Special Issue

Preparation and Application of Carbon Adsorbent

Message from the Guest Editors

Carbon materials are the primary choice for adsorption technology because of their large specific surface area and abundant pore structure, as well as their wide sources, good stability, environmental friendliness, and low price. Commonly used carbon materials are activated carbon, carbon aerogel, graphene, carbon nanotubes, biochar, etc. With the development of carbon material preparation technology, new carbon materials have been developed, including MOF-based carbon materials, polymer-based carbon materials, ordered mesoporous carbon materials, hierarchical porous carbon materials, etc. These carbon materials are used in gas separation/adsorption, ion separation/adsorption, organic separation/adsorption, etc. In order to develop and optimize carbon adsorption materials and explore adsorption behavior and mechanisms at the molecular level, molecular simulation has become the main research method in concert with experimental methods. This Special Issue focuses on, but is not limited to: (1) carbon adsorption material preparation; (2) adsorption mechanism; (3) adsorption kinetics, adsorption isotherm, and adsorption thermodynamics; and (4) adsorption process simulation.

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Editor-in-Chief

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