

Synthesis of carbon nanomaterials from rice husk via microwave oven

ABSTRACT

Microwave oven was utilized to fabricate carbon nanostructure, specifically CNTs, from waste RH powders. It has been shown that the use of carbon source, catalyst, and commercial microwave oven to induce plasma is necessary to carry on this synthesis. The plasma enhances and speeds up the catalytic decomposition of RH in presence of ferrocene. FESEM, TGA, and Raman spectroscopy were utilized to confirm the presence and quality of produced carbon nanomaterials. In addition, these results suggest the conversion of ferrocene to iron(II, III) oxide with notable conversion rate.