Journal of Nanomaterials

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Special Issue on
Self-Assembly, Directed Self-Assembly, and Direct Assembly of Nanostructures

CALL FOR PAPERS

Nanofabrication is a major bottleneck in the widespread application of nanotechnology. Nanoscale effects can offer significant advantages in sensitivity, efficiency, and performance, but we have yet to see the significant industrial and economic breakthrough that has been expected from this field of study. Self-assembly, where a system naturally evolves without influence from any imposed initial condition, provides the most feasible approach when considering ultimate scalability (from nanoscale to the macroscale) but is limited by the processes and systems available and the control offered by nature. Directed self-assembly, where a system naturally evolves with the influence of an imposed initial condition provides a method for improving the control of self-assembly processes by nudging a system toward a particular end state but often relies on direct assembly techniques as part of the process. Direct assembly, where a system does not naturally evolve but is rather designed and fabricated to the desired state, provides the most control for a given process but is typically limited in scalability and is cost and capitol intensive.

We invite investigators to contribute original research articles as well as review articles that seek to address the barriers in scalable nanomanufacturing based on self-assembly, directed self-assembly, and direct assembly processes.

Potential topics include but are not limited to the following:

- Improving nanostructure control based on self-assembly processes
- Improving nanostructure throughput based on directed self-assembly and direct assembly processes
- Novel nanofabrication processes based on self-assembly, directed self-assembly, or direct assembly techniques that offer potential for improved material or device properties
- Scale-up of existing self-assembly, directed self-assembly, or direct assembly techniques to produce high throughput batch or continuous processes with an emphasis on reliability, cost saving, and safety

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

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