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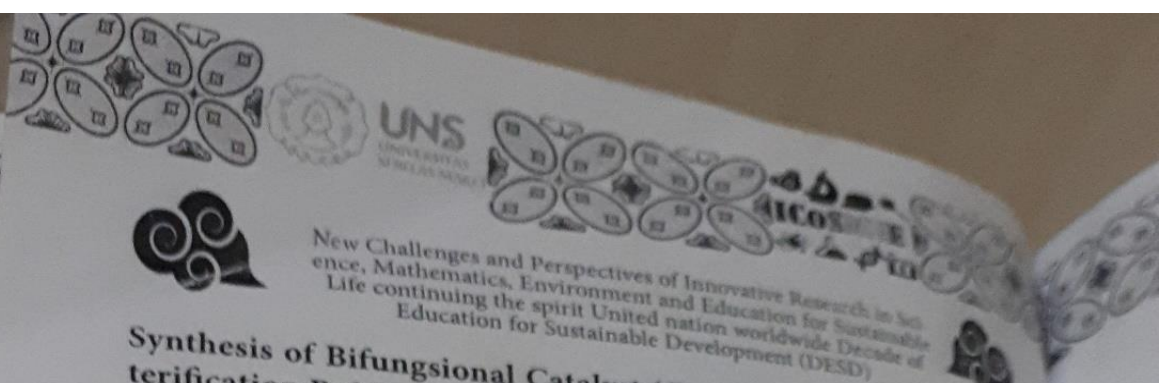
# **ABSTRACT BOOK**

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## Synthesis of Bifunctional Catalyst (CaO-MgO/SiO<sub>2</sub>) for Transesterification Rubber Seed Oil

CMS-18 **Kamisah D. Pandiangan<sup>1\*</sup>, Wasinton Simanjuntak<sup>1</sup>, Mita Rihyantri<sup>1</sup>, Nenasar Jamarun<sup>2</sup>, and Syukri Arief<sup>2</sup>**  
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**Abstract.** Synthesized bifunctional catalyst (CaO-MgO/SiO<sub>2</sub>) was carried out by sol-gel method with different relative amounts of dopant (CaO-MgO) to support matrix (SiO<sub>2</sub>) to produce two types of catalyst i.e with the compositions of 1: 1: 3 and 1: 1: 5. Each catalyst was calcined at 500, 600, 700, 800, 900 °C and tested for activity in the transesterification reaction of rubber seed oil. The results showed that CaO-MgO/SiO<sub>2</sub> 1: 1: 5 calcined at 800 °C was the best catalyst. The optimum transesterification conditions are the use of 5% catalyst, 50 mL methanol, 10% co-reactant, carried out for six hours at 70 °C with 90% conversion.

**Keyword:-**

