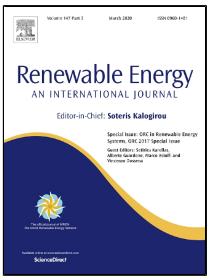

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Microwave-assisted catalytic pyrolysis of *Dunaliella salina* using different compound additives

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Abstract

Microwave-assisted pyrolysis of *Dunaliella salina* was carried out. The effect of different types (mixtures of activated carbon (AC) with CaO and AC with Fe_2O_3), different adding amounts (5, 10, 15, and 20%), and different mixing ratios (0:10, 3:7, 4:6, 5:5, 6:4, 7:3, and 10:0) of compound additives was evaluated, the results were compared with those of single additive and no additive groups. When the compound additive was a mixture of AC and CaO, the maximum weight loss rate (R_m) and average weight loss rate (R_v) of AC/CaO = 6:4 group at 20% addition were the largest, whereas the times corresponding to R_m (t_m) and weight stabilization (t_s) were the smallest. The total weight loss (M_t) of AC/CaO = 0:10 and 4:6 groups at 20% addition were the largest. When the compound additive was a mixture of AC and Fe_2O_3, the R_v and R_m of AC/Fe_2O_3 = 5:5 group at 15% addition were the largest, while the t_s and t_m

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