عنوان مقاله:

ZnO nanostructures to disinfection of water

محل انتشار:

پنجمین کنفرانس بین المللی مهندسی محیط زیست و منابع طبیعی (سال: 1398)

تعداد صفحات اصل مقاله: 5

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خلاصه مقاله:

In recent years, various technologies and materials have been developed to treat various pollutants from water. Microbes are transferred to humans through infiltration of human wastewater to drinking water and consequently different diseases are transferred to humans by water. Nanostructured ZnO is capable of operating effectively for water treatment via various nanotechnology routes. They specially have wide antibacterial effect on some microorganisms. The antimicrobial activity of ZnO nanoparticles involves the release of oxygen species from the surface of ZnO, which causes fatal injury to microorganisms. The rupture of the cell wall is due to the surface activity of ZnO, which causes the decomposition of the cell wall, and subsequently the cell membrane, the cell contents and, eventually, the cell death. In this work ZnO nanostructures synthesized and SEM images indicate that ZnO nanostructures has 40 nm in diameters and XRD measurement prove the pure crystallites of them.

کلمات کلیدی:

ZnO Nanostructure, antibacterial effect, antimicrobial activity, disinfection of water