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Polymer Materials Chemistry

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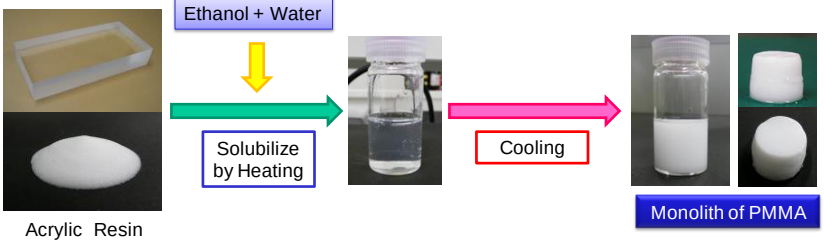
Key words: Biomass, Monolith, Plastic, Hydrogel

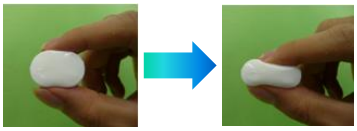
Functional Porous Polymer Monolith

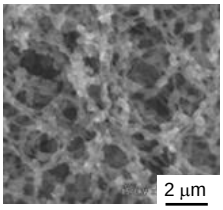
Preparation



Application

Characterization





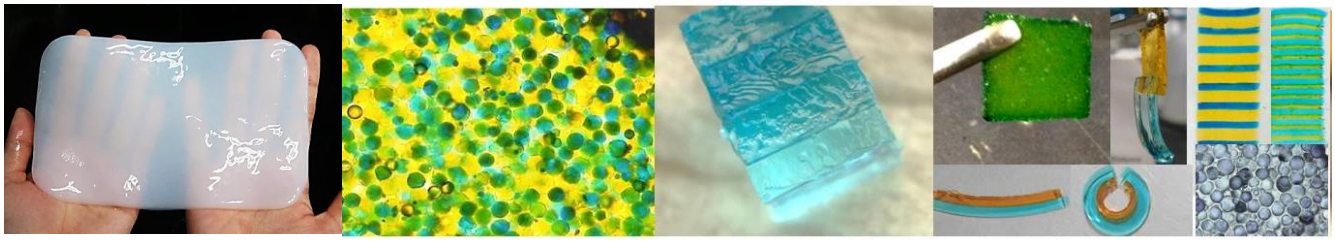
Nanoporous Morphology

- Separation/Purification Materials for Biomedical Use
- Adsorption Materials for Environmental Use
- Battery Materials (Carbonization of Monoliths)

Biomass Plastics

- Use of bioresources as starting substrate of polymeric materials reduces greenhouse warming and contributes to global sustainability without depletion of scarce fossil resources.
- Plant oils are used for coating and adhesive materials as well as additives to improve properties of biomass plastics.

Functional Hydrogels



- Functional materials based on cellulose nanofibers are developed.
- Novel hydrogel architectures are prepared by adhesion of hydrogels.