

Accepted Manuscript

Title: Preparation of conductive cellulose paper through electrochemical exfoliation of graphite: The role of anionic surfactant ionic liquids as exfoliating and stabilizing agents

Authors: Azmi Mohamed, Tretya Ardyani, Suriani Abu Bakar, Masanobu Sagisaka, Yasushi Umetsu, Mohd Rofei Mat Hussin, Mohd Khairul Ahmad, Mohamad Hafiz Mamat, Stephen King, Adam Czajka, Christopher Hill, Julian Eastoe



PII: S0144-8617(18)30938-X
DOI: <https://doi.org/10.1016/j.carbpol.2018.08.040>
Reference: CARP 13937

To appear in:

Received date: 21-3-2018
Revised date: 23-7-2018
Accepted date: 10-8-2018

Please cite this article as: Mohamed A, Ardyani T, Bakar SA, Sagisaka M, Umetsu Y, Hussin MRM, Ahmad MK, Mamat MH, King S, Czajka A, Hill C, Eastoe J, Preparation of conductive cellulose paper through electrochemical exfoliation of graphite: The role of anionic surfactant ionic liquids as exfoliating and stabilizing agents, *Carbohydrate Polymers* (2018), <https://doi.org/10.1016/j.carbpol.2018.08.040>

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.

Preparation of conductive cellulose paper through electrochemical exfoliation of graphite: The role of anionic surfactant ionic liquids as exfoliating and stabilizing agents

Azmi Mohamed^{1,2*}, Tretya Ardyani¹, Suriani Abu Bakar², Masanobu Sagisaka³, Yasushi Umetsu³, Mohd Rofei Mat Hussin⁴, Mohd Khairul Ahmad⁵, Mohamad Hafiz Mamat⁶, Stephen King⁷, Adam Czajka⁸, Christopher Hill⁸, Julian Eastoe⁸

¹Department of Chemistry, ²Nanotechnology Research Centre, Faculty of Science and Mathematics, Universiti Pendidikan Sultan Idris, 35900 Tanjong Malim, Perak, Malaysia

³Department of Frontier Materials Chemistry, Graduate School of Science and Technology, Hirosaki University, Bunkyo-cho 3, Hirosaki, Aomori 036-8561, Japan

⁴MIMOS Semiconductor Sdn Bhd (MSSB), Technology Park Malaysia, 57000 Bukit Jalil, Kuala Lumpur

⁵Microelectronic and Nanotechnology – Shamsuddin Research Centre (MiNT-SRC), Faculty of Electrical and Electronic Engineering, Universiti Tun Hussein Onn Malaysia, 86400 Parit Raja, Batu Pahat, Johor, Malaysia

⁶NANO-SciTech Centre (NST), Institute of Science (IOS), Universiti Teknologi MARA (UiTM), 40450 Shah Alam, Selangor, Malaysia

⁷Rutherford Appleton Laboratory, ISIS Spallation Source, Chilton, Oxfordshire, OX110QT, United Kingdom

⁸School of Chemistry, University of Bristol, Cantock's Close, Bristol, BS8 1TS, United Kingdom

*Corresponding author. Tel.: +601548797582; fax: +601548797296

E-mail address: azmi.mohamed@fsmt.upsi.edu.my

Research Highlights

- Combination of SAILs and nanofibrillated kenaf cellulose was used for exfoliation
- SAILs shows enhanced graphene-compatibility over commercial surfactant

Download English Version:

<https://daneshyari.com/en/article/8942926>

Download Persian Version:

<https://daneshyari.com/article/8942926>

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