



**SDI Review Form 1.6**

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| Journal Name:            | <a href="#">International Research Journal of Pure and Applied Chemistry</a>                           |
| Manuscript Number:       | 2013_IRJPAC_6588                                                                                       |
| Title of the Manuscript: | Synthesis and Characterization of Bisdithiocarbamates from Weak Nitrogen Bases and its Metal Complexes |
| Type of the Article      | Research Paper                                                                                         |

**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.

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(<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) |
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| <b>Compulsory</b> REVISION comments | <p>In this article, IR, UV-Vis spectroscopic, elemental analysis and TGA (for ligands) methods are not sufficiently rigorous to establish beyond doubt that the proposed complexes have indeed been prepared and the suggested structures are correct, which authors haven't included. Therefore, it is essential that ligands and complexes are properly characterised by other methods such as; ESI-MS, NMR, TGA, and X-ray crystallography - for complexes if it is available. The authors have not given enough time to revise the manuscript. There are too many problems in this manuscript and I am not satisfied by proposed structures of the complexes.</p> <p>In addition there are the following comments:</p> <ul style="list-style-type: none"> <li>• Introduction must be rewritten in a proper English Language, reshaping sentences and avoiding typos. The following statement by authors "Although dithiocarbamates have been extensively studied, a few reports appeared on bisdithiocarbamates [24,56-58]", is unacceptable statement. Please know that there is a pile of references reported by P. Beer and other researchers regarding the preparation of bisdithiocarbamates metal complexes – macrocyclic, polymeric, etc. It seems that authors haven't done a proper literature review.</li> <li>• Authors mentioned they have reported the, "The complexation behaviour of these</li> </ul> | <p>I rewrite the introduction with proper literature review.</p> <p>I correct my mistake. These replace by this because the</p>                                               |



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|  | <p>bisdithiocarbamates towards various transition metal ions, namely Co(II), Ni (II), Cu(II), Zn (II), Hg(II) and Pb(II)". However, the manuscript only covers the complexation behaviour of the ureabisdithiocarbamates ligand.</p> <ul style="list-style-type: none"> <li>• In the IR part of complexes, reporting M-S frequency is essential. This is to confirm complex formation and coordination mode of the CS<sub>2</sub> moiety to metal centre. Authors failed to indicate it throughout the manuscript.</li> <li>• In page 7, authors indicated that complexes were insoluble in water as well as common organic solvents. There is no indication regarding organic solvents used to dissolve them.</li> <li>• In the UV-Vis section; authors failed to mention which solvent(s) was used to run ligands and complexes. In addition, the assignment of d-d transition peaks in table 3 is not clear, related to which ion?</li> <li>• In page 18, there is a statement regarding the use of <sup>1</sup>H NMR. However, authors failed to report NMR data for ligands and complexes (for Zn- and Pb-complexes), which one expected in any synthetic work.</li> <li>• In such work, magnetic measurement is essential. I am wondering why authors haven't included.</li> <li>• Unfortunately, in this manuscript authors failed to induce the proposed geometry about metal centre.</li> <li>• In general, references are not updated and they are old - only one reference in 2008.</li> <li>• authors reported wrongly reference 29 for "The bis(N-cyclohexyldithiocarbamato) nitrido technetium-99m complex [99mTcN-(CHDTC)<sub>2</sub>] (CHDTC:N-cyclohexyl dithiocarbamato) has been used a potential brain perfusion imaging agent [29]". This reference [29] should be for the use of bidithiocarbamates in luminescence.</li> </ul> <p>Given these various reasons and considerations, I am advising against publication of this paper.</p> | <p>manuscript only covers the complexation behaviour of the ureabisdithiocarbamates ligand.</p> <p>Now I incorporate</p> <p>DMSO solvent</p> <p>DMSO solvent, I revised the data</p> <p>NMR only available for ligand</p> <p>Add magnetic susceptibility</p> <p>Updated references</p> |
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| <b>Minor</b> REVISION comments   |  |  |
| <b>Optional/General</b> comments |  |  |