

## Publications:

1. **Ntoi LLA, Alexander OT, Von Eschwege KG** (2019). Synthesis and kinetics of photochromic carboxy-substituted dithizonatophenyl mercury (II). *Journal of Photochemistry and Photobiology A-Chemistry*, 368 pp. 219 - 226... [ufs-032892](#)
2. **Tay A, Frogley B, Ware D, Conradie J, Ghosh A, Brothers P**(2019). Tetrahedral Pegs in Square Holes: Stereochemistry of Diboron Porphyrazines and Phthalocyanines *Angewandte Chemie-International Edition*, 58 (10), pp. 3057 - 3061... [ufs-034199](#)
3. **Ferreira H, Conradie-Bekker MM, Conradie J** (2019). Cyclic voltammetry data of polypyridine ligands and Co (II)-polypyridine complexes. *Data in Brief*, 22 pp. 436 - 445... [ufs-034227](#)
4. **Ngake, T.L., Potgieter, J.H. and Conradie, J.** (2019). Electrochemical behaviour of amino substituted  $\beta$ -amino  $\alpha,\beta$  unsaturated ketones: A computational chemistry and experimental study. *Electrochimica Acta*. 2019, 296, 1070-1082 DOI: 10.1016/j.electacta.2018.11.144 Elsevier <http://www.journals.elsevier.com/electrochimica-acta/> . [ufs-034228](#)
5. **Adeniyi AA, Conradie J** (2019). Influence of substituents on the reduction potential and pKa values of  $\beta$ -diketones tautomers: A theoretical study. *Electrochimica Acta*, 297 pp. 947 - 960... [ufs-034234](#)
6. **Ferreira H, Conradie-Bekker MM, Conradie J** (2019). Electrochemical and electronic properties of a series of substituted polypyridine ligands and their Co (II) complexes. *Inorganica Chimica Acta*, 486 pp. 26 - 35. [ufs-034236](#)
7. **Conradie J, Conradie-Bekker MM, Mtshali Z, Van Der Westhuizen D, Tawfiq K, Al-Jeboori M, Coles S, Wilson C, Potgieter J** (2019). Synthesis, characterisation and electrochemistry of eight Fe coordination compounds containing substituted 2-(1-(4-R-phenyl-1H-1, 2, 3-triazol-4-yl) pyridine ligands, R=CH<sub>3</sub>, OCH<sub>3</sub>, COOH, F, Cl, CN, H and CF<sub>3</sub>. *Inorganica Chimica Acta*, 484 pp. 375 - 385... [ufs-034241](#)
8. **Conradie J** (2019). Jahn-Teller effect in high spin d<sub>4</sub> and d<sub>9</sub> octahedral metal complexes. *Inorganica Chimica Acta*, 486 pp. 193 - 199... [ufs-034264](#)
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10. **Conradie J, Brothers P, Ghosh A** (2019). Main-Group-Element Isophlorin Complexes Revisited: The Question of a Subvalent Central Atom *Inorganic Chemistry*, 58 pp. 4634 - 4640.. [ufs-034274](#)

11. **Chiyindiko E, Conradie J** (2019). Redox behaviour of bis ( $\beta$ -diketonato) copper (II) complexes. *Journal of Electroanalytical Chemistry*, 837 pp. 76 - 85... [ufs-034282](#)
12. **Adeniyi AA, Conradie J** (2019). Computational insight into the contribution of para-substituents on the reduction potential, proton affinity, and electronic properties of nitrobenzene compounds. *Journal of Molecular Modeling*, 25 (3), pp. 78-1 - 78-20... [ufs-034287](#)
13. **Twigge L, Swarts JC, Conradie J** (2019).  $^{103}\text{Rh}$  NMR shifts of RHI- $\beta$ -diketonato and RHI- $\beta$ -aminoketonato complexes influenced by different substituents. *Polyhedron*, 169 pp. 14 - 23... [ufs-034296](#)
14. **Zhuang Z, Li Y, Huang J, Li Z, Zhao K, Zhao J, Xu L, Zhou L, Moskaleva L, Mai L** (2019). Sisyphus effects in hydrogen electrochemistry on metal silicides enabled by silicene subunit edge. *Science Bulletin*, 64 pp. 617 - 624... [ufs-034342](#)
15. **Šulce A, Nico M, Azov V, Kunz S** (2019). Molecular Insights into the Ligand-Reactant Interactions of Pt Nanoparticles Functionalized with  $\alpha$ -Amino Acids as Asymmetric Catalysts for  $\beta$ -Keto Esters. *Chemcatchem*, 11 pp. 2732 -2742... [ufs-034432](#)
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17. **Syafni N, Moradi-Afrapoli F, Danton O, Wilhelm A, Stadler M, Hering S, Potterat O, Hamburger M** (2019). HPLC-Based Activity Profiling for GABAA Receptor Modulators In *Murraya exotica*. *Natural Product Communications*, 14 (1), pp. 41 - 45... [ufs-034467](#)
18. **Schutte-Smith M, Roodt A, Visser HG** (2019). Ambient and high-pressure kinetic investigation of methanol substitution in *fac* [Re (Trop) (CO) 3(MeOH)] by different monodentate nucleophiles. *Dalton Transactions*, 48 pp. 9984 - 9997... [ufs-034468](#)
19. **Jansen Van Vuuren L, Visser HG, Schutte-Smith M** (2019). Crystal structure of 2-(methylamino) tropone. *Acta Crystallographica Section E: Crystallographic Communications*, E75 pp. 1128 - 1132... [ufs-034474](#)
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23. **Conradie J, Foroutan-Nejad C, Ghosh A** (2019). Norcorrole as a Delocalized, Antiaromatic System. Scientific Reports, 9 (4852), pp. 1 - 6... [ufs-034301](#)
24. **Kimberly A, Coleman C, Mei W, Bharathi A, Bonnet SL, Lindsey L, Bridget D, Boon P, Ferreira D** (2019). Structural Characterization of Cranberry Arabinoxyloglucan Oligosaccharides. Journal of Natural Products, 82 pp. 606 - 620... [ufs-034343](#)
25. **Mayer M, van Lessen v, Rohdenburg M, Hou G, Yang Z, Exner R, Apra E, Azov V, Grabowsky S, Xantheas S, Asmis K, Wang X, Jenne C, Warneke J** (2019). Rational design of an argon-binding superelectrophilic anion. Proceedings of the National Academy of Sciences of the United States of America, 116 pp. 8167 - 8172... [ufs-034360](#)
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29. **Dononelli W, Tomaschun g, Kluner T, Moskaleva L** (2019). Understanding Oxygen Activation on Nanoporous Gold. Acs Catalysis, 9 pp. 5204 - 5216... [ufs-034393](#)
30. **Purcell W, Sinha MK** (2019). Reducing agents in the leaching of manganese ores: A Comprehensive review. Hydrometallurgy, 187 pp. 168 - 186... [ufs-034452](#)
31. **Schutte-Smith M, Roodt A, Alberto R, Twigge L, Visser HG, Kirsten L, Koen R** (2019). Structures of rhenium (I) complexes with 3-hydroxyflavone and benzhydroxamic acid as O, O'-bidentate ligands and confirmation of  $\pi$ -stacking by solid-state NMR spectroscopy. Acta Crystallographica Section C-Structural Chemistry, C75 pp. 378 - 387... [ufs-034481](#)

32. **Van Der Westhuizen D, Von Eschwege KG, Conradie J** (2019). Electrochemistry and spectroscopy of substituted [Ru (phen) 3]2+ and [Ru (bpy) 3]2+ complexes. *Electrochimica Acta*, 320 pp. 134540-1 - 134540-9... **ufs-034500**
33. **Boukar O, Fifen J, Malloum A, Dhaoaidi Z, Ghalila H, Conradie J** (2019). Structures of solvated ferrous ion clusters in ammonia and spin-crossover at various temperatures. *New Journal of Chemistry*, 43 pp. 9902 - 9915... **ufs-034504**
34. **Conradie J, Ghosh A** (2019). Theoretical Search for the Highest Valence States of the Coinage Metals: Roentgenium Heptafluoride May Exist. *Inorganic Chemistry*, 58 pp. 8735 - 8738... **ufs-034517**
35. **Shan W, Desbois N, Pacquelet S, Brandes S, Rousselin Y, Conradie J, Ghosh A, Gros C, Kadish K** (2019). Ligand Noninnocence in Cobalt Dipyrrin–Bisphenols: Spectroscopic, Electrochemical and Theoretical Insights Indicating an Emerging Analogy with Corroles. *Inorganic Chemistry*, 58 pp. 7677 - 7689... **ufs-034518**
36. **Loke PF, Kotze E, Du Preez CC, Twigge L** (2019). Dynamics of Soil Carbon Concentrations and Quality Induced by Agricultural Land Use in Central South Africa. *Soil Science Society Of America Journal*, 83 pp. 366 - 379... **ufs-034724**
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38. **Truscott, J.C., Visser, H.G., Conradie, J., Swart H.C. and Duvenhage, M** (2019). Synthesis, Crystal Structures, Photoluminescence, Electrochemistry and DFT study of Ga(III) and Al(III) complexes containing a novel tetradentate Schiff-base ligand, *Acta Crystallographica Section C: Structural Chemistry* 2019, C75, 1045-1052 <https://doi.org/10.1107/S2053229619008805> International Union of Crystallography (IUCr). **Ufs-034969**
39. **Alexander OT, Kroon RE, Brink A, Visser HG** (2019). Symmetry correlations between crystallographic and photoluminescence study of ternary  $\beta$ -diketone europium (III) based complexes using 1, 10-phenanthroline as the ancillary ligand. *Dalton Transactions*, (40), pp. 1 - 9... **ufs-034979**
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43. **Buitendach BE, Conradie J, Malan FP, Niemantsverdriet JW, Swarts JC** (2019) Synthesis, Spectroscopy and Electrochemistry in Relation to DFT Computed Energies of Ferrocene- and Ruthenocene-Containing  $\beta$ -Diketonato Iridium (III) Heteroleptic Complexes. Structure of [(2-Pyridylphenyl)<sub>2</sub>Ir(RcCOCHCOCH<sub>3</sub>)] Molecules. pp1-20...[ufs-035139](#)
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61. **Conradie J, Mateyise NGS, Conradie-Bekker MM (2019)**. Reduction potential of  $\beta$ -diketones: Effect of electron donating, aromatic and ester substituent groups. South African Journal for Science and Technology / Suid-Afrikaanse Tydskrif vir Natuurwetenskap en Tegnologie, 38 (1), pp. 1 - 18. [ufs-036045](#)

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65. **Kenneth P. Caulfield, Jeanet Conradie, Hadi D. Arman, Abhik Ghosh, and Zachary J. Tonzetich,** (2019) Iron(II) Corrole Anions, Inorganic Chemistry. 2019, 58, 22, 15225-15235. American Chemical Society Publications. **ufs-036213**
66. **Roodt, A** (2019). Book Review. The Whys of a Scientific Life. By John R. Helliwell. Journal of Applied Crystallography 2019. 52, 697-698. **ufs-036357**
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