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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

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