International Journal of Chemical Engineering

Hindawi

Special Issue on

Molecular Sieve-Based Film: Towards A New Era in Separation, Sensing, Energy Storage, and Conversion

CALL FOR PAPERS

Recent years have witnessed an explosive growth in the field of molecular sieve-based films. On one hand, metal-organic frameworks (MOFs), covalent-organic frameworks (COFs), porous organic polymers (POPs), graphene oxide (GO), etc. have emerged as new film materials and exhibited significantly enhanced application performances. On the other hand, many innovative methodologies have been developed for efficient fabrication of qualified molecular sieve-based films. In addition, highly adjustable framework topology and functionality further endowed molecular sieve films with unprecedented opportunities to meet energy and environmental challenges.

We invite researchers to contribute original research articles as well as review articles that will further stimulate the advancement of molecular sieve films. We are particularly interested in articles discussing molecular sieve films constructed from MOFs, COFs, POPs, or low-dimensional building blocks, exploring their potential as sensors or membranes for selective detection and separation of volatile organic compounds (VOCs), organic dyes, heavy ions, and industrially important gas, vapor, and liquid mixtures. We also welcome articles concerning application of molecular sieve-based films in electrochemically super capacitive energy storage, solar cells, and electro-/photocatalysis.

Potential topics include but are not limited to the following:

- Zeolite, carbon, silica, MOF, COF, and POP-based three-dimensional molecular sieve films
- GO, layered metal sulfide, layered double hydroxide, or montmorillonite-based two-dimensional molecular sieve films
- Pure molecular sieve film or molecular sieve-based composite film
- Selective detection of VOCs, heavy ions, and other pollutants
- Gas separation, pervaporation, vapor permeation, reverse osmosis, and nanofiltration
- Electrochemical supercapacitors and solar cells for energy storage and conversion
- Electrocatalysis and photocatalysis (e.g. water splitting and CO_2 reduction)
- Simulation and modelling
- Emerging applications beyond

Authors can submit their manuscripts through the Manuscript Tracking System at http://mts.hindawi.com/submit/journals/ijce/msbt/.

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yliu@icems.kyoto-u.ac.jp

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osama.shekhah@kaust.edu.sa

Xinlei Liu, Delft University of Technology, Delft, Netherlands
liu1985@mail.ustc.edu.cn

Manuscript Due
Friday, 31 March 2017

First Round of Reviews
Friday, 23 June 2017

Publication Date
Friday, 18 August 2017