The Institute-wide Nanotechnology Graduate Program is supported by the founding academic departments within the Schaefer School of Engineering and the Imperatore School of Sciences and Arts:

- Chemical, Biomedical, and Materials Engineering
- Chemistry and Chemical Biology
- Civil, Environmental, and Ocean Engineering
- Mechanical Engineering
- Physics and Engineering Physics

Participation in the Nanotechnology Graduate Program leads to Masters of Science, Masters of Engineering, and Doctor of Philosophy in the respective discipline with a designated nanotechnology concentration.

To qualify for the nanotechnology concentration, in addition to satisfying disciplinary core requirements, candidates for Masters' degrees must complete the common core and a minimum of three elective courses. Thesis option is also strongly recommeded for Masters' candidates.

Candidates for Ph.D. degrees with a nanotechnology concentration must satisfy disciplinary core requirements, complete the common core plus a minimum of five elective courses, and must regularly attend the nanotechnology seminar series within the Curriculum. In addition, a Ph.D. candidate must successfully execute a doctoral dissertation in the realm of nanotechnology.

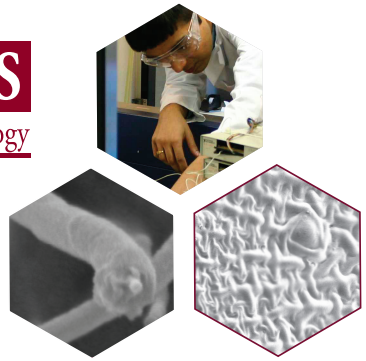
All applications are processed through the individual's home department. Disciplinary admissions standards apply.

Stevens Institute of Technology

Founded in 1870, Stevens inspires & educates students to acquire the knowledge needed to lead in the creation, application and management of technology.

Located in Hoboken, New Jersey, across the Hudson River from Manhattan, research at Stevens takes place within a scholarly and supportive community of faculty, students and staff who together push the boundaries of technology development within and across science and engineering disciplines.

STEVENS
Institute of Technology



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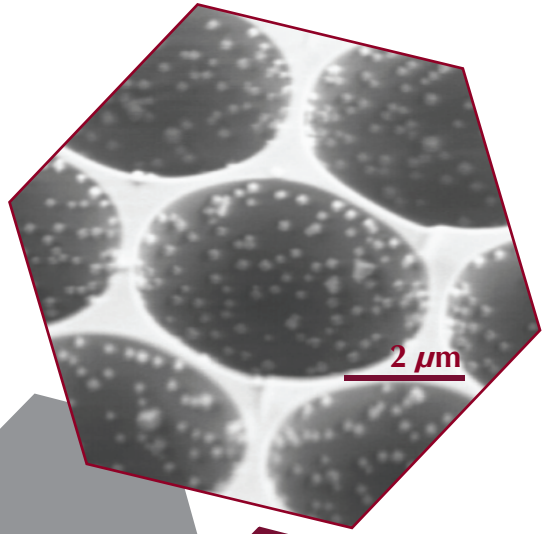


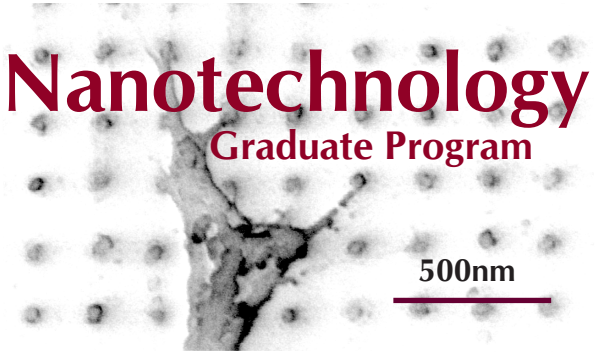
Nanotechnology
Graduate Program

At the forefront of transformational research, nanotechnology enables breakthrough and field-changing advancements spanning a broad spectrum of engineering and science disciplines. As a growth engine for R&D for decades to come, market demand for nanotechnology professionals will be fueled by the permeation of new discoveries and applications into diverse sectors of the economy, including health, electronics, transportation, the environment, and national security.

STEVENS
Institute of Technology

www.stevens.edu/nano

Nanotechnology
Graduate Program



The goal of the Nanotechnology Graduate Program (NGP) is to create a vibrant research training environment in nanotechnology. The mission of the Program is to equip Stevens' graduates with the interdisciplinary intellectual capacity necessary to lead in translating nanotechnology solutions to the global marketplace. The NGP provides students, via a common core and range of technical courses, with:

- An understanding of nanoscale phenomena and the techniques for characterization and measurement of structures and properties at that scale;
- The knowledge of synthesis, processing, and manufacturing of nanostructures, nanocomponents, and multiscale systems with nanobuilding blocks for applications ranging from life sciences to engineering;
- The ability to design, analyze and simulate nanocomponents, nanodevices & nanosystems for various applications;
- The ability to excel in an interdisciplinary environment, and to think critically as well as creatively

Chemical, Biomedical & Materials Engineering

Ron Besser	nano/micro-fabrication for microreactor technology
Henry Du	molecular and nano-scale surface modification; nanophotonic sensing/imaging
Dilhan Kalyon	synthesis and fabrication of colloids, nanoparticles, and nanocomposites
Suphan Koven	nanopowder crystallization
Niyi Lawal	microfluidic modeling & chemical synthesis using microreactors with nanocatalytic surfaces
Woo Lee	multi-scale synthesis of novel structures, chemical/ biological microsystems
Matt Libera	cell-material interactions; e-beam-assisted fabrication of biologically active nano-/micro-arrays
Hongjun Wang	nanomedicine and biomaterials design, cell signaling
Xiaojun Xu	regenerative medicine and cell-cell interaction

Civil, Environmental & Ocean Engineering

Christos Christodoulatos	environmental behavior of nanoparticles and their use for water treatment
Dimitri Donskoy	nanoacoustics
Xiaoguang Meng	science and technology of nanoparticulates for environmental remediation
Mahmoud Wazne	nanomaterials for environmental remediation; nanoparticle fate and transport
X. Frank Xu	computational mechanics at multi-length scales

EMERGING RESEARCH INCLUDES:

- Chemical & Biological Microsystems
- Cell-Cell & Cell-Material Interactions
- Nano-Photonic Sensing & Imagining
- Environmental Impact of Nanomaterials
- Quantum Electronic Structures & Devices
- Nanomechanics & Nanocomposite Materials
- Nanoparticles for Environmental Remediation
- NEMS/MEMS Devices & Systems
- Control of Quantum Systems
- Controlled Drug Release

Mechanical Engineering

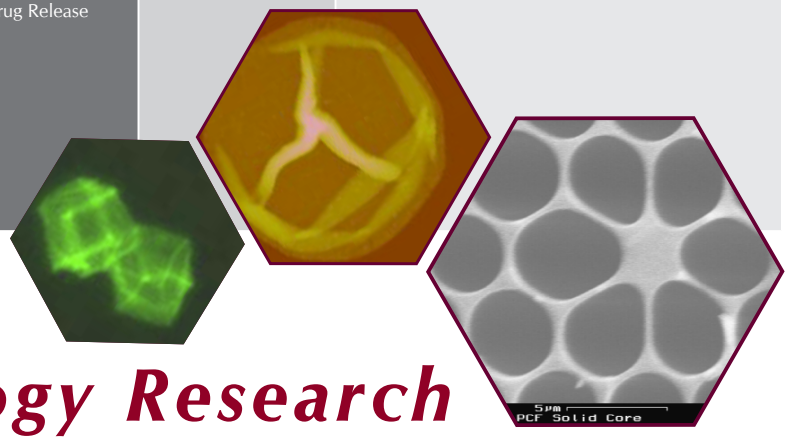
Chang-Hwan Choi	nanofabrication, nanobioscience and engineering, nano/microfluidics
Frank Fisher	nanocomposites and nanomechanics, bioinspired nanomaterials, nanosensors
Yong Shi	MEMS/NEMS design and fabrication, nanofibers and nanocomposites, smart structures
EH Yang	nano/microtechnologies for energy conversion; nanomanufacturing; nano/micro sensors & actuators
Zhenqi Zhu	nano-precision actuators and nano-robotics

Chemistry & Chemical Biology

James Liang	nano/microfabrication for microreactor technology
Svetlana Sukhishvili	molecular and nanoscale surface modification; nanophotonic sensing/imaging
Jiahua Xu	dependence of growth, differentiation, migration, invasion & gene expression on nanoenvironment

Physics & Engineering Physics

Kurt Becker	microplasma and modeling of plasma-surface interactions
Hong-Liang Cui	quantum electronic and optic devices, superlattices, theory and modeling of quantum structures
Norman Horing	transport and dielectric response in nanostructures, nano-optics
Rainer Martini	semiconductor and semiconductor heterostructures for ultrafast switching, photonic sensing
Svetlana Malinovskaya	AMO physics, ultrafast dynamics, control of quantum systems
Christopher Search	quantum optics, control of quantum systems
Stefan Strauf	nanophotonics, control of quantum systems



Interdisciplinary Nanotechnology Research