Comparative Assessment the Ability of Microwave Absorber Nanocatalyst in Microwave-Assisted Biodiesel Production Process

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Fig. S. KOH/Ca12Al14O33 nanocatalyst and its carbonated preparation rout using microwave combustion-impregnation method.



Fig. S. N2 adsorption-desorption isotherms of KOH/Ca12Al14O33 and carbonated KOH/Ca12Al14O33 nanocatalysts.



Fig. S. Effect of amount of carbonated KOH/Ca12Al14O33 nanocatalysts on the conversion of canola oil to biodiesel under microwave irradiation. Reaction conditions: microwave power of 270 W, 18 molar ratios of methanol/Oil and 45 min reaction time.



Fig. S. Effect of methanol/oil molar ratio on the conversion of canola oil to biodiesel under microwave irradiation. Reaction conditions: microwave power of 270 W, 4 wt.% of carbonated KOH/Ca12Al14O33 nanocatalysts and 45 min reaction time.



Fig. S. Effect of reaction time on the conversion of canola oil to biodiesel under microwave irradiation. Reaction conditions: microwave power of 270 W, 15 molar ratios of methanol/Oil and 4 wt.% of carbonated KOH/Ca12Al14O33 nanocatalysts.

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