



البحث الثاني				
Physico-mechanical properties, potent adsorptive and photocatalytic efficacies of sulfate resisting cement blends containing micro silica and nano-TiO₂				عنوان البحث
شارك في البحث باحثين اثنين. Amr A. Essawy, S. Abd El.Aleem				المؤلفون
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Abstract: Blends contain sulfate resisting cement (SRC), micro silica (MS) and nano-sized TiO ₂ (nT) were prepared. The phase of nT is a pure anatase. Incorporating 5 wt.% of nT into cement blends gave more desirable physico-mechanical properties than others. The prepared mixes exhibited adsorptive action towards the hazard water-soluble xanthenes dye (pyronin Y, PY). The ΔG° of the PY contact with the nT-SRC/ MS blend giving an estimate of -27.3 kJ. Adsorption capacity was calculated using UV-Vis spectroscopy. Contact time, pH and blend composition had an effect on the adsorption process. Blend surface is photoactive in the photomineralization of the adsorbed PY.				