

Special Issue on
Engineering Nano-/micro Architecture for Catalysis

CALL FOR PAPERS

Nanoreactors/microreactors, which are often self-assembled by amphiphilic molecules/nanomaterials for catalysis, ubiquitously exist in a dazzling diversity of nature, such as the formation of live cells and organelles that modulate life activities. These nanosized/micron sized structures provide the pivotal compartmentalization to ensure the system integrity and catalytic efficiency.

Inspired by the nature, great emphasis has been devoted to construct artificial nanoreactors/microreactors by numerous methods and materials in order to catalyze the reactions of interest in the past decades. For examples, amphiphilic small molecules are utilized to form (reverse) emulsions and liposomes, and, similarly, block copolymers are synthesized to build up more stable polymersomes. More recently, nanoparticles/microparticles are fabricated to assemble at interfaces as pickering-emulsions (colloidosomes) for high-performance catalytic process. By using these nanostructure/microstructure, the broad applicability of different catalysts has been demonstrated, ranging from heterogeneous nanoparticles to biocatalytic enzymes and homogeneous molecules. Due to the great success of these approaches, the huge industrial applications by nanoreactors/microreactors are being highly envisioned in the near future.

This special issue intends to discuss and present innovative methodology, most exciting results, and relevant applications, which is expected to further demonstrate the great use of nanoreactors/microreactors for catalytic purpose. Therefore, the editors are pleased to invite high quality, original research articles as well as review articles on the relevant field of nanoreactors/microreactors for excellent catalysis.

Potential topics include but are not limited to the following:

- ▶ Catalysis by the immobilized active catalysts (enzymes, noble and transition metal, etc.) in nanoparticles/microparticles
- ▶ Catalysis by self-assembled emulsions such as (reverse) microemulsions, liposomes, polymersomes, and colloidosomes
- ▶ Catalysis at nanointerface in nonaqueous media, where in particular the nanoparticles/microparticles and microporous/mesoporous/macroporous materials are used as carriers
- ▶ Catalysis by stimuli-responsive nanomaterials

Authors can submit their manuscripts through the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/jnm/enmc/>.

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