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ECO-TOXICOLOGICAL ASPECTS REGARDING PHYTOGENIC COPPER OXIDE NANOPARTICLES FOR WASTEWATER TREATMENT

Marcela-Elisabeta BARBINTA-PATRASCU^{1,2}, Cornelia NICHITA^{1,3}, Bogdan Ciprian MITREA¹, Bogdan BITA¹, Irina ZGURA⁴, Ioan STAMATIN¹

¹CTT-3Nano-SAE Research Center, Faculty of Physics, ICUB, University of Bucharest, MG-38, 405 Atomistilor Street, 077125 Magurele, Romania;

²Department of Electricity, Solid-State Physics and Biophysics, Faculty of Physics, University of Bucharest, 405 Atomistilor Street, P.O. Box MG-11, 077125 Magurele, Romania;

³National Institute for Chemical-Pharmaceutical Research and Development, 112 Vitan Avenue, 031299 Bucharest, Romania;

⁴National Institute of Materials Physics, Atomistilor 405A, 077125 Magurele, Romania;

The *Green Chemistry* approaches have been used more and more in the last decade, for clean development of metal-based nanomaterials. Plant extracts are preferred in this regard for nanometal biosynthesis, because the phytochemicals present in the plant extracts are a source of reducing as well as stabilizing agents during *green* fabrication of these nanomaterials [1].

One of the valuable metal-based green nanomaterials used in many fields including wastewater treatment are phytogetic copper oxide nanoparticles (CuO NPs) [2]. This study presents a *green* approach for the phytosynthesis of CuO NPs. These nanomaterials were characterized by various physico-chemical methods. Their stability (physical and chemical) was assessed. The evaluation of the eco-impact of these nanoparticles was carried out for the purpose of the wastewater treatment applications. The effect of the obtained phytogetic CuO NPs on urease activity was evaluated by conductometric assay.

Keywords: phytogetic copper oxide nanoparticles, eco-toxicity, wastewater treatment.

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