

## Special Issue on Adsorption Science and Technology

### Call for Papers

Adsorption is the adhesion of atoms, ions, or molecules from a gas, liquid, or dissolved solid to a surface. This process creates a film of the adsorbate on the surface of the adsorbent. This process differs from absorption, in which a fluid permeates or is dissolved by a liquid or solid. Note that adsorption is a surface-based process while absorption involves the whole volume of the material. The term sorption encompasses both processes, while desorption is the reverse of adsorption. It is a surface phenomenon.

Similar to surface tension, adsorption is a consequence of surface energy. In a bulk material, all the bonding requirements of the constituent atoms of the material are filled by other atoms in the material. However, atoms on the surface of the adsorbent are not wholly surrounded by other adsorbent atoms and therefore can attract adsorbates. The exact nature of the bonding depends on the details of the species involved, but the adsorption process is generally classified as physisorption or chemisorption. It may also occur due to electrostatic attraction.

Adsorption is present in many natural physical, biological, and chemical systems, and is widely used in industrial applications such as activated charcoal, capturing and using waste heat to provide cold water for air conditioning and other process requirements, synthetic resins, increase storage capacity of carbide-derived carbons, and water purification. Adsorption, ion exchange, and chromatography are sorption processes in which certain adsorbates are selectively transferred from the fluid phase to the surface of insoluble, rigid particles suspended in a vessel or packed in a column. Lesser known, are the pharmaceutical industry applications as a means to prolong neurological exposure to specific drugs or parts thereof.

In this special issue, we intend to invite front-line researchers and authors to submit original research and review articles on exploring **Adsorption Science and Technology**.

Authors should read over the journal's [Authors' Guidelines](#) carefully before submission, Prospective authors should submit an electronic copy of their complete manuscript through the journal [Paper Submission System](#).

Please kindly notice that the "Special Issue" under your manuscript title is supposed to be specified and the research field "Special Issue — Adsorption Science and Technology" should be chosen during your submission.

According to the following timetable:

Manuscript Due	May 17th, 2013
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### Special Issue Editor

Guest Editor:

For further questions or inquiries

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