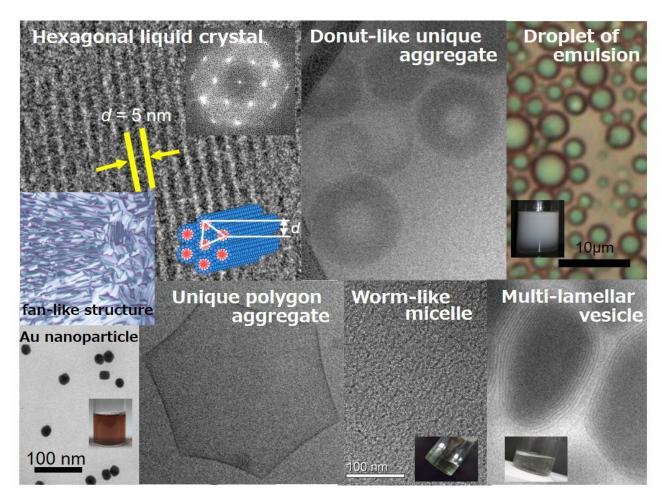
## Development of Environmentally Friendly Surfactants and Study of Removal of Environmental Contaminated Materials using Colloid Particles

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Molecular assemblies by optical microscopy and transmission electron microscopy.

We develop environmentally friendly novel surfactants such as amino acid or sugar-based surfactants and gemini-type surfactants with expectation to reduce used amount under the consideration of the affection on environments. Furthermore, we investigate their properties such as adsorption at liquid and solid surface, molecular assembly in aqueous solution, emulsion, solubilization, metal-nanoparticle. We also study on removal of environmental contaminated materials such as radioactive substance and organic substance using the properties of environmentally friendly surfactants.

Keywords: Surfactant, Reduction of Environmental Load, Colloid, Environmental Contaminated Material