

Fall 2018- Graduate Research Assistantship in Nanocellulose Membrane Engineering
School of Forest Resources, University of Maine

An assistantship is available for a self-motivated graduate student (MS or PhD level) in the concentration of Bioproducts Engineering with focus on nanocellulose membrane technology at the School of Forest Resources, University of Maine. Research may be conducted at the Advanced Structures and Composites Center. The assistantship is available beginning in the Fall of 2018.

Membrane technology has wide applications in building energy management, water purification, and CO₂ capture. There is significant activity national with respect to membrane research and development; substituting petroleum-based membranes with biobased membranes is a new frontier. The student will work on a project related to design, production, and characterization of novel nanocellulose membranes to be used for moisture removal from exhausted air for building moisture management and waste heat recovery. The student will receive comprehensive training on the cutting-edge technologies of bio-based nanomaterials synthesis, characterization, and advanced applications.

Qualifications:

It is expected that the applicants have an undergraduate (BS) in wood science, materials science, polymer science, chemistry, environmental engineering, mechanical engineering, chemical engineering, or other related areas. Some research experience in related areas of characterization and application development of nanocellulose is highly desirable but it is not a requirement. In addition, the ideal applicant is a team worker, has a high level of intellectual curiosity, and can work independently. International students must also have acceptable TOEFL scores or equivalent.

Assistantship:

An annual stipend (\$20,266.67) paid in 12 monthly installments plus half the Annual Health Insurance fee and full tuition waiver (up to 9 credits per semester) will be provided for an expected 20 hours per week appointment. Operating funds for conducting research and travel will also be available. Read more about assistantships at: <https://forest.umaine.edu/available-assistantships/>

How to apply:

Interested candidates should send a copy of their statement of purpose, CV, transcripts, and TOEFL score to Dr. Stephen Shaler at shaler@maine.edu. Details of our graduate program including the application process and requirements can be found at: <https://forest.umaine.edu/graduate-programs/>

About the University of Maine School of Forest Resources (SFR, <http://forest.umaine.edu>):

With almost 90% of the state covered by forest, forest resources are central to Maine's quality of life and economy. The SFR provides essential forestry education and research and is a signature area of the University of Maine. Over 40 graduate students are currently enrolled in M.F., M.S., and Ph.D. programs within the SFR. The University has over 12,000 students and is the state's flagship research institution.

About the Advanced Structures and Composites Center (ASCC, <https://composites.umaine.edu>):

The University of Maine's Advanced Structures and Composites Center is a world-leading, interdisciplinary center for research, education, and economic development encompassing material sciences, manufacturing, and engineering of composites and structures. The Center is housed in a 100,000 ft² ISO 17025-accredited testing laboratory with more than 150 full and part time personnel.