UNIVERSITY OF DELAWARE
CENTER FOR
COMPOSITE MATERIALS
Celebrating 50 Years

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PROF. MEHDI TAJVIDI
UNIVERSITY OF MAINE
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🕘 9:00 AM – SEMINAR

Opportunities for Cellulose Nanomaterials in Composites Technology

Cellulose nanomaterials (CNMs) are emerging materials with a wide array of potential applications from additives for rheology modification, to barrier coatings to composite materials and structures. Various research groups around the world have focused on applications in composite materials with variable degrees of success. This presentation will provide an alternative perspective towards cellulose nanomaterials in composite material development by shifting the focus from "additive/reinforcement" to "binder" and "matrix". Recent progress in CNF binder technology developed at UMaine and implications for traditional composite materials will be discussed as well as some futuristic pathways for further development.

Biography:

Prof. Mehdi Tajvidi joined the University of Maine, School of Forest Resources and the Advanced Structures and Composites Center in September 2013.

Starting his scientific career at Forest Products Laboratory, Madison, WI in 2001 working on dynamic mechanical analysis of wood plastic composites, Mehdi later joined the University of Tehran's, Department of Wood and Paper Science and Technology before moving to the University Tokyo in 2007 and the University of Waterloo in 2011.

Mehdi's areas of research interest are production, characterization and performance evaluation of renewable nanomaterials and their composites.

He is particularly interested in mechanical properties of nano-materials and nanocomposites, structure-property relationships, viscoelastic behavior, dynamic mechanical analysis and magnetic cellulose nanocomposites. Mehdi's core research area at the University of Maine is focused on utilization of cellulose nanomaterials in high volume applications such as coatings, packaging and building products.

To date, Mehdi has published over 160 papers in academic journals, presented over 80 presentations at international conferences and advised/co-advised over 70 graduate students and postdocs.