

## Accepted Manuscript

Title: A Morpholinium Ionic Liquid for Cellulose Dissolution

Author: Dilip G. Raut Ola Sundman Weiqing Su Pasi Virtanen  
Yasuhito Sugano Krisztian Kordas Jyri-Pekka Mikkola



PII: S0144-8617(15)00348-3

DOI: <http://dx.doi.org/doi:10.1016/j.carbpol.2015.04.032>

Reference: CARP 9863

To appear in:

Received date: 26-11-2014

Revised date: 17-4-2015

Accepted date: 20-4-2015

Please cite this article as: Raut, D. G., Sundman, O., Su, W., Virtanen, P., Sugano, Y., Kordas, K., and Mikkola, J.-P., A Morpholinium Ionic Liquid for Cellulose Dissolution, *Carbohydrate Polymers* (2015), <http://dx.doi.org/10.1016/j.carbpol.2015.04.032>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

## 1 Highlights

- 2
- Dissolution of cellulose in newly synthesized ionic liquids was studied.
- 3
- At 120 °C, [AMMorp][OAc] could dissolve 30 wt%, 28 wt% and 25 wt% of cellulose
- 4
- with degree of polymerization ( $DP_n$ ) - 789, 1644 and 2082 respectively, in 20 min.
- 5
- Importantly, 25 wt% cellulose with very high DP (2082) could be dissolved.
- 6
- Structure and morphology of regenerated cellulose films were determined.
- 7
- No discernible changes occurred in terms of the degree of polymerization of the
- 8
- different celluloses after regeneration.
- 9
- Efficient recovery of [AMMorp][OAc] was demonstrated using water as an anti-
- 10
- solvent.
- 11
- 12

Download English Version:

<https://daneshyari.com/en/article/7787931>

Download Persian Version:

<https://daneshyari.com/article/7787931>

[Daneshyari.com](https://daneshyari.com)