

NANOCELLULOSE: PREPARATION, CHARACTERIZATION, SUPRAMOLECULAR MODELING, AND ITS LIFE CYCLE ASSESSMENT

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Dissertation submitted to the faculty of

Virginia Polytechnic Institute & State University

in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

in

Forest Products

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August 29, 2012

Blacksburg, Virginia

Keywords: TEMPO-mediated oxidation, cellulose, molecularly thin, MT nanocellulose, microfibrils, supramolecular structure, modeling, life cycle assessment

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Title: Supramolecular Structure Characterization of Molecularly Thin Cellulose I Nanoparticles
Author: Qingqing Li and Scott Rennekar
Publication: Biomacromolecules
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Nanocrystals for Bioimaging
Applications

Author: Shuping Dong and Maren
Roman*

Publication: Journal of the American
Chemical Society

Publisher: American Chemical Society

Date: Nov 1, 2007

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Author: Youssef Habibi, Lucian A. Lucia,
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Publication: Chemical Reviews

Publisher: American Chemical Society

Date: Jun 1, 2010

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Author: Noritsugu Terashima

Publication: Journal of Wood Science

Publisher: Springer

Date: Jan 1, 2009

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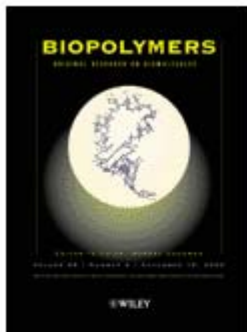
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Author: Remco J. Viëtor, Karim Mazeau, Miles Lakin, Serge Pérez

Publication: Biopolymers

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Date: Jul 13, 2000

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Publication: Angewandte Chemie International Edition

Publisher: John Wiley and Sons

Date: May 20, 2011

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