

*Supplementary Material*

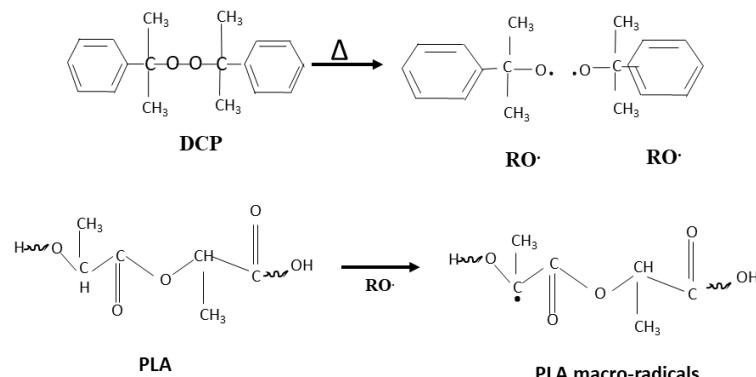
# Flow Characteristics, Mechanical, Thermal, and Thermomechanical Properties, and 3D Printability of Biodegradable Polylactide Containing Boehmite at Different Loadings

Dimakatso Makwakwa <sup>1,2</sup>, Vincent Ojijo <sup>1</sup>, Jayita Bandyopadhyay <sup>1</sup> and Suprakas Sinha Ray <sup>1,2,\*</sup>

<sup>1</sup> DST-CSIR National Centre for Nanostructured Materials, Council for Scientific and Industrial Research, Pretoria 0001, South Africa; DMakwakwa@csir.co.za (D.M.); vojijo@csir.co.za (V.O.)

<sup>2</sup> Department of Chemical Sciences, University of Johannesburg, Doornfontein, Johannesburg 2028, South Africa; jbandyopadhyay@csir.co.za

\* Correspondence: rsuprakas@csir.co.za



**Figure S1.** The mechanism of reaction between PLA and DCP.

**Citation:** Makwakwa, D.; Ojijo, V.; Bandyopadhyay, J.; Ray, S.S. Flow Characteristics, Mechanical, Thermal and Thermo-Mechanical Properties and 3D Printability of Biodegradable Polylactide Containing Boehmite at Different Loadings. *Polymers* **2021**, *13*, 2019. <https://doi.org/10.3390/polym13122019>

Academic Editors: Antonella Patti and Domenico Acierno

Received: 07 May 2021

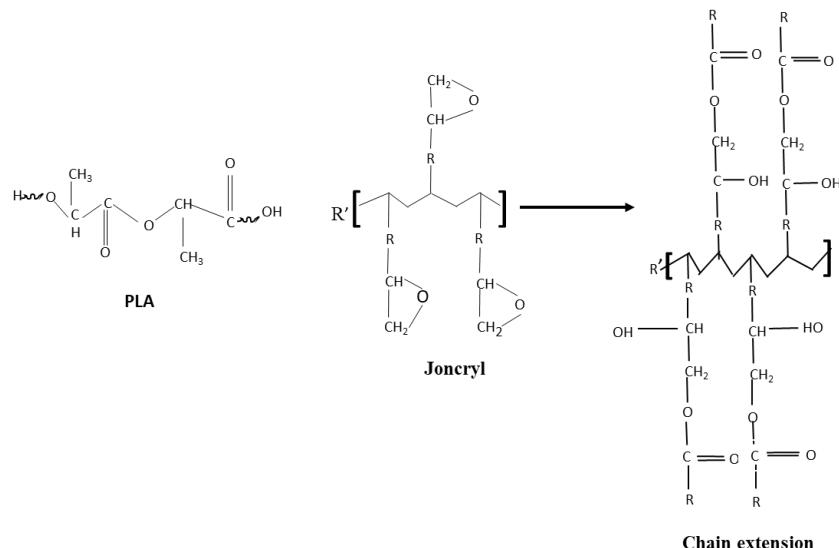
Accepted: 02 June 2021

Published: 21 June 2021

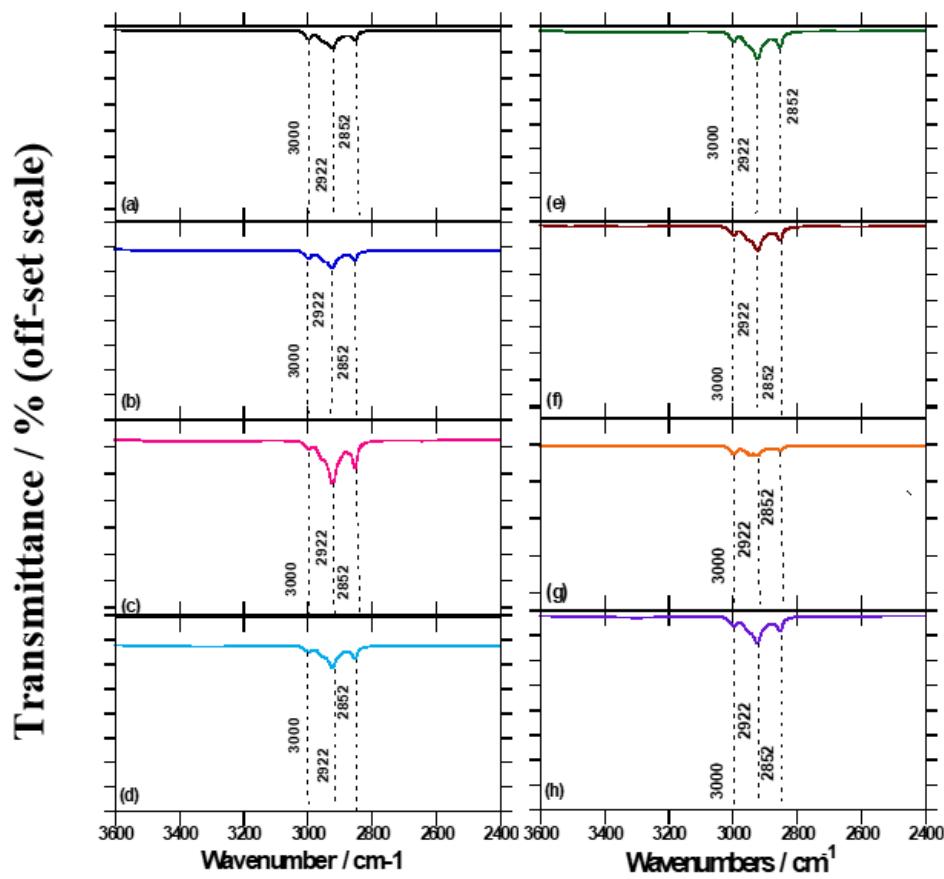
**Publisher's Note:** MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



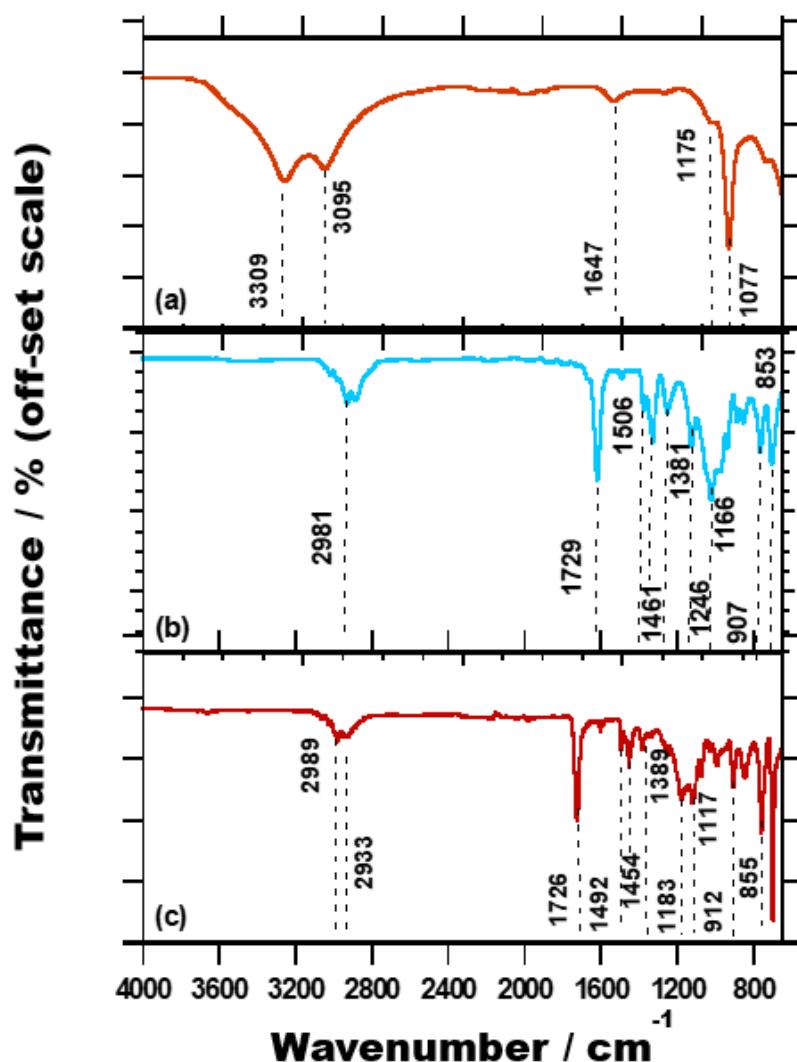
**Copyright:** © 2021 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).



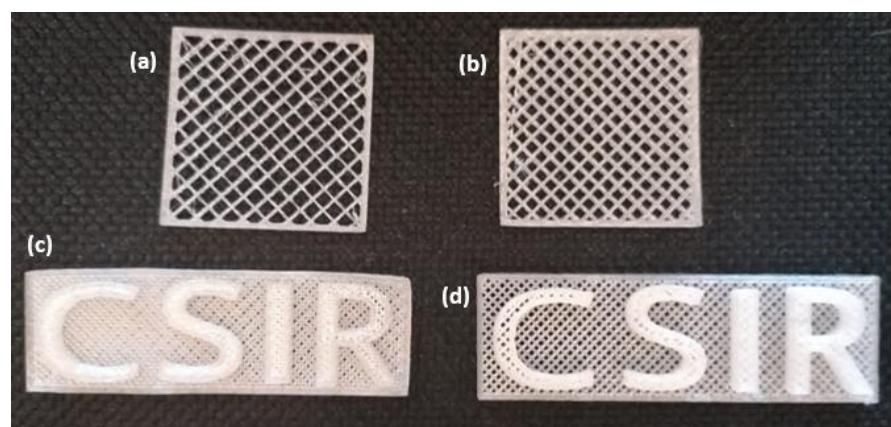
**Figure S2.** The mechanism of reaction between PLA and Joncryl.



**Figure S3.** FTIR spectra for: (a) neat PLA, (b) PLA/DCP (c) PLA/J, (d) PLA/DCP/J, (e) PLA/BA, (f) PLA/BA/DCP, (g) PLA/BA, and (h) PLA/BA/DCP/J.



**Figure S4.** FTIR spectra for neat materials of (a) BA, (b) DCP, and (c) Joncryl.



**Figure S5.** The printability of: (a) neat PLA square shape, (b) BA3 square shape, (c) neat PLA CSIR logo, and (d) BA3 CSIR logo.