

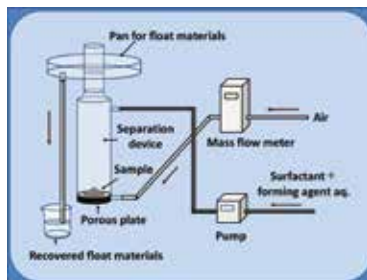


## Research on waste recycling for building a recycling-oriented society, and biomass and green hydrocarbon cycles for global environmental issues

We aim to solve environmental problems with a chemical engineering (reaction engineering) approach, focusing on four fields: building a recycling-based society, global environmental problems, environmental conservation, and basic reaction engineering technology. We are conducting research mainly focusing on waste recycling for building a recycling-oriented society, researching biomass and green hydrocarbon cycles for global environmental issues, developing environmentally friendly adsorbents and catalysts effective for air, groundwater and soil pollutions protection technologies.



## Research on recycling of valuable components in pulverized waste silicon-based solar cells by flotation separation method



Flotation separation has been widely applied in the mining industry to concentrate valuable elements in a raw mineral for many years. The multiple components with the difference in surface property such as hydrophobicity and hydrophilicity are efficiently separated by the gas bubble and surfactant. As recent development for a recycling process, we are investigating the study on collecting a high purity of valuable elements in pulverized scraped silicon-based waste solar cells by flotation. A chemical engineering approach is taken to this study and the goal is put to practical use.

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