

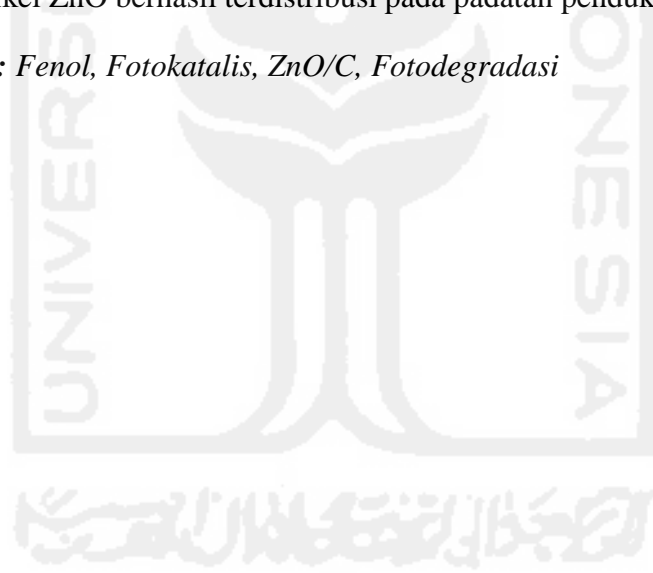
FOTODEGRADASI FENOL MENGGUNAKAN FOTOKATALIS ZnO/C

INTISARI

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Telah dilakukan preparasi fotokatalis ZnO/C menggunakan seng asetat dan karbon aktif. Karakterisasi fotokatalis ditentukan dengan menggunakan N_2 adsorpsi-desorpsi (*surface area analyzer*) dan spektrofotometer *diffuse reflectance* UV-Vis. Aktivitas fotokatalis diuji terhadap fotodegradasi fenol. Aktivitas fotokatalis diuji dengan larutan fenol 20 ppm menggunakan reaktor fotokatalitik dengan konsentrasi fotokatalis 2,5 % pada variasi waktu 15, 30,45, 60, dan 120 menit, dan variasi berat 0,01; 0,02; dan 0,03 gram, kemudian hasilnya dianalisis dengan menggunakan spektrofotometer UV-Vis. Kondisi optimum adalah pada waktu 120 menit dan berat katalis 0,02 gram. Karakterisasi memperlihatkan bahwa partikel ZnO berhasil terdistribusi pada padatan pendukung karbon aktif.

Kata kunci: Fenol, Fotokatalis, ZnO/C, Fotodegradasi



PHOTODEGRADATION OF PHENOL USING ZnO/C PHOTOCATALYST

ABSTRACT

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Preparation of ZnO/C photocatalyst based on a zinc acetate and activated carbon has been conducted. Characterization of photocatalyst were determined using N₂ adsorption-desorption (surface area analyzer) and UV-Vis spectrophotometer diffuse reflectance. Photocatalyst activity was evaluated in photodegradation of phenol. Photocatalyst activity was tested with 20 ppm phenol solution using photocatalytic reactor with photocatalyst concentration of 2.5% at time variation: 15, 30, 45, 60 and 120 minutes, and weight variation: 0.01; 0.02; and 0.03 grams, then the results were analyzed by UV-Vis Spectrophotometer. The optimum activity was obtained in 120 minutes and photocatalyst weight of 0.02 grams. Characterization showed that the ZnO particles were successfully distributed in activated carbon support.

Keywords: *Phenol, Photocatalyst, ZnO/C, Photodegradation*

