عنوان مقاله:

Ultrasonic assisted fabrication and characterization of porous/hybrid CuO/ Fe2O3 using Quinoa plant

محل انتشار:

اولین همایش بین المللی علوم و فناوری نانو (سال: 1399)

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خلاصه مقاله:

Recently, composite adsorbents containing ferric oxides have gained considerable attention, because the composites inherit the advantages of parent oxides and have obviously joint effect [1]. Copper oxide is a p -type semiconductor material with a narrow band gap of 1.4 eV, which is non-toxic and its constituents are available in abundance. Owing to its special propertiesof a large surface to volume ratio, increased activity, special electronic properties and unique optical properties, CuO is attractive for various applications, especially for catalysis and adsorption. Due to the photoconductive and photochemical properties of CuO, many studies have focused on its applications in photocatalysis. Quinoa is a flowering plant in the amaranth family. It is an herbaceous annual plant grown as a crop primarily for its edible seeds; the seeds are rich in protein, dietary fiber, B vitamins, and dietary minerals in amounts greater than in many grains.Here, ultrasonic assisted fabrication of CuO/ Fe2 O3 with nanoporous structure was performed successfully using 2.5 mmol copper sulfate and FeCl3 .6H2O using Quinoa. It also characterized by XRD, .SEM, TEM, AFM and VSM to have size, morphology, and topology of this compound

کلمات کلیدی:

Quinoa, Fe2O3/CuO, Bio nanohybrid, Ultrasonic