SOFT CRYSTALS

Grant-in-Aid for Scientific Research on "Innovative Areas" for FY 2017-21 (Area Number 2903)

Science and Photofunctions of Flexible Response Systems with High Order

Area Organizer
Professor Masako Kato (Department of Chemistry, Faculty of Science, Hokkaido University)

What is our project "Soft Crystals"?

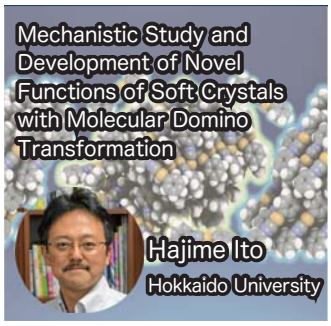
- Purpose of the Research Project -

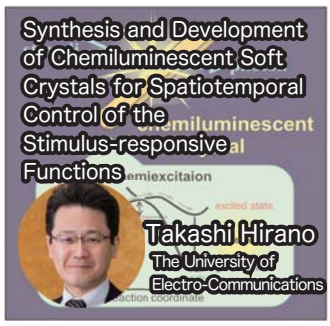
This project aims to establish a new science concerning “Soft Crystals” , which responds to macroscopic gentle stimuli (e.g. vapor exposure, rubbing, and rotation) that exhibit visually remarkable changes such as luminescence and optical properties. This project also aims to develop novel functional materials on the basis of the scientific achievements. “Soft Crystals” are regulated solids with stable and highly ordered structures. However, they are characteristic of facile structural transformations and phase transitions in response to weak but particular stimuli . One of scientifically most important challenges is to clarify the phenomena of the formation and phase-transition of “Soft Crystals” . Through the scientific research, we aim to create a new area, which can provide new materials beyond the conventional hard crystals and/or soft matters.

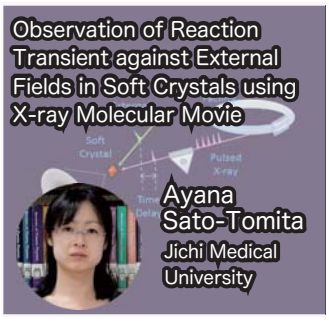
Contents of the Research Project

Research Item A01: Development of Soft Crystals through molecular design & synthesis

Research Item A02: Development of Soft Crystals with novel structure & morphology







Research Item A03: Development of Soft Crystals with superior physical properties & functions