



Publications Template

#	Research Title	Field	Abstract	Year of Publication	Publishing Link "URL"
1	Evaluation of toxicity of copper oxide nano particles on human blood	Biophysics	Copper oxide (CuO) nanoparticles are of incredible interest because of its efficacious applications including electronic devices, optoelectronic devices, such as microelectromechanical frameworks, field effect transistors, electrochemical cells, gas sensors, magnetic storage media, sun-powered cells, field emitters and nanodevices (for catalysis and medical applications). Examination by Transmission Electron Microscope (TEM) revealed that CuO nanoparticles depicted as wire-like nature with an average size of 27 nm. The results of the particle size analyzer showed the hydrodynamic diameter of chemically syntheized CuO nanoparticles was 82.24 nm with polydisperisty index (PDI) of 0.426. The zeta potential of prepared CuO nanoparticles was -4.69 mV. After 24 h of incubation, CuO nanoparticles produced deformation in the erythrocytes, the deformation enhanced at the most elevated concentration of CuO nanoparticles (400 ppm) suspended phosphate buffer saline (PBS)/citrate; erythrocytes influence was time and dose-dependent. The results of the toxicity study shows that the red blood cell count is substantially reduced after 24 h of incubation and progressively transparent with a concentration of 400 ppm CuO nanoparticles, when compared with negative control and positive control samples. The prothrombin time (PT) and partial thromboplastin time (PTT) test cannot be detected, which means that CuO nanoparticles appear as potent inhibitors anti-partial thromboplastin time (APTT) agents by retarding clotting time in PT and PTT test. After 24-h incubation with CuO nanoparticles, there was a substantial decrease in the platelets (PLT) count in blood sample relative to negative control and positive control samples. The exposure to CuO nanoparticles should be minimized.	January 2021	https://academicjournals.org/journal/JB/article-full-text/28C529D66179