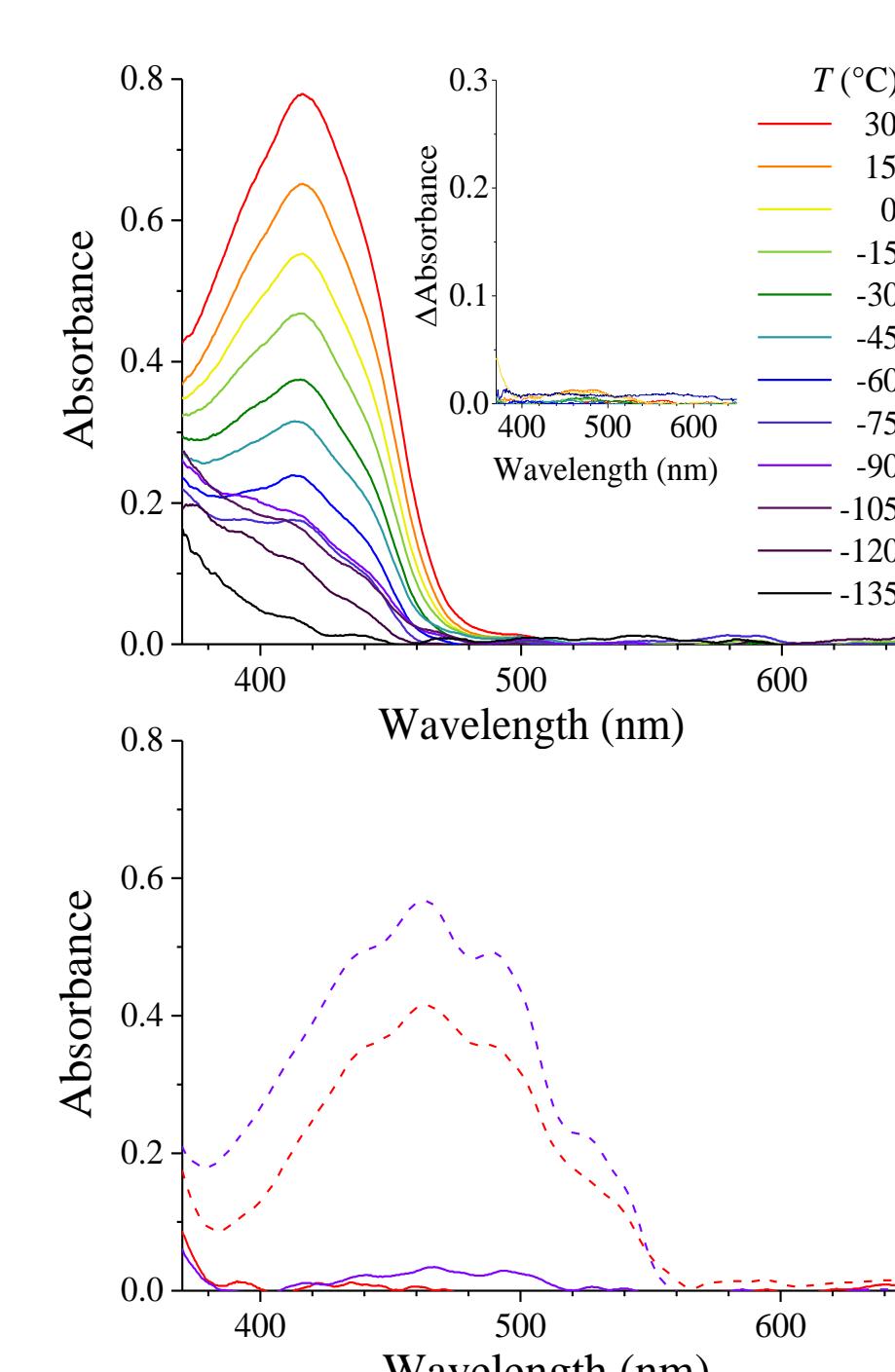
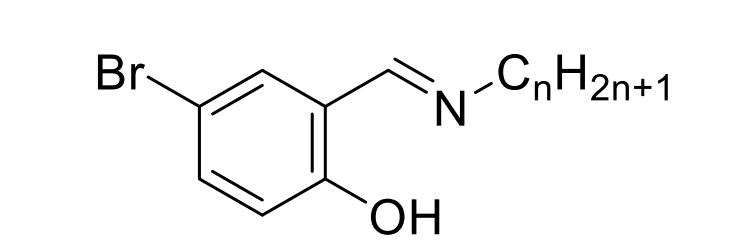
Homologue approach to crystal design



Ambient temp.: odd-yellow/even-colorless

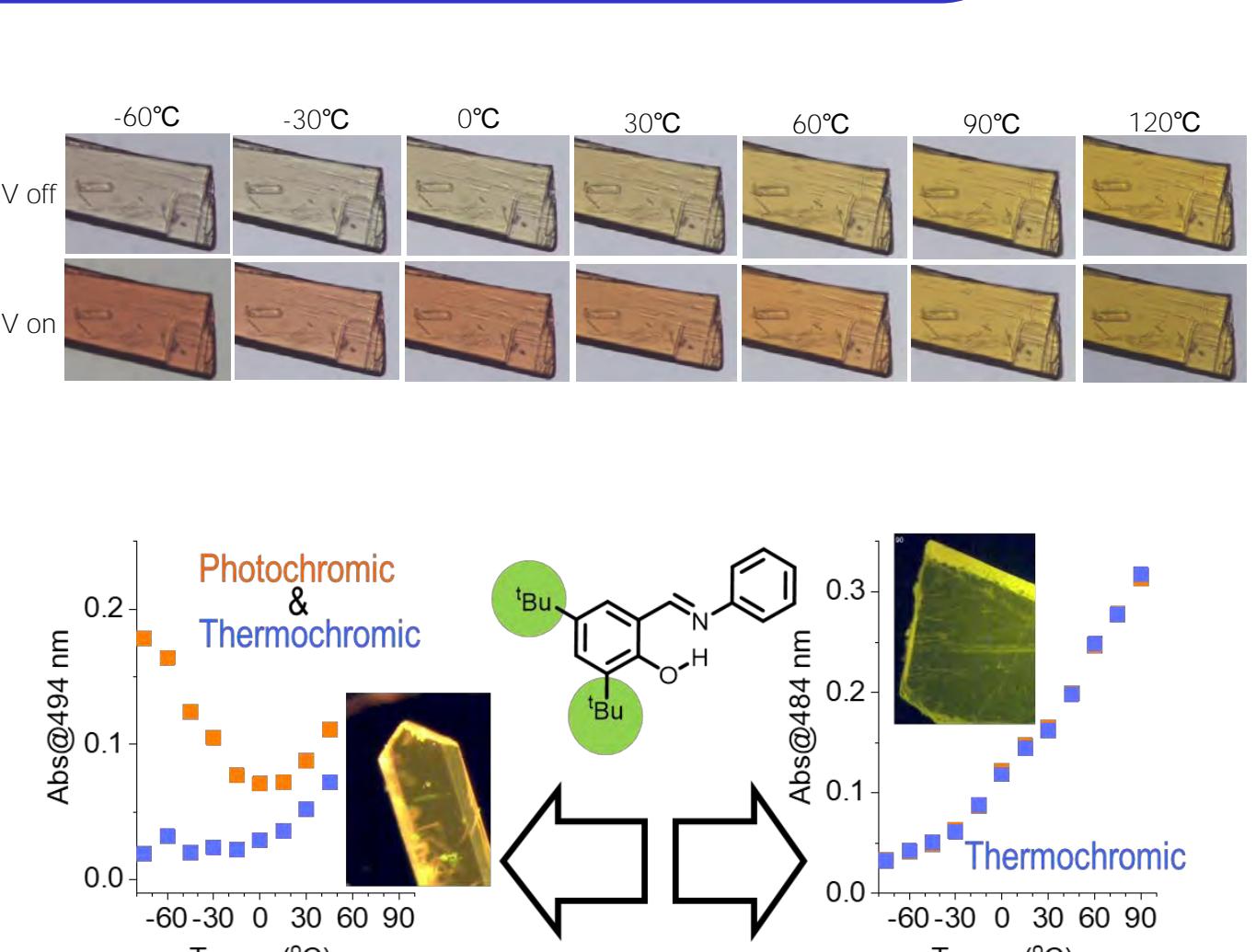
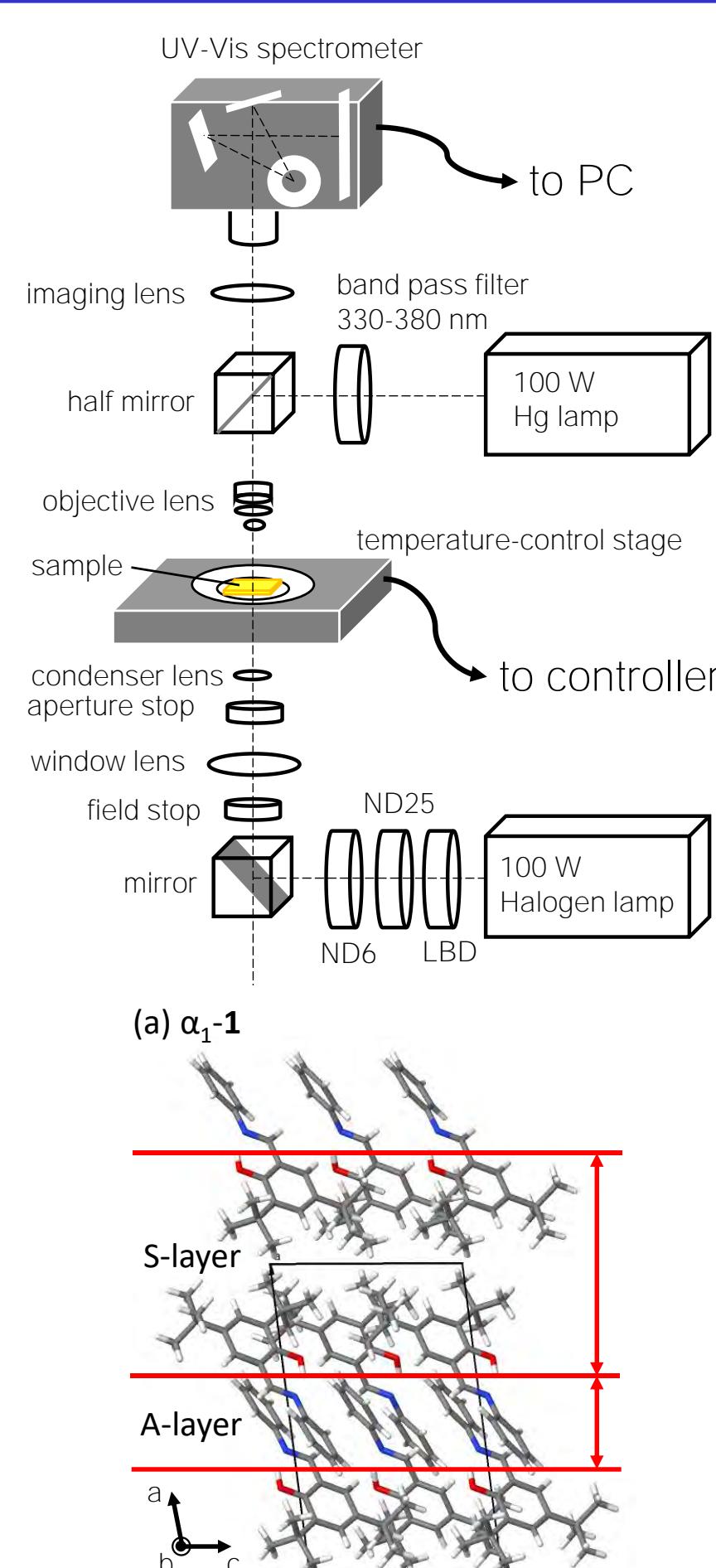
Low temp.: odd-colorless/even-colorless

UV at low temp.: odd-colorless/even-orange



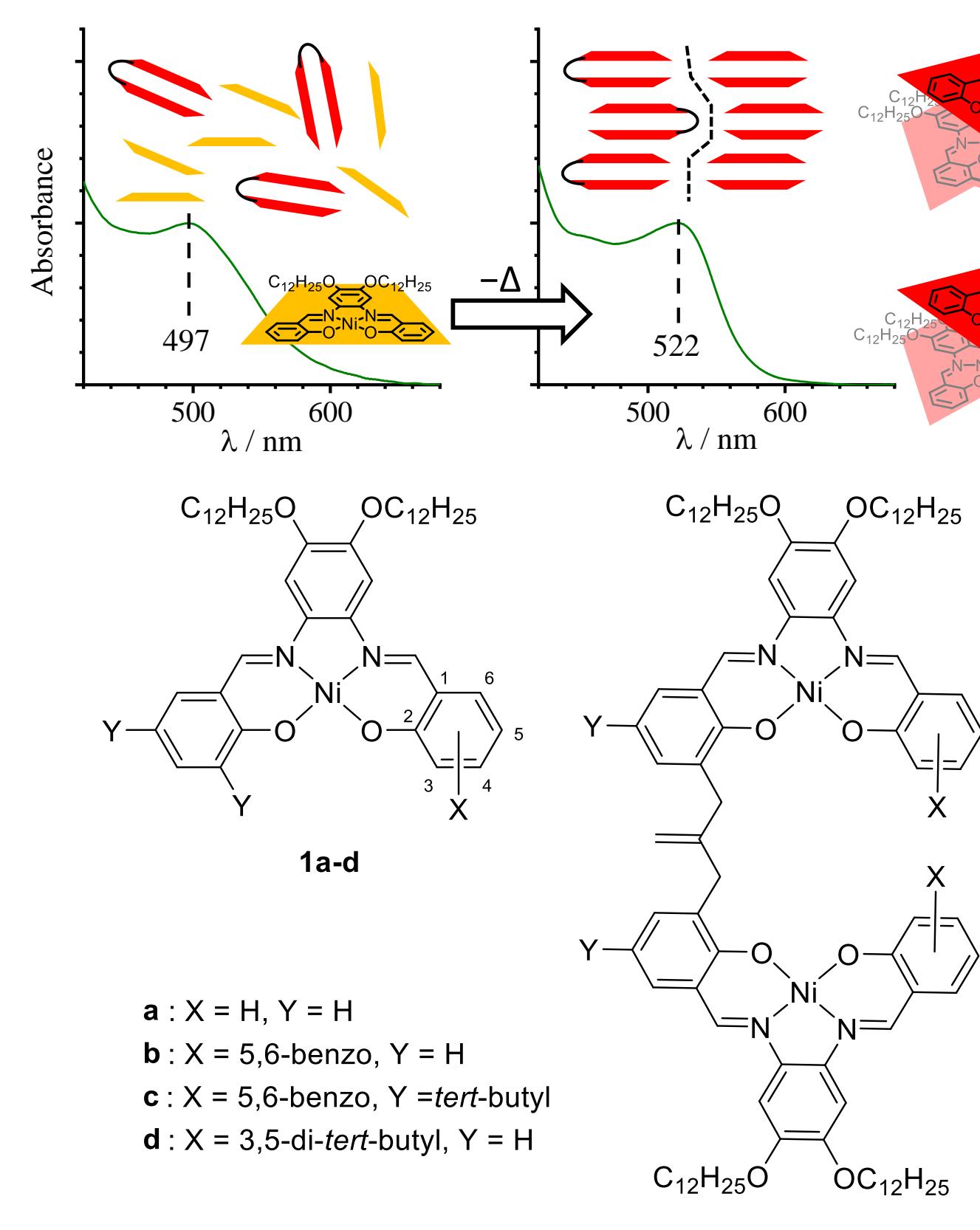
Chem. Commun. 53 (2017) 10898.

Single crystal examination for chromic properties

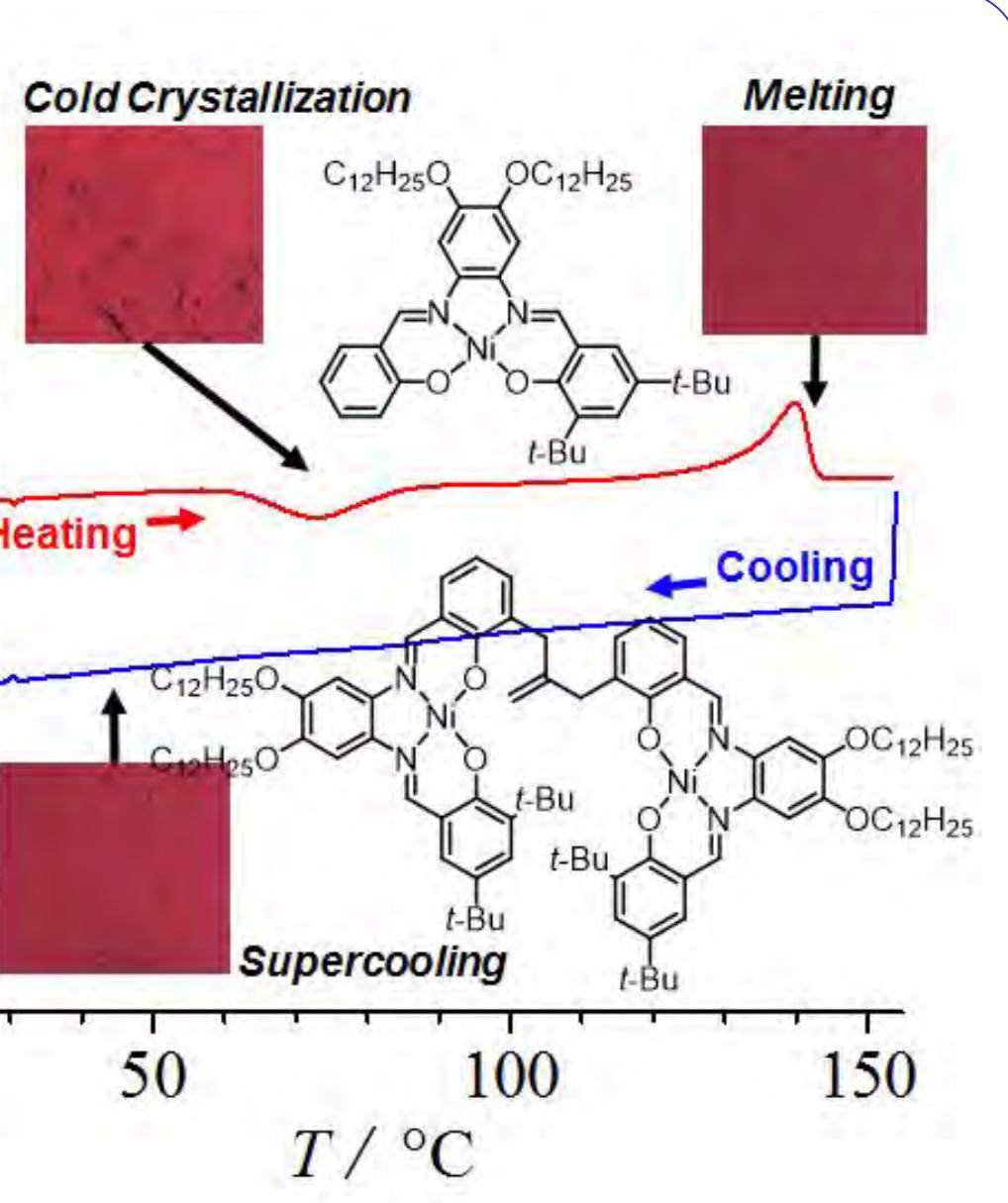
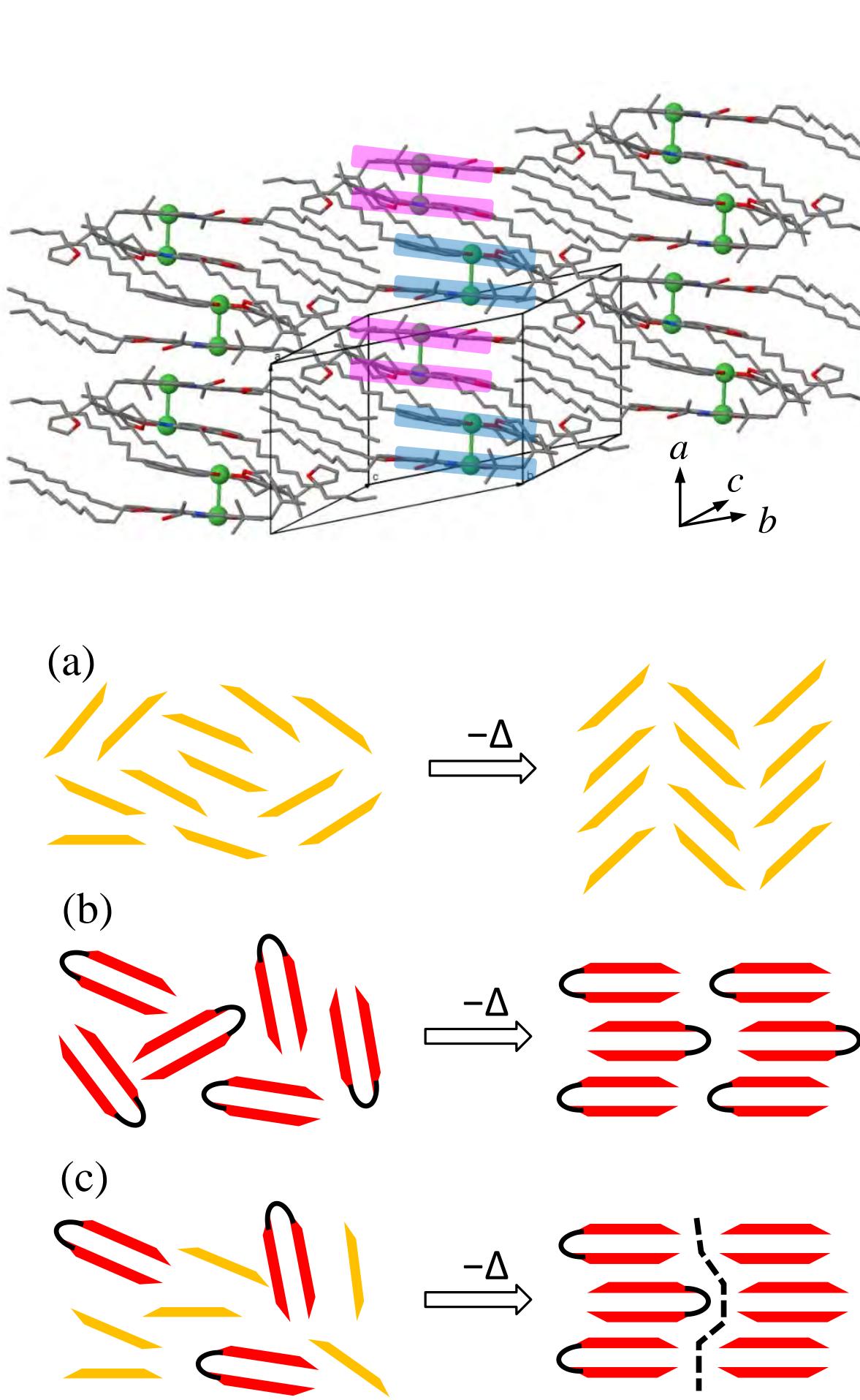
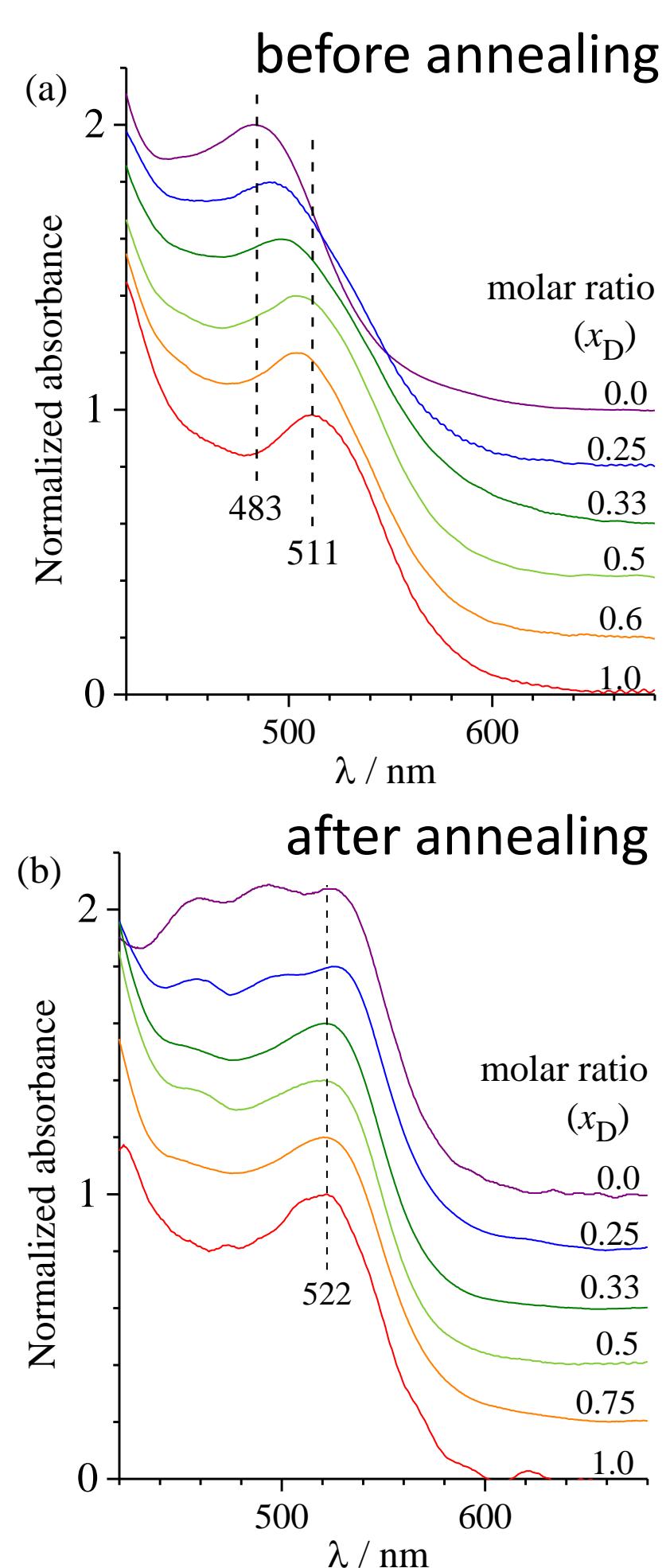


Cryst. Growth & Des. 19 (2019) 1384.

Thermo-responsive materials



a : X = H, Y = H
b : X = 5,6-benzo, Y = H
c : X = 5,6-benzo, Y = *tert*-butyl
d : X = 3,5-di-*tert*-butyl, Y = H



Chem. Lett. 45 (2016) 1415.
Thermochim. Acta. 669 (2018) 52.