



SDI Review Form 1.6

Journal Name:	International Research Journal of Pure and Applied Chemistry
Manuscript Number:	2013_IRJPAC_7595
Title of the Manuscript:	Structural characterization of Fe-Ag bimetallic nanoparticles synthesized by chemical reduction
Type of the Article	Short Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	1-Macroscopic characterization such as color of final product (Fe_3O_4-Ag nanoparticles) should be mentioned and were PH and charge of them measured? If so, add them also. 2-Write complete name of EDS and FCC before the first abbreviations of them in the text. 3- Put NaBH_4 in parentheses (line of 33). 4- In the conclusion of abstract you wrote size distribution of 20 nm was recorded for the particles of Ag and 7 nm for Fe, but in lines of 72-73 you wrote opposite.	1- Your suggestion was considered and attended in the article. 2 - Your suggestion was considered and attended in the article 3 -Your suggestion was considered and attended in the article 4 - Your suggestion was considered and attended in the article
Minor REVISION comments	5-Lines of 96-98 (we can notice.....atomic number) need more or better descriptions.	5- Previously to the description of the contrast by atomic number , is given a brief introduction these concepts "According to the mechanism of mass/thickness contrast in TEM, in the case of BF image, thicker or higher Z regions scatter more electrons; therefore, these areas are darker than thinner or low Z regions (light contrast)."
Optional/General comments	6-It is better to write chemical reactions equations for this new method. 7-How often was your method repeated for this study? I mean for producing a new route, repeating it and gaining same quality and quantity results is obligatory. 8-According to lines of 28-33, what methods have been used for producing Fe-Ag dumbbell-like nanoparticles before and what are advantages of your method and in which field have you seen that these Fe-Ag dumbbell-like nanoparticles have exactly been used?	6- We make reference to the reactions described by the authors: Hsing-Lung [18] and Zhanhua Guo [19], which indicate the mechanisms of reduction of metal salts and modify some conditions of synthesis. 7 Synthesis Route is completely reproducible, multiple occasions these experiments have been repeated, finding similar results in each of these experiments. There is a strong relationship



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	9-How do you control necessary solubility in your method to the formation of desirable product (fe3o4-ag dumbbell nanoparticles)?	between the concentration of reactants, reaction time, and molar ratios, which was observed by the characterization of particles. 8 There are various methods of synthesis of bimetallic nanoparticles, however a very effective method for the production methods of these particles is specifically “magnetron sputtering with subsequent in-flight annealing” which compared with our method used has significant economic advantages in production, in our case, the reactions are carried out at room temperature, a decrease in embodied energy and less use of specialized equipment. On the other hand, these particles have multifunctional properties with various diagnostic and therapeutic applications in biomedicine. Additionally, shows a superparamagnetic behavior and exhibit significant antibacterial and antifungal activities against a variety of microorganisms including disease causing pathogens, as well as prolonged action and high efficiency of phosphorus removal. 9-Controlling the reaction time and the order in which the metal salts are added in solution We appreciate all your comments and consider their professionalism and objectivity
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