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**Composite MCM-41/ZSM-5 as a cracking catalyst for the production of liquid fuel from used palm oil**

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Composite MCM-41/ZSM-5 comprised of microporous ZSM-5 coated with mesoporous MCM-41 was synthesized using two different routes namely (a) seeding method and (b) two-step crystallization. Powder XRD showed the existence of well-structured microphase ZSM-5 and mesophase MCM-41 in the composite materials. The amount of mesophase present in the composite was better controlled using seeding method as compared to two-step crystallization method. The performance of the composite material as a catalyst was investigated in the cracking of used palm oil for the production of liquid hydrocarbons and its activity was compared with the catalytic activity of a physical mixture of ZSM-5 and MCM-41. The composite material synthesized via seeding method gave a better performance in terms of conversion and yield of liquid fuel gasoline fraction compared to composite material obtained from two-step crystallization process and physical mixing. The composite material was found to be more selective for liquid fuel gasoline fraction compared to ZSM-5 alone or the physical mixture of MCM-41 and ZSM-5.