

The National Science Foundation (NSF) announces a 6th (sixth) year of a solicitation on collaborative research and education in the area of Scalable Nanomanufacturing (SNM). This solicitation is in response to and is a component of the NNI Signature Initiative: Sustainable Nanomanufacturing - Creating the Industries of the Future (<http://www.nano.gov/NSINanomanufacturing>). **Although many nanofabrication techniques have demonstrated the ability to fabricate small quantities of nanomaterials and nanostructures for characterization and evaluation purposes, the emphasis of the Scalable Nanomanufacturing (SNM) solicitation is on research on new manufacturing processes and methods to overcome the key scientific and engineering barriers that prevent the production of useful nanomaterials and nanostructures and their integration into nanodevices and nanosystems at an industrially relevant scale, reliably, and at low cost and within sustainability and environmental, health and safety (EHS) guidelines.**

Proposals should target nanomanufacturing processes with a clear commercial relevance, and should consider addressing key aspects of the nanomanufacturing value chain of nano-scale building-blocks to complex nanostructures to functional devices to integrated systems:

- Novel scalable processes and techniques for large-area or continuous manufacturing of nano-scale materials and structures and their assembly and integration into higher order structures, devices and systems;
- Fundamental scientific research in key, well-defined technical areas that are compellingly justified as approaches to overcome critical scientific and engineering barriers to scale-up and integration; and
- Design principles for production systems leading to nanomanufacturing tools, systems and platforms; identification of metrology, instrumentation, standards and control methodologies needed for process control and to assess quality and yield; identification of environmental and energy footprints, as applicable.

Competitive proposals are expected to address the training and education of students in nanomanufacturing and related areas. Since Scalable Nanomanufacturing research will involve addressing multiple scientific challenges, an inter-disciplinary approach is strongly encouraged. Disciplines could range from mathematics to the physical sciences to engineering. While not required, collaborative activities with industrial or small business companies are welcome and collaborations in which industrial partners develop industrially relevant test-beds where university and company researchers can experiment and interact are encouraged. It is advisable that such firms be consulted early in the proposal preparation process and that their intellectual contributions be clearly explained in the proposal.

THIS IS A LIMITED SUBMISSION GRANT OPPORTUNITY. An Institution may submit one proposal no more than one (1) proposal on which it is the lead organization in response to this solicitation.

If you are interested in applying, **please submit a one page Letter of Intent and the PI's abbreviated CV to rifs@wayne.edu by 5PM on Friday, January 22, 2016.** The full proposals are due to NSF by 5PM on February 16, 2016.