

Abstract

The objectives of this study are to mix TiO_2 and SiO_2 gel for photo catalyzing in methylene blue and calculated energy gap of TiO_2 - SiO_2 gel composite. Nanoparticles of TiO_2 -doped SiO_2 gels have been synthesized for use as composites in photodegradation of methylene blue. SiO_2 gel was synthesized by a sol-gel method from rice husk ash. TiO_2 was synthesized by microwave method from TiOSO_4 . The composite of TiO_2 - SiO_2 was prepared by mixing of 25% wt TiO_2 and 75% wt SiO_2 gel and SiO_2 gel bead. There are two sources of TiO_2 loading in this work are TiO_2 from microwave synthesis (MW) and TiO_2 from P25. The UV absorption values of methylene blue after used TiO_2 - SiO_2 composite were measured. Wavelengths of composites were measured by Uv-vis reflectometer and energy gap were calculated.