Special Issue

Application of 3D Printing in Separation Science: Manufacturing and Modelling

Message from the Guest Editors

Additive manufacturing (AM), also known as three dimensional (3D) printing, is considered a new manufacturing revolution which can enable cutting-edge research in the field of separation science due to its ability to fabricate objects with complicated structures in a single-step process. 3D printing could play a key role in separation systems because it can control the fundamental properties of separation devices and materials such as thickness, pore size, roughness, and surface patterns. Moreover, 3D printing can also control architectural variables of separation devices and materials (e.g., shape, arrangement, channels, and pores), which are almost impossible to achieve with conventional fabrication methods. This Special Issue focuses on the latest advancements of 3D printing in the fabrication and development of separation devices and materials. Topics include, but are not limited to:

- 3D-printed membrane-based devices and materials
- 3D-printed modules in separation systems
- 3D-printed selective sorbents
- 3D-printed solid-phase extraction preconcentrator
- 3D-printed flow injection analysis systems
- Modelling and simulation of 3D-printed separation devices

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