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Energy Sources, Part A: Recovery, Utilization and Environmental Effects

Volume 39, Issue 2, 17 January 2017, Pages 154-159

A heterogeneous catalyst from a mixture of coconut waste and eggshells for biodiesel production (Article)

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Abstract

In this study, **heterogeneous** catalysts were synthesized from **mixture** of calcined solid **coconut waste** and **eggshells** as a **catalyst** for the transesterification of palm oil. Response surface methodology (RSM) based on central composite design (CCD) was used to optimize the amount of catalysts (**coconut waste**:calcined **eggshells** ratio) for **production** of **biodiesel**. The optimum ratio of catalysts for **biodiesel production** was found as follows: **coconut waste** to eggshell, 5:1 wt% and the highest FAME yield was 81% with fixed parameters of reaction time (3 h), reaction temperature (65°C), and methanol:oil ratio (24:1). © 2017 Taylor & Francis Group, LLC.

Author keywords

Biodiesel; **coconut waste**; **eggshells**; **heterogeneous catalyst**; transesterification

ISSN: 15567036 Source Type: Journal Original language: English

DOI: 10.1080/15567036.2016.1205683 Document Type: Article

Publisher: Taylor and Francis Inc.

Funding details

Funding number	Funding sponsor	Acronym
RG/REN/AS_C-FR3240288948	The World Academy of Sciences	TWAS

Funding text

This research are funded by FRGS grant (FRGS 13-079-0320) and TWAS-COMSTech Research Grant_REF:15-333 RG/REN/AS_C-FR3240288948.

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