Special Issue

Advanced Composite Materials for Gas Adsorption and Separation

Message from the Guest Editors

Today, gas adsorption and separation represent a very important direction to fight climate change. Advanced solid porous materials such as mesoporous adsorbents, metal–organic frameworks, and zeolites represent a promising direction for CO2 capture and separation due to their high efficiency and low energy consumption. The pore size and pore volume of the advanced solid mesoporous materials significantly affect the gas capture performance of amine-grafted and amine-impregnated adsorbents. The synthesis of these materials functionalized with different amine groups with high adsorption capacity for the gas capture process represents an important task for the future. The characterization of these materials from the structural, thermal program adsorption–desorption, and regeneration points of view are also important for future industrial CO2 capture applications. In this Special Issue, I have the pleasure of inviting you to contribute with new research material in this scientific domain, dedicated to innovative advanced solid porous materials for gas adsorption and separation.

Guest Editors

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Separations offers the scientific community a high-quality, open-access journal option with rapid time-to-publication without any sacrifice of a rigorous peer-review process. We invite contributions ranging from fundamental characterization and instrumentation development through application of techniques to shed light on a broad spectrum of separation science needs. Since inception, *Separations*, has become unique in its combination of rapid publication and thorough scientific content. We invite you to consider us for your next contribution.

Editor-in-Chief

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