# Professor – Tenure System
# Michigan State University



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| **Job Title** | Professor – Tenure System |
| **Department** | Department of Chemical Engineering and Materials Science |
| **Institution** | Michigan State University<br>East Lansing, Michigan |
| **Date Posted** | Oct. 9, 2024 |
| **Application Deadline** | Open until filled |
| **Position Start Date** | Available immediately |
| **Job Categories** | Assistant Professor<br>Associate Professor<br>Professor |
| **Academic Field(s)** | Materials Sciences/Polymer Sciences<br>Chemistry - General |
| **Apply Online Here** | http://careers.msu.edu |
| **Apply By Email** | |
| **Job Description** | |

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Other titles/ranks: **Assistant Professor, Associate Professor, Professor**

**Snapshot**

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The Department of Chemical Engineering and Materials Science (ChEMS) is seeking applications for multiple tenure-system faculty positions in the areas related to Semiconductor Science andEngineering.

**Position Summary**

The College of Engineering at Michigan State University (MSU) invites applications for multiple tenure-system faculty positions in the Department of Chemical Engineering and Materials Science (ChEMS) in the areas related to Semiconductor Science and Engineering.We encourage applications for appointment at the rank of Assistant Professor and will consider exceptional candidates for appointment at the rank of Associate or (Full) Professor. This position is supported through Michigan State University's Global Impact Initiative, designed to address global grand challenges and national priorities through the creation of over 100 new faculty positions in some of the most promising – and critical – fields of research.

Candidates must have an earned PhD in Materials Science and Engineering, Chemical Engineering, or a closely related discipline at the time of appointment, with an anticipated start date of August 16, 2025. Successful candidates will be expected to develop a sustainable, externally funded, and internationally recognized research program; contribute significantly to their discipline through scholarly work; demonstrate effective teaching and mentorship of both undergraduate and graduate students; participate in institutional and professional service; and support the university's mission in advancing diversity, equity, and inclusion. Candidates are encouraged to discuss how their research could impact and complement the strengths within the department.

All areas of research specialization will be considered, but the following areas have been identified as being of particular interest:

- Complementary computational and experimental approaches investigating mechanisms of semiconductor growth and aging.
- Interface, spin, structure, strain, and charge effects of layered semiconductor materials and microscopic/spectroscopic characterization.
- Heterogeneous microsystem integration, device development, and packaging of semiconductors.
- Approaches integrating novel materials in high performance circuits. Topics of interest include, but are not limited to, emerging research in mixed analog and digital integration, sensor systems,

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wide band gap amplifiers, power electronics, and related areas.

- Additive manufacturing of materials for high-performance, electronics. Topics of interest include, but are not limited to, emerging research in additively manufactured dielectric material development, microstructural and interface characterization, deposition/synthesis, thermal/electrical properties and mechanisms underlying fatigue life and damage mechanisms, and the influence of manufacturing processes and microstructure on performance and lifetime in space-based electronics applications.

- Development of materials for radiation-tolerant electronics including in space applications. Topics of interest include, but are not limited to, atomistic prediction and experimental verification of radiation-induced effects, as well as the analysis of non-epitaxial interfaces designed for improving electrical and thermal performance.

Other qualifications include strong leadership and interpersonal skills, excellent written and oral communication skills, an ability to work in a collaborative research environment, and a commitment to fostering and advancing diversity. Joint appointments with other engineering departments are possible, considering existing strengths and capabilities and the candidate's preferences. Successful candidates will be appointed to an academic-year position in the tenure system, with tenure, if appropriate. Successful candidates are expected to elevate the reputation of MSU through their professional activities. Those who conduct research that enhances or is related to aspects of inclusion and equity are of high interest.

**Required Application Materials**
Interested individuals should apply for this position through **http://careers.msu.edu** and refer to posting #**993782**. The application must include the following materials:

1. A detailed CV
2. A cover letter summarizing your qualifications (up to five pages)
3. A teaching vision statement (up to five pages)
4.

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A research vision statement (up to five pages)

5. A diversity, equity, and inclusion (DEI) vision statement (up to five pages), which should include:
    - Your awareness and education in DEI
    - Examples of your work in DEI
    - Assessment and outcomes of your DEI work
    - Demonstrated impact of your efforts
6. Names and contact information for at least three professional references

In your application, please describe the potential impact of your work and how it aligns with the existing strengths of the Department, College, or other programs at MSU. Data indicates a paucity of underrepresented minorities and women faculty in Chemical Engineering and Materials Science (ChEMS); individuals from these groups are strongly encouraged to apply.

Review of applications will begin on 11/15/2024, and continue until the position is filled. Questions about this position are welcome and should be directed to the search committee chair by email at semiconductorfacultysearch@egr.msu.edu.

**Department Statement**

The Chemical Engineering and Materials Science (CHEMS) department comprises 31 tenure-system faculty members, three teaching faculty, and approximately 480 graduate and undergraduate students. Both the Material Science Engineering (MSE) and Chemical Engineering (CHE) programs offer degrees at the BS, MS, and PhD levels. Faculty in the department engage in instruction and perform cutting-edge research in a variety of areas including biomaterials, biomolecular engineering, catalysis, computational modeling, diamond and carbon-based electronics, electrochemical systems, electric vehicles, energy systems, lightweight metals and advanced structural alloys, machine learning and artificial intelligence, materials for energy conversion and storage, nanomaterials, polymers, polymer composites, renewable chemicals, and semiconductors. Shared research facilities are available across campus for carrying out state-of-the-art experimental and computational studies in MSE, CHE, and

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related disciplines.

**About The College of Engineering**

Advancing, disseminating, and applying engineering knowledge has been the focus of the MSU College of Engineering for more than 130 years. The mission of the MSU College of Engineering is to deliver the highest-quality engineering graduates, cutting-edge research, and innovative technology to benefit society locally and globally. The college carries out its mission through educational and research programs over eight departments tackling interdisciplinary themes such as computational sciences, energy, health, manufacturing, materials, mobility, security, and sustainability, with research expenditures totaling $60 million annually. Research is highly interdisciplinary and collaborative, with themes spanning eight departments in the college and an extensive network of collaborators in other colleges and research organizations. The departments and college have strong track records of mentoring junior faculty to grow their academic careers successfully.

The College of Engineering is dedicated to building a diverse and inclusive workforce that reflects the rich diversity of our global society while upholding the high standards of Michigan State University. We encourage applications from individuals of all backgrounds and perspectives, including but not limited to women, underrepresented racial and ethnic groups, individuals with disabilities, protected veterans, members of the LGBTQ+ community, and others who bring unique experiences. Your diverse insights and contributions are essential to our college's ongoing growth and pursuit of excellence.

**About Michigan State University**

MSU is an R1 university that enjoys a park-like campus with some outlying research facilities and natural areas. The campus is in the city of East Lansing, adjacent to the capital city of Lansing. The Lansing metropolitan area has a diverse population of approximately 541,000. Local communities have excellent school systems and place a high value on education. Michigan State University is proactive in exploring employment opportunities for dual-career couples inside and outside the University.

**MSU Statements**

*Michigan State University has been advancing the common good with uncommon will for more than 160 years. One of the top research universities in the world, MSU pushes the boundaries of discovery and forges enduring partnerships to solve the most pressing global challenges while providing life-changing opportunities to a diverse and inclusive academic community through more than 200 programs of study in 17 degree-granting colleges.*

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*All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, citizenship, disability or protected veteranstatus.*

**Required Degree**

PhD in Materials Science and Engineering, Chemical Engineering, or a closely related discipline.

**Contact Information**

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

**Contact**

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