

— Call for Papers —
A Symposium on
Nanomanufacturing of Multi-functional Systems

Sponsored by the ASME Manufacturing Engineering Division's
Nano/Micro/Meso Manufacturing Technical Committee
2017 ASME International Manufacturing Science and Engineering Conference (MSEC)*
June 4-8, 2017
University of Southern California

Technical Focus

The scope of nano-manufacturing of multifunctional systems covers one or more activities of the following: the manufacturing of useful nano-scale materials, structures, subassemblies, devices and systems that enable controlled and consistent performances. This symposium is interested in fundamental and technical advances in any of the activities above that can contribute to production, modification, manipulation, and assembly of functional nanomaterials for micro/nano-scale devices/systems to enable practical applications in an **economically viable** manner. It includes both the “bottom-up” and “top-down” manufacturing of devices/parts. We are especially interested in those approaches with potential improvement over process capability, productivity, quality consistency and/or cost, as compared with the state of the arts. The mechanics, materials, and fabrication process involved in producing devices and systems in energy, electronics and healthcare are among the target areas of applications due to large potential market. This symposium will focus on the research advances in both the fundamental understanding and technological innovations for the nanomanufacturing of multi-functional nanosystems from controllably producing and intergrating nanoscale functional materials. Novel applications/technologies in energy, electronics and healthcare enabled by such nanomanufacturing processes are of strong interests. This symposium intends to provide a forum for scientists and engineers working in advanced nanomanufacturing, functional nanomaterials, nanotechnology and related fields to communicate recent progress on current technologies toward competitive applications and to exchange ideas about next-generation competitive solutions. Specific topics of interest include, but are not limited to:

- Nanomanufacturing science of multi-functional systems
- Laser-integrated nanomanufacturing of functional nanomaterials
- Solution-based nanomanufacturing
- Competitive top-down nanomanufacturing processes
- Manufacturing and Integration of functional materials into nanosystems
- Processing of functional nanomaterials for energy applications
- Nanomanufacturing process for smart electronics
- Nanomanufacturing of multi-functional nanosystems for healthcare
- Other emerging nanomanufacturing processes for nanosystem production

Paper Submission

Authors are encouraged to submit an abstract and full manuscript for review by **November 03, 2016** via the conference website. Final revised manuscripts must be submitted by **March 08, 2017**. The copyright transfer form must be filled out and the presenting author must pre-register by April 06, 2017 or the paper will be withdrawn from the conference. Authors may also consult www.asme.org/divisions/med/call/ for updates. **No papers are to be submitted to the organizers; submissions will only be accepted via the conference website at www.asmeconferences.org/msec2017/.**

Additional Symposium Activities

To highlight advancements in this technical area, symposium organizers will:

- work to attract a high profile international keynote speaker including honorarium
- organize a special issue in the ASME J. of Manufacturing Science and Engineering or ASME J. of Micro and Nano-Manufacturing
- organize a state-of-the-art paper that will be the lead article in the special issue

Organizers:

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* The conference is collocated with NAMRI/SME's 45th North American Manufacturing Research Conference (NAMRC45) and JSME's International Conference on Materials and Processing (ICMP 2017), both of which have a separate call-for-papers. Please note that submissions of the same paper to more than one conference are not permitted.