

**Tenure-Track Faculty Position in MSE: Synthesis and
Processing Science of Ceramics
University of Tennessee, Knoxville**

Direct Link: <https://www.AcademicKeys.com/r?job=262261>

Downloaded On: Oct. 29, 2025 8:51am

Posted Sep. 9, 2025, set to expire Jan. 22, 2026

Job Title	Tenure-Track Faculty Position in MSE: Synthesis and Processing Science of Ceramics
Department	Materials Science and Engineering https://mse.utk.edu/
Institution	University of Tennessee, Knoxville Knoxville, Tennessee
Date Posted	Sep. 9, 2025
Application Deadline	Nov. 10, 2025
Position Start Date	Aug. 1, 2026
Job Categories	Assistant Professor
Academic Field(s)	Material/Metallurgy Engineering - Other
Job Website	https://apply.interfolio.com/173240
Apply Online Here	https://apply.interfolio.com/173240
Apply By Email	
Job Description	

Position Description

The Department of Materials Science and Engineering (MSE) in the Tickle College of Engineering (TCE) at the University of Tennessee, Knoxville (UTK), invites applications for a tenure-track Assistant Professor position in the general area of experimental synthesis and processing science of ceramics.

The MSE Department at UTK is a vibrant and rapidly growing academic unit with internationally recognized strengths in ceramics, metals and alloys, polymers, composites, and electronic materials.

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Our faculty bring world-class expertise in computational modeling, AI/ML for materials informatics, advanced and automated synthesis and characterization, in-situ and ex-situ probes of nano- and microstructures, and physical and mechanical testing of materials. Leveraging close partnerships with Oak Ridge National Laboratory and access to state-of-the-art facilities, the department offers an unparalleled environment for impactful research and education. Visit the department website for more information: <https://mse.utk.edu/>

Research Areas of Interest

We seek candidates with experimental research expertise in the synthesis and processing science of ceramics. The successful candidate is expected to advance fundamental understanding of how processing routes control structure, chemistry, and performance in bulk and thin-film ceramics, with potential applications in structural, functional, energy, or extreme-environment ceramics. Areas of particular interest include, but are not limited to:

- Advanced ceramics synthesis and processing, including the design and development of new ceramic compositions and architectures.
- Traditional ceramic processing and fabrication, such as powder synthesis, forming, densification, and sintering.
- Solution- and colloidal-based sol-gel processing of bulk and thin-film ceramics for structural and functional applications.
- Ceramic phase equilibria and thermodynamics, with emphasis on developing and applying ternary and higher-order phase diagrams to guide synthesis and processing.
- In-situ experimental characterization using X-rays, electrons, and neutrons, to probe reaction pathways, phase transformations, kinetics, and thermal expansion during processing.
- Grain boundary chemistry, microstructure evolution, and interface science of ceramics, particularly in linking processing conditions to microstructural control and material performance.

The successful candidate will be expected to establish a vigorous, externally funded research program in ceramic materials, collaborate with MSE faculty and across disciplines within UTK and ORNL, and contribute to the broader ceramics and materials communities through high-quality scholarship and professional service.

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Candidates whose research is primarily computational or theoretical will not be considered.

Teaching Areas of Interest

The successful candidate will contribute to the department's undergraduate and graduate teaching mission in ceramics. Teaching areas may include, but are not limited to:

- Principles and Processing of Ceramic Materials
- Materials Chemistry of Ceramics
- Ceramic Phase Equilibria
- Kinetics of Materials
- X-ray Diffraction and Characterization Methods

The ability to develop new graduate-level courses in areas aligned with the candidate's research is strongly encouraged.

About the Tickle College of Engineering

The Tickle College of Engineering (TCE) is in the midst of an unprecedented period of growth and success, including adding over 30 new faculty to the college as part of ambitious hiring campaigns led by Chancellor Donde Plowman and Dean Matthew Mench. The college has set records in research expenditures, enrollment, incoming student GPA, intellectual property development, and U.S. News & World Report rank in the past three years. New facilities include the state-of-the-art Zeanah Engineering Complex, the University of Tennessee Manufacturing and Design Enterprise (TN-MADE) facility, and the Innovation South building now under construction that will house UTK's Fibers and Composites Manufacturing Facility (FCMF).

TCE currently has 203 tenure/tenure-track and 79 non-tenure track faculty in its nine academic departments and offers 11 undergraduate, 16 M.S., and 15 Ph.D./DE degree programs. Affiliated with TCE and located in Tullahoma, Tennessee, the UT Space Institute is a hub of aerospace and defense research. The college is also home to eight research centers and three interdisciplinary institutes. With approximately 4,300 undergraduate and 1,500 graduate students, the college sits 29th among public universities in the most recent U.S. News and World Report graduate rankings. Faculty in the college have won 29 early career awards (NSF, DOE, DARPA, AFOSR, and ARO) since 2016. In FY24, the college had annual research expenditures of \$113.6M.

About Knoxville

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Knoxville, TN is a vibrant city with a beautiful and walkable downtown, active neighborhoods, an effervescent nightlife that includes numerous theaters and museums, a rich live music scene across all genres, and eclectic restaurants. Knoxville is nestled in the foothills of the Great Smoky Mountains, surrounded by lakes and the Tennessee River, providing amazing access to various outdoor activities. Knoxville is within easy driving distance of four major metropolitan areas that regularly host larger cultural and entertainment events.

Qualifications

- A Ph.D. in Materials Science and Engineering or a closely related field is required, with demonstrated expertise in experimental ceramics synthesis and processing.
- Postdoctoral or equivalent research experience is strongly preferred.
- Demonstrated potential for excellence in research and teaching at both the undergraduate and graduate levels.
- Evidence of ability to work collaboratively in multidisciplinary teams.

Application Instructions

Applicants should submit the following materials:

1. Cover letter addressing qualifications and research/teaching interests (1–2 pages).
2. Curriculum vitae, including a complete publication list.
3. Statement of research interests and future research plans (1–3 pages).
4. Statement of teaching philosophy and interests (1–2 pages).
5. Contact information for at least three professional references.

Applications must be submitted through the University of Tennessee's online application system <https://apply.interfolio.com/173240>. To receive full consideration, applications should be received before Nov 10, 2025. Review of applications will continue until the position is filled.

For questions and inquiries about this position, please contact the Search Committee Chair, Prof. Haixuan Xu, xhx@utk.edu.

EEO/AA Policy

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Equal Employment Opportunity Statement

All qualified applicants will receive equal consideration for employment and admission without regard to race, color, national origin, religion, sex, pregnancy, marital status, sexual orientation, gender identity, age, physical or mental disability, genetic information, veteran status, and parental status, or any other characteristic protected by federal or state law. In accordance with the requirements of Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act of 1990, the University of Tennessee affirmatively states that it does not discriminate on the basis of race, sex, or disability in its education programs and activities, and this policy extends to employment by the university.

Requests for accommodation of a disability should be directed to the ADA Coordinator at Equal Opportunity and Accessibility, 1840 Melrose Avenue, Knoxville, TN 37996-3560, by email to eoaa@utk.edu, or by phone at 865-974-2498. Inquiries and charges of violation of Title VI (race, color, and national origin), Title IX (sex), Section 504 (disability), the ADA (disability), the Age Discrimination in Employment Act (age), sexual orientation, or veteran status should be directed to the Office of Investigation and Resolution, 216 Business Incubator Building, E J. Chapman Drive, Knoxville, TN 37996-3560, by email to investigations@utk.edu, or by phone at 865-974-0717.

Contact Information

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

Contact Haixuan Xu
Materials Science and Engineering
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Knoxville, TN 37916

Contact E-mail xhx@utk.edu