



Friday, February 4th | 3:30 PM | WebEx

<https://purdue-edu.zoom.us/j/98878483163>

Naturally Nanostructured Cellulose for Energy, Water and Sustainability

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Abstract: Transitioning into a sustainable future requires the identification of sustainable and functional materials with high performance. As the main component of wood, cellulose is the most abundant polymer on earth with many economic and environmental benefits. Cellulose provides a unique hierarchical framework from meters tall to ångström scale and can be fibrillated into building blocks of various dimensions. In this talk, I will give examples on our gained understanding on the multiscale process-structure-property relationships of cellulose towards unlocking its capabilities not only as a sustainable option, but as a critical material that can enable advanced properties.

Biography: Dr. Tian Li is an Assistant Professor in School of Mechanical Engineering at Purdue University. Her research focuses on material innovation towards energy, water and sustainability. As the leading author, she has published in Science, Nature, Nature Energy, Nature Materials, Science Advances, among others. Her work has been highlighted by many medias including Nature Index, Science podcast, New York Times, LA Times. She received several awards, including ASME Haythornthwaite Award (2020), R&D 100 Finalist (2020), MRS Postdoctoral Award (2020) and Forbes 30 under 30 in energy category (2018), ECE Distinguished Dissertation Fellowship (2015) and Outstanding Graduate Assistant Award in University of Maryland (2015).