

Accepted Manuscript

Title: Catalytic Upgrading of Bio Oil Model Compound into Polyol Ester via Green Alginate Catalyzed Esterification Reaction

Authors: Y.L. Cheryl-Low, H.V. Lee, S.B. Abd Hamid

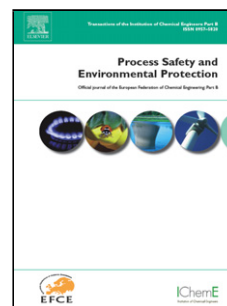
PII: S0957-5820(17)30212-4
DOI: <http://dx.doi.org/doi:10.1016/j.psep.2017.06.021>
Reference: PSEP 1102

To appear in: *Process Safety and Environment Protection*

Received date: 28-9-2016
Revised date: 27-4-2017
Accepted date: 29-6-2017

Please cite this article as: Cheryl-Low, Y.L., Lee, H.V., Abd Hamid, S.B., Catalytic Upgrading of Bio Oil Model Compound into Polyol Ester via Green Alginate Catalyzed Esterification Reaction. *Process Safety and Environment Protection* <http://dx.doi.org/10.1016/j.psep.2017.06.021>

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.



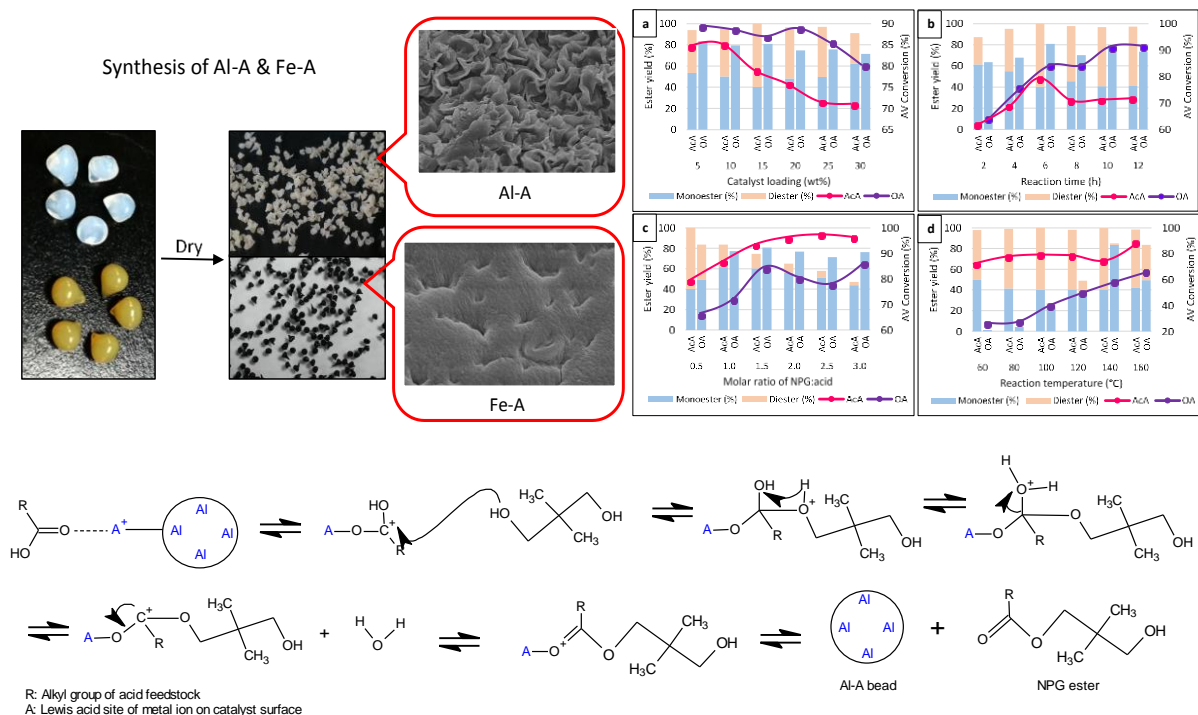
Catalytic Upgrading of Bio Oil Model Compound into Polyol Ester via Green Alginate Catalyzed Esterification Reaction

Y.L. Cheryl-Low, H.V. Lee* and S.B. Abd Hamid

Nanotechnology & Catalysis Research Centre (NANOCAT), Institute of Postgraduate Studies, Universiti Malaya, 50603 Kuala Lumpur, Malaysia.

*Corresponding author. Tel: +603-7967 6954; Fax: +603-7957 6956;
E-mail address: leehweivoon@um.edu.my

Graphical Abstract



Highlights:

- Al-A and Fe-A catalyst were used to catalyze the esterification reaction of polyol.
- Al-A (100%), a stronger Lewis acid, acquire higher ester yield than Fe-A (95.5%).
- AcA esterification optimized at 15 wt. %, 6h, 1:2 of NPG:AcA molar ratio, 100 °C.
- OA esterification optimized at 15 wt. %, 6h, 1:2 of NPG:AcA molar ratio, 160 °C.

Download English Version:

<https://daneshyari.com/en/article/4980651>

Download Persian Version:

<https://daneshyari.com/article/4980651>

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