The Titanium Dioxide nanoparticles influences their toxicity

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TiO2 particles can drive various chemical reactions due to their strong oxidizing and reducing ability. TiO2 is well known photocatalyst and reported as a sunscreen agent. However, recently arguments have occurred about TiO2 toxicity. According to some papers, TiO2 nanoparticle works as a catalyst. It break down water into OH radical and H radican as the result a cell membranes damaged and finally cell dead.
Our work show TiO2 nanoparticles toxicity though optical density , droplet test, survival cell test (Spread the solutions on the plates). We compared two side approach for toxicity study ,one side was about concentration effects and other side was light effects. The toxicity of TiO2 nanoparticle was determind by exposing yeast cells of 50ppm concentrations and light effects. We demonstrated that TiO2 nanoparticles toxic effect.