Special Issue

Metal-Organic Frameworks (MOFs) and Their Application in Storage, Adsorption and Separation Processes

Message from the Guest Editors

Metal-Organic Frameworks (MOFs) and MOF-related composites together with their applications in various fields are advancing at unprecedented levels to find solutions to imminent problems. MOFs feature highly versatile and tunable organic–inorganic porous structures, in terms of chemical compositions and pore dimensions. Their large surface areas are highly relevant in storage and transport applications, especially for difficult-to-store gases. Engineering MOF composition and understanding the adsorption mechanisms and properties are of paramount importance in selective adsorption and separation applications. From an engineering perspective, separation process design is a fundamental step that bridges the fundamental knowledge and the final application of MOFs. Topics include, but are not limited to, the following:

- MOF materials and performance evaluation for various applications;
- MOFs in transport and/or storage field;
- MOF adsorption processes insights and fundamental aspects;
- MOFs in separation processes.

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