Dr. Nikolić,

Journal of the Serbian Chemical Society,

Editor

Date: 11 December, 2015

Dear editor,

We are submitting an original scientific paper titled "Copper and copper oxide nanoparticles prepared from copper (II) acetate bipyridine complex” prepared by a group of authors T.A. Lastovina, A.P. Budnyk, G.A. Khaishbashev, E.A. Kudryavtsev and A.V. Soldatov. This atticle reports about an original research and have not been submitted anywhere previously.

The article presents the results of synthesis of copper and copper oxides nanoparticles from a single copper (II) acetate bipyridine complex by three different methods: solvothermal, microwave-assisted and borohydride. The choice of copper (II) acetate bipyridine complex as a precursor allowed to perform synthesis without use of any stabilizing agents. The solvothermal method resulted in copper (II) oxide nanoparticles of ~11 nm having regular shape. Instead, the microwave-assisted polyolprocedure produced copper/copper (I) oxide nanoparticles of ~80 nm with irregular shape. The Cu2O/CuO NPs of ~16 nm were synthesized by a borohydride method at room temperature. The dry product is stable and could be dispersed again in solvents for further applications.

To the best of our knowledge, this is the first report where copper (II) acetate bipyridine complex was used to produce copper-based nanoparticles containing Cu(0), Cu(I), Cu(II). It is known that copper and copper compound nanoparticles have therapeutic and diagnostic potential in the field of human diseases; they are also widely employed as antifungal and antibacterial agents. This makes obtained particles be beneficial for further application-oriented studies. Hence, we are proposing the simple and effective way to produce copper/copper oxides nanoparticles which would be of interest of the wide general readership. We also assume that our example of how copper (II) acetate bipyridine complex can be used in preparation of copper-based nanoparticles will draw interest from the part of the specialists in the field.

We do believe that content of proposed communication corresponds tothe topic of your journal. We did our best to explain obtained data in concise and clear way to fit the requirements of the journal. Below the letter you may find list of suggested reviewers.

On behalf of group of authors,

Tatiana Lastovina

Ph.D. in Physical Chemistry

International Research Center "Smart materials",

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List of suggested reviewers

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