



SDI Review Form 1.6

Journal Name:	International Research Journal of Pure and Applied Chemistry
Manuscript Number:	2014_IRJPAC_11517
Title of the Manuscript:	REDOX KINETICS AND MECHANISM OF THE OXIDATION OF THIOUREA BY DIAQUOTETRAKIS(2,2'-BIPYRIDINE) - μ - OXODIRUTHENIUM (III) ION, IN AQUEOUS PERCHLORIC ACID
Type of the Article	Original Research Article

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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	In the Introductory part of the article the author mainly highlights the importance of the Ruthenium polypyridyl complexes but according to my view he should also pointed out: the oxidation of thiourea using various reagents are also a well known phenomena citing the following references. 1. Simoyi R. H., Epstein I. R., Kustin K., Kinetics and mechanism of the oxidation of thiourea by bromate in acidic solution. <i>J.Phys. Chem.</i> 1994, 98, 551-557. 2. Chatterjee D, Rothbart S, van Eldik R. Selective oxidation of thiourea with H₂O₂ catalyzed by [Ru(III)(edta)(H₂O)]⁻ : kinetic and mechanistic studies. <i>Dalton Trans.</i> 2013, 42, 4725-4729. 3. Bhattacharya S., Dutta A., Banerjee P., Oxidation of thiourea and its N-Substituted Derivatives by a Nickel (IV) Oxime-Imine Complex in aqueous Perchlorate medium, <i>Acta Chemica Scandinavica</i>, 1997, 51, 676-682. 4. Osunlaja AA., Idris SO., Uzarin A., Oxidation of 1, 3-Dimethyl-2-thiourea by 3,7-Bis(Dimethylamino)phenazothionium chloride in aqueous hydrochloric acid, <i>International Journal of pharmaceutical, chemical and biological sciences</i>, 2013, 3,	This observation has been taken care of from lines 32-35



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	861-869.	
Minor REVISION comments	1. In the line 8, 13, 14 $[(\text{H}_2\text{O})_2\text{Ru}_2\text{O}]^{4+}$ should be replaced by $[(\text{bpy})_2(\text{H}_2\text{O})\text{RuORu}(\text{H}_2\text{O})(\text{bpy})_2]^{4+}$ 2. Similarly in the line 71: Ru_2O^{4+} should be replaced by either $[(\text{bpy})_2(\text{H}_2\text{O})\text{RuORu}(\text{H}_2\text{O})(\text{bpy})_2]^{4+}$ or $[(\text{bpy})_4(\text{H}_2\text{O})_2\text{Ru}_2\text{O}]^{4+}$ 3. In the line 100 and 101: 4+ is not over O it should be outside the third bracket. 4. In the line 183: CH_3COOH^- should be replaced by CH_3COO^- Lastly in the section 3.9. The author proposed a reaction mechanism without giving any reference I suggest to cite at least two references which support this type of outer sphere mechanism. I recommend that the manuscript be published after the above changes have been made.	These replacements have been effected. Replacement has been done and can be viewed at line 76 The 4+ has been placed outside the bracket. Replacement of CH_3COOH^- By CH_3COO^- has been effected. Viewed in line 103. This has been done
Optional/General comments		