



UMaine Student Posters

1. The Influence of Base Paper and Coating Properties on the Recyclability of Barrier Coated Products

Aysan Najd Mazhar

Department of Chemical & Biomedical Engineering

Advisor(s): Dr. Douglas Bousfield, Dr. Clayton Wheeler

2. The Effects of Chemical Cross-Linking on the Properties of Cellulose Nanofibril Composites

Cam Andrews

Department of Chemical & Biomedical Engineering

Advisor: Dr. Michael Mason

3. High Shear-High Residence Time Drying of Cellulose Nanofibrils (CNF) Stephanie Christau

Charles Eme

Department of Chemical & Biomedical Engineering

Advisor: Dr. David Nievandt

4. Cellulose Nanomaterial Hydrogel for Applications in Aquaculture Vaccine and Drug Delivery

Jacob Holbrook

Department of Chemical & Biomedical Engineering

Advisor: Dr. Michael Mason

5. The use of cellulose nanofibril (CNF) layer to improve barrier coating performance

Kritee Pokharel

Department of Chemical & Biomedical Engineering

Advisor(s): Dr. Douglas Bousfield, Dr. Jinwu Wang

6. Drying of cellulose nanofiber/polylactic acid composites using liquid and supercritical CO₂ that eliminates the need for an alcohol exchange step

Alyson Manley

Department of Chemistry

Advisor: Dr. Carl Tripp

7. Renewable Biomaterials from Norbornene Modified Cellulose via Thiol-ene Click Chemistry

Ayan Dutta

Department of Chemistry

Advisor: Dr. William Gramlich



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8. Improving Barrier Properties of Dispersion Coatings on Paper

Chidubem Uchefuna

Department of Chemistry

Advisor(s): Dr. William Gramlich, Dr. Douglas Bousfield

9. Surface Modification of Cellulose Nanofibers Using Silanes

Viraji Senevirathne

Department of Chemistry

Advisor: Dr. Carl Tripp

10. CelloGraph – Accelerating Knowledge Discovery for Cellulose Materials using AI and Knowledge Graphs

Umayer Reza

School of Computing and Information Science

Advisor(s): Dr. Torsten Hahmann, Dr. Jimwu Wang

11. Dewatering PLA with CNF for Biopolymer Composite Applications

Alex Collins

School of Forest Resources

Advisor: Dr. Mehdi Tajvidi

12. Cellulose nanofibrils-based materials as a substrate for disinfectant wipes

Luke Berger

School of Forest Resources

Advisor(s): Dr. Islam Hafez, Dr. Mehdi Tajvidi

13. An Alternative Approach to Produce Cellulose Nanofibrils (CNF)-based Hybrid Foams by Microwave Irradiation

Md Musfiqur Rahman

School of Forest Resources

Advisor(s): Dr. Islam Hafez, Dr. Mehdi Tajvidi

14. Multiscale Compression Modeling of Lignocellulosic Foam to Predict Elastic-Plastic Behavior

Mohammad Tauhiduzzaman

School of Forest Resources

Advisor(s): Dr. Islam Hafez, Dr. Douglas Bousfield, Dr. Mehdi Tajvidi



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15. Orientation of Cellulose Nanofibrils (CNFs) for High Gas Barrier Packaging Films

Nabanita Das

School of Forest Resources

Advisor: Dr. Mehdi Tajvidi

16. Silylated CNC/PDMS hybrid membrane for water vapor/air separation for wood drying

Nasim Alikhani

School of Forest Resources

Advisor: Dr. Ling Li

17. Relationship between the degree of fibrillation of cellulose nanofibrils (CNFs) and their performance as films for packaging applications

Mirela Artner

Forest Biomaterials

North Carolina State University

18. Effect of bionanopolymers on the strength and frost resistance properties of ordinary concrete is

Malgorzata Szafraniec

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