Materials Science and Engineering Program
Department of Materials Science and Chemical Engineering

Chairperson
Dilip Gersappe, Engineering Building 316
Dilip.Gersappe@stonybrook.edu

Graduate Program Director
Michael Dudley, Engineering Building 312
Michael.dudley@stonybrook.edu

Department Administrator
Ms. Chandrani Roy (631) 632-4174

Department Staff Assistant
Ms. Elaine Soto (631) 632-8483

Graduate Program Coordinator
Vacant
ESMandCME_GradInfo@stonybrook.edu (Existing students must email here)
ESMandCME_GradAdmissions@stonybrook.edu (Prospective students/applicants please email here)

Degrees Awarded
B.E./M.S. in Materials Science and Engineering
M.S. in Materials Science and Engineering;
Ph.D. in Materials Science and Engineering

Website
https://www.stonybrook.edu/matscieng

Application
https://graduateschool.stonybrook.edu/apply/

Materials Science and Engineering Department
The program of Materials Science and Engineering in the College of Engineering and Applied Sciences, offers graduate work leading to the Master of Science and Doctor of Philosophy degrees. The motivating philosophy of the graduate program is to provide the student with a broad synthesis of the theoretical and experimental techniques required to work with all classes of materials. Emphasis is placed on courses that unify the field in terms of fundamentals treated with sufficient depth to enable the student to make technological contributions in diverse areas of materials science and engineering. Laboratory and coursework are structured to provide programs for students who (1) are entering intensive basic research-oriented programs leading to Ph.D. or Master of Science degrees, (2) are currently employed and can complete their studies in the evening, or (3) are working in materials-related industries and integrate their work experience into their degree requirements.

Industrial Cooperative Ph.D. Program: A special extramural Ph.D. degree program is offered by the Department of Materials Science and Engineering for highly qualified individuals working in an industrial materials research area. Candidates for this program must have met the graduate coursework requirements for the Ph.D. typically by earning a master’s degree. Doctoral research is generally done at the student’s place of employment, rather than on the University campus. Contact the Department for further information.

ESM M.S. & PhD. Admission Requirements-
We are excited that you are considering our Graduate Program. Materials Science and Engineering program offers admission to M.S. and Ph.D. programs. Admission to the M.S. and Ph.D. Programs are handled separately by the departmental Admissions Committee.

Minimum requirements for admission to graduate study in Materials Science and Engineering (ESM) are as follows:

1. A bachelor’s degree in Engineering, Mathematics, Physics, Chemistry, or a closely related area from an accredited college or university; (or a closely related field).
2. A grade point average of at least B (i.e., 3.0/4.0) in all mathematics, engineering, and science courses.
3. Results of the Graduate Record Examination (GRE) general test (Waived for Spring or Fall 2025);
4. For non-native speakers of English, results of the TOEFL exam with a score is required. Please reference for minimum score Official scores sent directly to the graduate school via ETS-Institutional code: 2548; Departmental code 69.
   1. Masters students that have completed a degree program from a U.S. institution may be eligible for a TOEFL waiver and need to request the waiver, please email Graduate Admissions at gradadmissions@stonybrook.edu.
   2. All PhD applicants with a TA stipend whose native language is not English must demonstrate a sufficient level of English-speaking proficiency (TOEFL Speaking score) and may be required to take OAE courses based on these measures.
5. Acceptance by both the Department of Materials Science and Chemical Engineering and the Graduate School.
MATERIALS SCIENCE AND ENGINEERING (ESM)

Application Instructions

All applications must be completed online here. All additional required documents, such as, diplomas, transcripts, recommendation letters, Statement of Purpose etc. must be sent using the application portal.

You may download our Complete Application Checklist

All official and final transcripts, and other admission materials should be sent to:

Stony Brook University
Graduate School Office of Student Services
2401 Computer Science Building
Stony Brook, New York 11794-4433

Official E-Transcripts should be sent to: gradadmissions@stonybrook.edu

For application status and submission questions, including using the Slate system, please email: gradadmissions@stonybrook.edu.

For program or curriculum related questions, please email: ESMandCME_GradAdmissions@stonybrook.edu

Application Deadlines:

Spring 2025:

MS Domestic - November 15, 2024, 11:59pm (EST)

MS International - December 31, 2024, 11:59pm (EST)

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PhD Domestic & International - November 15, 2024, 11:59pm (EST)

Fall 2025:

MS Domestic Application – July 15, 2025 by 11:59 PM (EST)

MS International Application – May 15, 2025 by 11:59 PM (EST)

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PhD Domestic & International- January 1, 2025, 11:59pm (EST)

For Graduate Application & Admission FAQs, click here

Accelerated BE/MS & BS/MS Programs Admission Requirements-

ESG or ECM students are encouraged to apply to the five-year ESG BE/ESM MS or ECM BS/ESM MS accelerated degree program in the spring semester of their junior year. The application must include:

• Students in their Junior Spring semester with a GPA of 3.0 in the major courses and/or above in the Engineering Science Undergraduate program; Engineering Chemistry Undergraduate program; must email ESMandCME_GradAdmissions@stonybrook.edu and inform the department about their interest to be admitted in the BE or BS/MS Accelerated Program in Materials Science and Engineering
• Email your recent unofficial transcript.
• Consult with ESG/ECM Undergraduate Program Director (UPD) and ESM Graduate Program Director (GPD) regarding UG Senior Year and MS accelerated program Schedule.
• Once the department receives the above information and the GPD/Graduate committee accepts the student into the accelerated program, the student is extended an offer to accept admission in the ESM Accelerated program- the student signs and returns the offer letter. The department then completes the Accelerated Participant Program (APP) Declaration Form and submits to the Graduate School.
• Once accepted by Graduate school, the student must obtain email approval from the GPD and their respective UPD to enroll in ESM classes. Once approved via email, the student must complete the Permission for APP students to Enroll in Grad Courses form and upload
the email approvals to get approvals from Graduate School to enroll in classes at least 3 weeks before the semester begins. Please note that the student may elect to take all 6 credits of the M.S. coursework in one semester, although it is not recommended.

Transfer Students

Students who transfer to Stony Brook must complete at least one semester at Stony Brook before they will be considered for admission to the five-year BE/MS program and decisions will be made on a case-by-case basis to ensure they meet all other requirements to qualify for the combined degree program.

Applicants interested in the combined DDS/MS Program must first be admitted to the DDS program at Stony Brook University first. Outstanding applicants will be invited to submit a second application after matriculation in the graduate school, submitted at any time during the first two years of study. For the combined DDS/MS, applicants must apply separately to both the DDS program and the MS program.

To obtain applications and for more information, please access the Graduate School website

For program or curriculum related questions, please email: ESMandCME_GradAdmissions@stonybrook.edu

It is recommended if you have confirmation that your transcripts and other documents are received by Graduate School, please inform us (the department) via email at ESMandCME_GradAdmissions@stonybrook.edu

The Graduate School application fee is $100* and is non-refundable. It is required for applicants from all countries.

Financial Support

Admitted Ph.D. students are typically offered financial support in the form of teaching or research assistantships, which include full tuition and broad-based fees. Admission into this program is very competitive.

M.S. students are typically admitted with no financial support; however, full time MS students in the thesis track may be appointed as Research Project Assistants with an opportunity to enter the PhD program at the discretion of a faculty member upon availability of funds. Information regarding tuition and other costs can be found here.

Facilities of Materials Science and Engineering Department

Research Activities

Since its inception, the MSCE Department has had a strong research component, with a recent emphasis on advanced materials, materials and processes for energy generation and storage, and sustainability. The Department has been successful in obtaining external funding for research and currently has the highest per capita faculty funding within the University. In 2022, the Department had faculty research expenditures totaling over $10.5M. Our department is home to many research centers including an EFRC on Energy Storage Technologies, the Center for Mesoscale Transport Properties, the Garcia Polymer Center, the Center for Thermal Spray Technologies and the Institute of Gas Innovation and Technology. These centers offer a unique and rich environment for interdisciplinary graduate research and education.

The proximity to Brookhaven National Laboratory (BNL) and its advanced national facilities has been a major benefit to both faculty and students within the Department. Three of our faculty members hold joint appointments at BNL, while Brookhaven scientists participate in research and teaching within the Department. The DOE awarded the contract to manage BNL in 1998 to Brookhaven Science Associates, a consortium of other universities led by Stony Brook and the Battelle Memorial Institute. The University’s relationship with this premier research facility greatly enhances both the Department’s and Stony Brook’s research programs.

At BNL, the facilities available to the Department include particle accelerators for carrying out ion beam surface modification experiments and highly sophisticated surface analysis probes. The National Synchrotron Light Source (NSLS) is also located at BNL. As one of the participating research teams at NSLS, the Synchrotron Topography Research Group, centered in Stony Brook’s Department of Materials Science and Engineering, is using special X-ray methods to image nondestructively dislocation microstructures. This enables image-detailed descriptions of dislocation motion and structures attendant to crystal growth and plastic deformation and fracture, as well as to interesting materials behaviors. The topographic method is also being used in department-based studies of surface chemical reactivity.

Our ties with industry are growing stronger: faculty members are working with industry on joint research projects and submitting cooperative proposals to outside agencies. The Materials Science Department has led the effort in joint industry-University projects within the College of Engineering through the New York State Strategic Partnership for Industrial Resurgence (SPIR) program. Both the Center for Thermal Spray Research and the Institute for Gas Innovation and Technology have several industrial partners.

Stony Brook’s own facilities include state-of-the-art low-energy electron diffraction LEED; a state-of-the-art scanning electron microscope and a transmission electron microscope, both equipped with analytical capabilities and the latest software for electron diffraction simulation and image processing; an atomic force microscope; and electron spectroscopy for chemical analysis (ESCA) IAES/SIMS Infrared Microscopy units, as well as characterization facilities that include equipment for microanalysis and X-ray techniques.

Much of the research work has included collaborations with other universities, industries, national laboratories, and government facilities. such as the Army Research Laboratory, Weapons and Materials Directorate (Aberdeen, MD). Our faculty having funding from a range of federal agencies including the NSF, DOE, Department of Defense and Department of Education.
A common theme in all our programs is that we integrate the research experience as part of our educational mission. As a result, we have a vibrant, active department in which undergraduate students, graduate students, faculty and staff work together to tackle grand challenges that require new materials and processes.

Consistent with Stony Brook’s designated mission as a research center, the cornerstone of the Department’s academic program is the graduate work leading to the research-oriented M.S. and Ph.D. degrees.

Requirements for the M.S. Degree in Materials Science and Engineering

In addition to the minimum requirements of the Graduate School, the requirements for the M.S. degree in the Department of Materials Science and Engineering can be satisfied by either one of the two following options:

**M.S. Non-Thesis Option**

- **A. Election**
  The election of this option must be made by the student upon admission to the program and is considered a terminal degree.

- **B. Coursework**
  1. A minimum of 30 graduate credits with a grade point average of 3.0 or better in all graduate courses taken is required to graduate. All credits must be from coursework.
  2. The 30 credits must include the following three core courses: ESM 511 Thermodynamics of Solids; ESM 513 Strength of Materials; and ESM 521 Diffusion in Solids.
  3. Only six credits of ESM 696 Special Problems in Materials Science are allowed. Additional ESM 696 credits require permission of the Graduate Program Director.
  4. All courses taken outside the Department require permission from the Graduate Program Director.

**M.S. Thesis Option**

- **A. Election**
  The election of this option must be made by the student upon admission to the program and is normally considered part of the Ph.D. sequence. Students may not transfer to the Non-Thesis Option while registered for a Thesis Master’s or a Ph.D. degree.

- **B. Coursework**
  1. A minimum of 30 graduate credits is required to graduate; 24 credits must be from coursework.
  2. The 30 credits must include the following three core courses: ESM 511 Thermodynamics of Solids; ESM 513 Strength of Materials; and ESM 521 Diffusion in Solids.
  3. The 30 credits must include six credits of ESM 599 Research.
  4. Only six credits of ESM 696 Special Problems in Materials Science are allowed. Additional ESM 696 credits require permission of the Graduate Program Director.
  5. All courses taken outside the Department require permission from the Graduate Program Director.

- **C. Thesis**
  For the student who elects to complete a thesis for the M.S. degree, the thesis must be approved by three faculty members, at least two of whom are members of the Department of Materials Science and Engineering, including the research advisor.

- **D. Final Recommendation**
  Upon fulfillment of the above requirements, the Graduate Program Committee will recommend to the Dean of the Graduate School that the Master of Science degree be conferred or will stipulate further requirements that the student must fulfill.

- **E. Transfer to Other Options**
  Transfer to another degree option in the Department can be made only with the written permission of the Graduate Program Director.

Requirements for the Ph.D. Degree in Materials Science and Engineering

- **A. Plan of Work**
  Before completion of one year of full-time residency, the student must have selected a research advisor who agrees to serve in that capacity. The student will then prepare a plan of further coursework. This must receive the approval of the student’s advisor and of the Graduate Program Committee.

- **B. Coursework**
  1. An average grade of B or higher is required for all courses.
2. A minimum of 24 graduate course credits is required to graduate (excluding ESM 501, ESM 514, ESM 599, ESM 697, ESM 698, and ESM 699).

3. The 24 course credits must include the following three core courses: ESM 511 Thermodynamics of Solids; ESM 513 Strength of Materials; and ESM 521 Diffusion in Solids. If the student does not receive a minimum of a B in a core course, he or she may repeat that course one other time.

4. All students must complete ESM 501 Teaching and Mentoring Techniques and ESM 514, Technical Writing for Scientist. These 2 courses do not count towards the 24 graduate course credits required.

5. The student must pass at least three credits of ESM 698 Practicum in Teaching and six credits of ESM 699 Dissertation Research on Campus.

6. Only six credits of ESM 696 Special Problems in Materials Science are allowed. Additional ESM 696 credits require permission of the Graduate Program Director.

7. All courses taken outside the Department require permission from the Graduate Program Director.

8. All PhD students must act as teaching assistants for five semesters (regardless of support), and they must register for ESM 698 Practicum in Teaching in all five semesters for a total of 3 credits and 0 credits for the rest.

C. Preliminary Examination
The preliminary examination must be taken before the beginning of the student’s fifth semester. This is an oral examination designed to test the student’s ability to utilize his or her materials science background to carry out research in a chosen field of study, and to make clear written and oral presentations of research. At least ten days prior to the examination, the candidate should submit a research proposal (10-15 pages) to the examiners that places the research in context and outlines a scenario for its completion. The student must have finished the required coursework for the PhD program prior to taking the oral exam.

The examination committee will consist of three(3) Materials Science and Engineering Department faculty members. If a second examination is required, it must be completed by the tenth week of the sixth semester.

D. Advancement to Candidacy
After the prelims, the department processes the Advancement to Candidacy once the student’s preliminary examination committee has signed to confirm that the student has passed the prelims. It is important to note, that a student must have no “I” or “U” grades for courses that count towards the degree to advance to candidacy. He/she must have completed all coursework requirements to advance to candidacy.

E. Dissertation
The most important requirement of the Ph.D. degree is the completion of a dissertation, which must be an original scholarly investigation. The dissertation shall represent a significant contribution to the scientific literature, and its quality shall be compatible with the publication standards of appropriate and reputable scholarly journals. At least two semesters should elapse between the preliminary exam and submission of the dissertation.

F. Defense
The candidate shall defend the dissertation before an examining committee consisting of four members, including the research advisor, two members of the Materials Science and Engineering Department, and one member from outside the Department.

G. Time Limit
All requirements for the Ph.D. degree must be completed within seven years after completing 24 graduate course credits and other requirements as needed to complete the program.

Requirements for the Bachelor of Science Degree/Master of Science Degree Accelerated Program
The Accelerated BE/MS program is designed to allow undergraduate students in Engineering Science (ESG), Engineering Chemistry (ECM), and Physics (PHY) majors, in good academic standing with a GPA of 3.0 and above, to apply at the end of their junior year for admission to this special program, which leads to a Bachelor of Engineering or Bachelor of Science degree at the end of the fourth year and a Master of Science degree at the end of the fifth year. This is achieved by allowing undergraduate students in the program to take up to two graduate courses as their undergraduate technical electives. These graduate courses will also be counted towards their Master's degree. According to Graduate School policy, up to 6 credits taken as an undergraduate senior student may be counted for both degrees. As a result, students can complete both degrees in five years (i.e., just one extra year or two semesters for the MS)

Engineering Science students in the junior undergraduate year take ESM 455, which is normally taken in the senior year, instead of ESM 335. In the senior year, a student takes ESM 513, to use in lieu of ESM 335, in the fall and another graduate course in the spring. For details of the B.E./M.S. program, please see the graduate program coordinator in the department.

Students are not allowed to enroll in ESM 513 if they have already taken ESM 335. Then that student will be required to replace ESM 513 with another ESM course to fulfill the requirement to complete the PhD program.

Requirements for Application
1. Applicant must be an Engineering Science (ESG) or Engineering Chemistry (ECM) or Physics (PHY) major with a cumulative undergraduate GPA of at least 3.00 at the time of application in their junior year.
2. Students are encouraged to apply to the five-year program by the end of the spring semester of their junior year.
3. A 3.0 GPA must be maintained to begin the student’s graduate career in the 5th year of the accelerated program.
4. Please contact the department at ESMandCME_GradAdmissions@stonybrook.edu to apply to the program.

Applications are reviewed by the ESM Graduate Program Committee and students are generally accepted by the beginning of their senior undergraduate year and are then notified if they have been admitted to the Accelerated Program. The BE/MS is a sequential degree program. Students in the Accelerated Bachelor's/Master's program typically matriculate to the graduate career at the beginning of their third semester. Students must have a cumulative GPA of 3.0 or higher to be admitted to the Graduate School. The Master's in Materials Science and Engineering is a 30 credit program and 24 of those credits must be earned as a matriculated graduate student.

Applicants interested in a graduate degree who do not meet these criteria are encouraged to apply directly to the M.S. program in their senior year.

As an undergraduate, students will be charged tuition at the undergraduate rate for both graduate and undergraduate courses. Once the graduate career begins in the 5th year of the program, the student will be subject to graduate tuition, fees and Graduate School regulations. Students will be permitted to live in Graduate Housing however they will no longer be eligible for Undergraduate Financial Aid.

Students who transfer to Stony Brook must complete at least one semester at Stony Brook before they will be considered for admission to the five-year BE-BS/MS program and decisions will be made on a case-by-case basis to ensure they meet all other requirements to qualify for the combined degree program.

Transfer of credits into M.S. or Ph.D. programs

Students may transfer up to 9 credits of graduate courses obtained from another US accredited university. The following conditions and procedure is required to transfer any credits.

In order to be counted towards graduation, the credits must be evaluated by Materials Science Graduate Program committee and faculty. The evaluation must establish equivalence between a course being transferred from another institution and an ESM course in Stony Brook, which is accepted as part of the graduation requirements. The faculty member must be one of those who are teaching the corresponding graduate course on a regular basis. The professor typically evaluates the course materials/contents, student transcripts, etc. The approval is not automatic and we generally take a very careful look at such transfer requests.

Graduate courses that do not meet the previous requirement can be transferred without being counted towards graduation. This can sometimes be useful because students who have earned 24 graduate credits of any kind need to be registered for only 9 credits (instead of 12) in order to have full status. Therefore, gaining this status early might reduce tuition liability.

M.S. to Ph.D

A student in the M.S. program from ESM or any related field at Stony Brook can subsequently apply for admission into the Ph.D. program, only if the student can be supported by an advisor to complete the PhD program in ESM at Stony Brook. Student will require to complete a change of level/program form and will enter the PhD program as a G-4 student.

The ESM Ph.D. program also recognizes M.S. degree from other accredited US institutions, person that has M.S. degree in CME will still require to complete courses totaling 24 credits. The student will be accepted as G4 level student and expected to complete all requirements towards the Ph.D. degree.

Faculty of Materials Science and Chemical Engineering Department

Materials Science & Engineering Program

Distinguished Professors

Rafailovich, Miriam, Ph.D., 1980, Stony Brook University: Polymeric liquids; phase transitions; thin film wetting phenomena; atomic force microscopy; ion, X-ray, and neutron scattering.

Sampath, Sanjay, Ph.D., 1989, Stony Brook University: Thermal spraying; protective coatings; functioning graded materials; thick film electronics and sensors.


Professors

Clayton, Clive R., Ph.D., 1976, Surrey University, England: Environmental degradation of materials; XPS; AES; dynamic and static SIMS; electrochemical analysis synthesis by ultra-fast laser ablation; RHEED; protective coatings.

Dudley, Michael, Ph.D., 1982, University of Warwick, England: Synchrotron topography; crystal defects; mechanical properties.

Frenkel, Anatoly., PhD 1995, Tel Aviv University, Application of synchrotron measurements in materials, Structure-property-function relationships in applied nanomaterials, catalysis

Stony Brook University Graduate Bulletin: www.stonybrook.edu/gradbulletin
Gersappe, Dilip., Interim Chairperson, Ph.D., 1992, Northwestern University: Polymer theory and simulation, Modeling of complex fluids and electrochemical processes

Orlov, Alexander, Ph.D., 2005, University of Cambridge, UK, Physical Chemistry: M.Phil. Chemistry University of Cambridge, UK; M.S.E. Engineering, University of Michigan, USA; M.E./B.E. Engineering, National Technical University, Ukraine. Materials for environmental applications; physical chemistry, environmental nanotechnology and photocatalysis

Sokolov, Jonathan C., ESM Graduate Program Director, Ph.D., 1983, Stony Brook University: Surface and interface properties of polymers and blends; phase transitions; neutron and X-ray scattering; EXAFS, SIMS.

Trelewicz, Jason, Ph.D., 2008, M.I.T.; thermodynamic and mechanical properties of binary nanocrystalline alloys by implementing a combination of analytical theory and experimental mechanics

### Associate Professors

Chen-Wiegart, Karen, PhD, 2011, Northwestern University, x-ray imaging and spectroscopic techniques to study novel functional materials. Energy storage and conversion, nano-/meso-porous materials, thin film & surface treatment

Halada, Gary, Ph.D., 1993, Stony Brook University: Electron spectroscopy; electrochemistry; surface engineering; optical spectroscopy; environmental remediation.

Venkatesh, T.A., Ph.D., 1998, Massachusetts Institute of Technology: Nanomaterials, Smart Materials, Materials for MEMS and biomedical applications

### Assistant Professor

Sprouster, David, Ph.D., 2010, Physics, Australian National University (Canberra), Research School of Physics and Engineering: “Ion Beam Formation and Modification of Cobalt Nanoparticles”

### Associate Professor of Practice

Koga, Maya Ph.D. 2005, Kyoto University, Japan, Polymer Physics.

### Crossover with Chemical Engineering

### Professors

Koga, Tadanori, Ph.D., 1998, Kyushu University, Japan, Physics: green nanofabrication of polymer thin films; chemical recycling of waste plastics and methane hydrate as a future energy resource

Mahajan, Devinder, CME Graduate Program Director, Ph.D., 1979, University of British Columbia: Inorganic chemistry; fuel cells; catalysis.

Tannenbaum, Irena, PhD 1982, ETH Zurich: Polymers, Biomaterials, nanotechnology and nanomedicine.

### Associate Professors

Kim, Taejin, PhD, 2007, Lehigh University, Catalysis and Reaction Engineering, Operando methods of characterizing catalytic reactions, biomass conversion to fuels and chemicals

### Assistant Professors

Lee, Dennis, Assistant Professor, Ph.D., North Carolina State University (2019). Research: Chemical Protective Metal-Organic Framework Thin Films on Fiber Systems Driven by Atomic Layer Deposition

Rajput, Nav Nidhi, Assistant Professor, Ph.D., Louisiana State University (2013). Research: Molecular dynamics studies of ionic liquids, Nanoporous materials; Electrochemistry

Seo, Hyowon, Assistant Professor, Ph.D., Massachusetts Institute of Technology (2019). Research: Electrocatalytic synthesis of chemicals and materials, Catalyst design, Catalytic conversion of CO2, Continuous flow process, Green chemistry, Sustainability

### Faculty of Practice

Meng, Yizhi, PhD, 2003, Cornell University, Food Engineering

Nitodas, Steve PhD, 2001, University of Rochester, Materials Science & Chemical Engineering, Kinetic Investigation and Modeling of the Chemical Vapor Deposition of Aluminum Oxide, Silicon Oxide and Aluminosilicates from Mixtures of Metal Chlorides, Carbon Dioxide, and Hydrogen

### Research Faculty

Marschilok, Amy, Associate Professor, Stony Brook University; Co-Director, Institute for Energy Sustainability and Equity, Stony Brook University; Scientist and Division Manager, Brookhaven National Laboratory; Ph.D., University at Buffalo, Chemistry; Areas of Interest: Electrochemistry, Electrochemical Materials Science
Raghothamachar, Balaji, Ph.D., 2001, Stony Brook University, Materials Science and Engineering
Snead, Lance, Ph.D., 1992, Rensselaer Polytechnic Institute, Nuclear Engineering
Samuilov, Vladimir, Ph.D., 1986, Belarus State University: Physics.

Adjunct Faculty

Abboud, Marcus, Ph.D., 2003, University of Bonn, Dental Medicine; “Correlation between gingival recession and tooth deflections in patients with mandibular crowding”


Arbab, Hassan, M., Dual Ph.D., 2011, Electrical Engineering and Nanotechnology

Berndt, Christopher, Ph.D., 1981, Monash University, Materials Science Engineering

Bhatt, Vatsal, Ph.D., 2014, CEPT University Ahmedabad, India, Urban Energy, Water and Climate Change

Boscoboinik, Jorge Anibal, Ph.D., 2010, University of Wisconsin Milwaukee, Chemistry; Small Organic Molecules in Transition Metal Surfaces and Monte Carlo Simulations of Bimetallic Surface Alloys.

Butcher, Thomas, Ph.D. 1987, Stony Brook University, Mechanical Engineering

Cen, Jiajie, Ph.D., 2019, Stony Brook University, Materials Science Engineering


Concepcion, Javier, Ph.D 2002, Pontifical Catholic University of Chile (Chile) and Georgia Institute of Technology (USA): Inorganic Chemistry

DiMarzio, Donald, Ph.D, 1987, Physics, Rutgers University New Brunswick, NJ.

Dwivedi, Gopal, Ph.D., 2011, Stony Brook University, Materials Science & Engineering


Gangwal, Santosh, Ph.D., 1977, University of Waterloo, CA, Chemical Engineering

Ge, Mingyuan, Ph.D., 2015, Materials Science, University of Southern California (USC), CA

Hainfeld, James, Ph.D., 1974, University of Texas, Chemistry and Biochemistry

Harrison, Robert, Ph.D., 1984, University of Cambridge, Theoretical Chemistry

Hu, Enyuan, Ph.D., 2015, Stony Brook University, Mechanical Engineering, Solid-State Chemistry

Huang, Xiaoqian, Ph.D., 2009, Stony Brook University, NY: Physics; Cryo Soft X-ray Diffraction Microscopy with Biological Samples

Huang, Xianrong, Ph.D., 1995, Nanjing University, China: X-ray typography

Jerome, Luckner John, Ph.D., 2005, Stony Brook University, Materials Science and Engineering.

Johnson, Curtis, Ph.D., Pennsylvania State University, Metallurgy

Keister, Jeffrey, Ph.D. 1997: University of North Carolina at Chapel Hill, Physical Chemistry.

Krstic, Predrag Ph.D., 1982, City College of CUNY, NY; Theoretical Physics; Atomic Physics

Kwon, Gihan, Ph.D., 2009, University of Alabama, Chemical & Biological Engineering

Lee, Wilson, Ph.D., 2007, Stony Brook University, Materials Science, Cosmetics Research and Development

Li, Qiang, Ph. D., 1991, Iowa State University at Ames: Energy and electronic materials; synthesis and characterization.

Lindberg, Jake C., Ph. D., 2021, Stony Brook University, Chemical & Molecular Engineering

Liu, Mingzhao, Ph.D., 2007, The University of Chicago, Chemistry; Solar water splitting; Pulsed Laser Deposition (PLD), Atomic Layer Deposition (ALD); Colloidal nanoparticle synthesis; Numerical simulation for nanophotonic/plasmonic structures

Stony Brook University Graduate Bulletin: www.stonybrook.edu/gradbulletin
Liu, Qun, Ph.D., 2006, Cornell University, Ithaca, NY: Biophysics, Biochemistry

Lombardi, Jack, Ph.D., 2015, Stony Brook University, Materials Science and Engineering

Lu, Deyu, Ph.D., Physics, University of Illinois at Urbana-Champaign: Empirical nanotube model: Applications to water channel and nanooscillators

Liu, Mingzhao, Ph.D., 2007, The University of Chicago, Chemistry: Solar water splitting; Pulsed Laser Deposition (PLD), Atomic Layer Deposition (ALD); Colloidal nanoparticle synthesis; Numerical simulation for nanophotonic/plasmonic structures.

Lu, Fang, Ph.D., 2007, Chinese Academy of Sciences: Condensed Matter Physics

May, Katherine Flynn, Ph.D, 2014, Stony Brook University, Materials Science and Engineering, Research field: Thermal Spray Formed Ceramic

Meng, Qingpeng, Ph.D, 2002, Shanghai Jiao Tong University, Materials Science and Engineering, Research field: Phase Transformation & Nanostructured Materials

Nam, Chang-Yong, Ph.D., 2007, University of Pennsylvania, Materials Science and Engineering; Infiltration synthesis, with a focus on material hybridization & nanopatterning; Atomic layer deposition for oxidation catalysts; Organic & hybrid photovoltaics; Nanowire electronics; Semiconductor device physics & characterization

Neiser, Richard A, Ph.D. 1989, Stony Brook University, Materials Science, and Engineering

Okoli, Celest, Ph.D., 2018, Stony brook University, Materials Science & Chemical Engineering

Petrovic, Cedomir, Ph.D. 2000, Florida State University, Physics.

Petrash, Stansislas, Ph.D., 1998, Polymer Science, University of Akron: "Neutron Reflectivity Studies of Human Serum Albumin Adsorption onto Well-Defined Surfaces"

Rodriguez, Jose, Ph.D., 1988, Indiana University, Chemistry, Catalysis and Surface Science

Sadasivan, Chandramouli, Ph.D. 2008, University of Miami, Neurosurgery

Salatto, Daniel, Ph.D. 2022, Stony Brook University, Chemical and Molecular Engineering

Shah, Raj, Ph.D, 1995, Pennsylvania State University, Chemical Engineering.

Sharma, Priyanka, Ph.D., 2014, CSIR-National Chemical Laboratory, India, Material Chemistry and Nanomaterials

Sharma, Sunil, Ph.D., 2016, IIT Bombay, Mumbai, India, Material Chemistry and Nanomaterials

Singh, Gurtej, Ph.D., 2012, Rensselaer Polytechnic Institute (RPI), Troy, NY; Chemical and Biological Engineering


Smith, Gregory, PhD. 2018, Stony Brook University, Materials Science and Engineering

Stach, Eric, Ph.D., 1998, University of Virginia, Materials Science and Engineering

Stacchiola, Dario, Ph.D., 2002, University of Wisconsin-Milwaukee, Physical Chemistry, Surface Science

Taboada, Stephanie, Ph.D., 2023, Stony Brook University, Chemical and Molecular Engineering.

Tan Kun, Ph.D., 2022 Stony Brook University, Chemical and Molecular Engineering

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Wu, Qin, Ph.D., 2004, Duke University, Chemistry
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Xue, Yuan, Ph.D. 2019, Stony Brook University, Materials Science and Engineering
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Affiliate Faculty

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Takeuchi, Kenneth, Ph.D. Ohio State University

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NOTE: The course descriptions for this program can be found in the corresponding program PDF or at COURSE SEARCH.