

Chemical Science and Engineering

Objectives

The global issues that we currently confront are the energy crisis, the food crisis, and fresh water shortage. These are interconnected with each other, but all of them can be reduced to an energy problem in thermodynamic contexts. Most of developed countries including US and Korea depend on the fossil fuels imported from foreign regions. The two directions that we may take toward the sustainable world are i) to improve the efficiency of utilization of currently available energy sources and ii) to develop alternative or renewable energy. This symposium aims at providing a wide range of chemical science and engineering to fulfill these two objectives including energy storage, generation, conversion, catalysis, environmentally-benign design, and carbon capture and sequestration.

Scope

Chemical Science and Technology for Sustainable Energy Applications

Topics

- 1) Chemical Energy Storage and Generation: Battery, Fuel Cells, Solar Thermal, etc.
- 2) Methane Hydrates
- 3) CO₂ Sequestration
- 4) Environmental Catalysis
- 5) Gasification of Coal and Biomass
- 6) Biofuels, Sustainable Technology in Biomaterials and Biochemical Science
- 7) Pollution Prevention and Environmentally-Benign Design
- 8) Joint Panel Workshop with “Renewable Energy & Sustainability Symposium”

Symposium Chair and Co-Chairs & Committee Members

United States	Korea
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Special Publications

If there are positive responses from symposium participants, we will seek a publication of special issues in a journal such as I&ECR or AIChE Journal or the Korean Journal of Chemical Engineering.