

Document details

[Back to results](#) | 1 of 1

[CSV export](#)
[Download](#)
[Print](#)
[E-mail](#)
[Save to PDF](#)
[Save to list](#)
[More...](#)

Journal of Advanced Research in Fluid Mechanics and Thermal Sciences
Volume 39, Issue 1, 1 November 2017, Pages 26-35

A review on multiple functions of ionic liquid in biodiesel production (Article)

Sharikh, A.M., Sulaiman, S., Azmi, A.S.

Department of Biotechnology Engineering, Kulliyah of Engineering, International Islamic University Malaysia (IIUM), Kuala Lumpur, Malaysia

Abstract

[View references \(76\)](#)

Scarcity of petroleum and constant concern over environmental problems caused by diesel fuels has promoted production of biodiesel from renewable sources. Biodiesel synthesized from transesterification methods in the presence of acid or base catalyst or enzyme requires huge amount of solvent, particularly from alcohol to affirm high production yield. Inevitably, the process results in bulky waste that demands appropriate attention. In attempt to tackle the problem, ionic liquid has been identified to be the most potential substitute for conventional catalyst and solvent required in the biodiesel conversion. Ionic liquid that is widely known as 'green chemical' can be synthesized to meet reaction requirement by careful selection of anion and cations, with correct proportion of each to produce desired mixture. This paper reviews recent applications of ionic liquid in biodiesel production as catalyst, solvent and co-solvent. Since there are few ways in which ionic liquid can be categorized, this paper highlights classification of ionic liquids into two major groups; namely acidic and basic ionic liquid. Discussion on these two groups covers their dual-functions in biodiesel production which are as solvent or co-solvent and catalyst as well as the limitation of each group in the biodiesel production. © 2017 PENERBIT AKADEMIKA BARU - All rights reserved.

Author keywords

Biodiesel Catalyst Ionic liquid Solvent

Funding details

| Funding number | Funding sponsor | Acronym | Funding opportunities |
|-----------------|---|---------|---|
| RIGS16-089-0253 | International Islamic University Malaysia | IIUM | See opportunities by IIUM |

Funding text

This research was funded by Ministry of Higher Education of Malaysia MOHE/FRGS 2013 grant (FRGS 13-079-0320) and RIGS16-089-0253 from International Islamic University Malaysia (IIUM).

ISSN: 22897879

Source Type: Journal

Original language: English

Document Type: Article

Publisher: Penerbit Akademia Baru

References (76)

[View in search results format](#)

Metrics

0 Citations in Scopus

0 Field-Weighted Citations



PlumX Metrics
Usage, Captures, Mentions,
Social Media and Citations
beyond Scopus.

Cited by 0 documents

Inform me when this document is cited in Scopus

[Set citation alert](#)
[Set citation feed](#)

Related documents

[Application of ionic liquids and deep eutectic solvent review](#)

Troter, D.Z., Todorović, Z.B., Dokić-Stojanović, I. (2016) *Renewable and Sustainable Energy Review*

[Enzymatic Production of Biodiesel from Milletia](#)

Huang, Z.-L., Yang, T.-X., Huang, J.-Z. (2014) *Bioenergy Research*

[Ionic liquids as catalysts and reaction media in oil processing: A review](#)

Nowicki, J., Muszyński, M. (2014) *Current Organic Chemistry*

[View all related documents based on references](#)