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Synthesis, Characterizationof Nb2O5\Cds Nanocompositesand Study of High Photo CatalyticActivity of Transition Metal Ion

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Abstract: This work includes the study of preparing the new Nb_2O_5/CdS coupled photocatalyst was prepare by wet commixing method at different ratios of(0.75:0.25,0.6:0.4,0.5:0.5, 0.85:0.15,0:1 ,1:0) and calcinations at different temperature 200 ^{0}C,500 ^{0}C and800^{0}C for4 hours .The prepared powder was characterized byX-ray diffraction,and Fourier Transform Technique (FT-IR).The photocatalytic activity wasestimated under mercury high pressure lamp for degradation $Co(NO_3)_2$ solution after find the wavelength at λ_{max}510nm . The result showed that (0.85:0.15) percentage at 800 ^{0}C has high activity than other ratio at different temperature. After this study some measure such as best of mass for the catalyst, initial of concentration for $Co(NO_3)_2$, effect of temperature, effect of PH.
Keywords: Co(NO3)2, couple Nb2o5/CdS, Degradation, photocatalytic.

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