

Assistant Professor Biomass Degradation/Preservation  
Department of Bioproducts and Biosystems Engineering  
College of Food, Agricultural and Natural Resource Sciences  
College of Science and Engineering  
University of Minnesota

The Department of Bioproducts and Biosystems Engineering, a multidisciplinary department composed of engineers and scientists, is seeking a suitable candidate to fill a 9-month tenure-track faculty position in biological degradation of bio-based materials and bioresources with 50% research and 50% teaching responsibilities. This department integrates engineering, science, technology, and management for sustainable use of renewable resources and enhancement of the environment. Microbial pathways to deconstruct plant cell walls have long been studied in a pest management context, particularly in wood durability, but these pathways are increasingly being studied in nature and harnessed for bioconversion of plant biomass. This has diversified the organisms being studied, including both fungi and bacteria, and broadened definitions for bio-based resources and materials. Bio-based resources include wood, agricultural crop residues, and other waste or recalcitrant biomass. Bio-based materials include forest products, bio-based composites, and polymeric lignocellulose derivatives. This faculty member will help Minnesota maintain its strong leadership position in the discovery, development and application of renewable resources and sustainable technologies to meet society's needs while enhancing the environment in Minnesota and beyond.

### **Responsibilities**

#### **Teaching**

Teaching responsibilities will include both undergraduate and graduate courses in bioproducts and biosystems engineering, sustainable systems management, and environmental sciences; course topics include the influence of organisms such as fungi, bacteria, and insects on the biodegradation of bio-based products and effective approaches to their preservation, bioremediation, environmental microbiology and industrial biotechnology. Courses will serve a diverse body of students.

#### **Research**

The successful candidate will develop a strong, extramurally-funded research program involving fundamental science and applications of microbiology (including bacterial and fungal biology) related to the biological degradation and protection of bio-based materials and bioresources.

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## **Qualifications**

### **Required Qualifications**

Ph.D. in Microbiology, Biochemistry, Forest Products, Bioproducts and Biosystems Engineering, Chemical or Biochemical Engineering, Mycology, Wood Science, Plant Pathology, or related disciplines with demonstrated experience/background in biological degradation of bio-based materials and bioresources. Applicants should have a strong publication record in relation to biodegradation/preservation of bio-based materials, and evidence of the potential to initiate and sustain a strong extramurally-funded research program. Ph.D. must be obtained before the date of appointment.

### **Preferred Qualifications**

The successful candidate is expected to excel in research, teaching and outreach and contribute to the overall success and mission of the department, college and the university. Candidates should have a proven track record for interacting collaboratively with scientists and engineers across various disciplines, and with external stakeholders within related industries. Postdoctoral experience beyond the PhD. Demonstrated experience in obtaining external funding. Evidence of innovative and effective approaches to teaching diverse audiences at both the undergraduate and graduate level. Evidence of excellent written and oral communication skills and the proven ability to support the University's commitment to equity and diversity.

### **Salary and Benefits**

Salary is competitive and commensurate with experience and qualifications. The University's outstanding fringe benefits package includes participation in the University's faculty retirement program; group life, medical, and dental insurance plans; and sabbatical, semester, and parental leave opportunities. Detailed benefits information is available at:

<http://humanresources.umn.edu/benefits>

### **Application Instructions**

Interested applicants should submit a curriculum vitae, cover letter, 2-3 page statement of research plans and experience, 1-2 page statement of teaching experience and philosophy, the names and contact information for three references, and a brief statement (up to one page) describing interest, experience with, and commitment to diversity and inclusiveness to the online application system described below. Review of applications will begin December 15th and continue until the position is filled. If you have any questions, please feel free to contact the chair of the search committee, Dr. Brett Barney, at [bbarney@umn.edu](mailto:bbarney@umn.edu) or 612-626-8751.

Please apply online via the University of Minnesota Employment System:

<https://humanresources.umn.edu/jobs>, Job ID 327170.

Please visit the following links to learn more about the Department of Bioproducts and Biosystems Engineering, [www.bbe.umn.edu](http://www.bbe.umn.edu) and the College of Food, Agricultural and Natural Resource Sciences, [www.cfans.umn.edu](http://www.cfans.umn.edu) and the College of Science and Engineering, [www.cse.umn.edu](http://www.cse.umn.edu).

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Any offer of employment is contingent upon the successful completion of a background check.

*The University of Minnesota provides equal access to and opportunity in its programs, facilities, and employment without regard to race, color, creed, religion, national origin, gender, age, marital status, disability, public assistance status, veteran status, sexual orientation, gender identity, or gender expression. As an institution committed to demonstrating excellence through diversity, the College of Food, Agricultural and Natural Resource Sciences and the University are committed to hiring a diverse faculty and staff, and strongly encourage candidates from historically underrepresented groups to apply. We welcome you to visit our college's Diversity and Inclusion web page at: <http://www.cfans.umn.edu/diversity/>*

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