



SDI Review Form 1.6

Journal Name:	American Chemical Science Journal
Manuscript Number:	2014_ACSj_14514
Title of the Manuscript:	Kinetic and Batch Equilibrium Adsorption of Nickel (II) and Copper (II) ions from aqueous solution onto activated carbon prepared from <i>Balanites aegyptiaca</i> shells
Type of the Article	Original 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)
<u>Compulsory</u> REVISION comments	1. How was the pH evolution of the solution during experimental process? 2. Did the authors show how many mass balance experiments were done? 3. In figures, how well is the data reproducibility, the data should be more than two of determination and the relative error should be calculated. See, refer to and cite this paper, Characterization of diatomite and its application for the retention of radiocobalt: role of environmental parameters, Journal of Environmental Radioactivity, 2012, 113, 108-115. 4. How is the repeated availability of the materials? See the follow papers and refer to and cite them. Microscopic Insights into the Temperature-Dependent Adsorption of Eu(III) onto Titanate Nanotubes Studied by FTIR, XPS, XAFS and Batch Technique, Chemical Engineering Journal, 2013, 217, 486-494. Colloidal diatomite, radionickel and humic substance interaction: A combined batch, XPS and EXAFS investigation, Environmental Science and Pollution Research, 2013, 20, 3708-3717.	1. The pH keeps constant during the experimental process 3. Yes that is true, but sometimes we did two or three determinations and we had just considered the average, without calculated the relative error. -Most of the papers cited here are not inaccessible for us, for that reason we had not refer to and cite them.



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Minor REVISION comments	1. Explain how you select the concentration of Nickel (Ni^{2+}) and Copper (Cu^{2+}). I am not sure whether this concentration range exists in real wastewater; if so please give reference for this. Besides, what kinds of interaction forces between Nickel (Ni^{2+}) and Copper (Cu^{2+}) with the adsorbent surface? 2. The adsorption capacities obtained in this study should be compared with other adsorbents conducted in this study or documented in the literature to illustrate the significance of this manuscript. 3. Does the pH value keep constant or change during the adsorption process? The change of pH value is an important factor on the application of sorption materials. Please show the data about the pH change.	1. That's true, but the concentrations studied by (Roman A Danilov* and Nils GA Ekelund., BMC Ecology 2001) ranged from 0.1 to 2.0 mg l^{-1} for copper, nickel, lead and zinc is being known. -It is electrostatique interaction between the Nickel (Ni^{2+}) and Copper (Cu^{2+}) with the adsorbent surface. 3. The pH value does not change. It keeps constant during the adsorption process. These values are: pH=4 during the adsorption of Nickel (Ni^{2+}) and pH= 5 during the adsorption of Copper (Cu^{2+}).
Optional/General comments	1. There is further scope to improve the English Language; the novel contribution of the work presented needs to be made clearer in the Introduction. 2. Conclusion, the authors have not provided a definitive conclusion section. I suggest that this section be completed in order to summarize the research completed. This section should also emphasize the significance of this research within the field of environmental science. 3. Some important papers should be cited in the revised form which are very helpful for the authors	



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	to improve the quality of the manuscript such as: Adsorption of Ni(II) from Aqueous Solution Using Oxidized Multi-walled Carbon Nanotubes. Industrial Engineering Chemistry Research. 2006, 45, 9144-9149; Adsorption behavior of multiwall carbon nanotube / iron oxide magnetic composites for Ni(II) and Sr(II). J. Hazard. Mater. 2009, 164, 923-928; Determination of Ni(II) Sorption Mechanisms on Mordenite Surfaces: A Combined Macroscopic and Microscopic Approach. Geochimica et Cosmochimica Acta 2011, 75, 6520-6534; Macroscopic and Microscopic Investigation of Ni(II) Sequestration on Diatomite by Batch, XPS and EXAFS Techniques. Environmental Science & Technology. 2011, 45, 7718-7726; Removal of Cu(II) and fulvic acid by graphene oxide nanosheets decorated with Fe₃O₄ nanoparticles. ACS Applied Materials & Interfaces, 2012, 4, 4991-5000.	
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