



NATURAL AND
AGRICULTURAL SCIENCES
NATUUR- EN
LANDBOUWETENSKAPPE

UFS·UV

KONFERENSIES / CONFERENCES - 2014 - RIMS

1. **Fourie, E., Sebitlo, M. and Swarts, J.C.** 2014. Synthesis and electrochemical studies of bio-degradable phosphorous polymer drug carriers (Oral). the 20th International Conference on Phosphorus Chemistry, Dublin, Ireland, 28 June - 2 July. **ufs-019674**
2. **Tsai, C-W, Langner, E.H.G.** 2014. Particle size control of ZIF-8 nanoparticles with applications in heterogeneous catalysis. (Poster). The 4th International Conference on Metal-Organic Frameworks and Open Framework Compounds, Kobe, Japan, 28 September - 1 October 2014. **ufs-019675**
3. **Peens, F.H., Langner, E.H.G.** 2014. Incipient Wetness Impregnation of Amino-MIL-53(Al) with Ferrocenecarboxylic Acid. (Poster). The 4th International Conference on Metal-Organic Frameworks and Open Framework Compounds, Kobe, Japan, 28 September - 1 October 2014. **ufs-019675**
4. **Langner, E.H.G.** 2014. ZIF-8 nanoparticles: synthesis and applications. (Oral). The 7th International Symposium On Macro- and Supramolecular Architectures and Materials, Johannesburg, South Africa, 23-27 November 2014. **ufs-019677**
5. **Schutte-Smith, M., Visser, H.G., Roodt, A.** 2014. Solution and solid state effects of coordinated ligands in rhenium (I) complexes. (Poster) 23rd Congress and General Assembly, International Union of Crystallography, Montreal, Canada, August 2014. **ufs-019679**
6. **Visser, H.G. Roodt, A., Schutte, M., Cloete, N. and Brink, A.** 2014. When Basic Chemistry Meets Industrial Requirements: Examples from Catalysis and Radiopharmacy. (ORAL) ICPAC 2014 International conference on pure and applied chemistry, Mauritius, 23 – 27 June 2014. **ufs-019683**
7. **Visser, H.G. Roodt, A., Schutte, M., Zobi, F. and Brink, A.** 2014. Reactivity of Re(I) tricarbonyl complexes in water and methanol. Special focus on the reactions of $[\text{Re}(\text{CO})_3(\text{H}_2\text{O})_2]^+$ coordinated to a protein. (Oral) ICC41 41st international conference on coordination chemistry, Singapore, 21 – 25 July 2014. **ufs-019706**
8. **Stuurman-Molefe, N.F., Swarts, J.C. and Conradie, J.** 2014. Electrochemistry (CV) and a phase study (DSC and POM) on γ -substituted rhodium complexes with possible catalytic effect. (Oral). The 5th International IUPAC Green Chemistry Conference on Green Chemistry, Durban, South Africa, 17 - 21 August 2014. **ufs-019710**

9. **Stuurman-Molefe, N.F. and Conradie, J.** 2014. Electrochemistry and application of computational methods by DFT on γ -substituted β -diketones, as precursors of rhodium complexes with possible catalytic effect. (Poster). The 5th International IUPAC Green Chemistry Conference on Green Chemistry, Durban, South Africa, 17 - 21 August 2014.[ufs-019712](#)
10. **Conradie, J.** 2014. Cr and W Fisher carbenes: a DFT Understanding of the Electrochemical Behaviour. (Poster). The 65th Annual Meeting of the International Society of Electrochemistry, Lausanne, Switzerland, 31 Aug – 5 Sept 2014.[ufs-019755](#)
11. **Conradie, J., Freitag, R., Liu, R. and Conradie, M.M.** 2014. Redox potentials of $M(\beta\text{-diketonato})_3$ Complexes: Prediction by Frontier Orbital Energies. (Poster). The 65th Annual Meeting of the International Society of Electrochemistry, Lausanne, Switzerland, 31 Aug – 5 Sept 2014.[ufs-019756](#)
12. **Purcell, W., Nete, M. and Nel, J.T.** 2014. $(\text{Ta/Nb})_2\text{O}_5$ as Models for Tantalite Beneficiation. (Oral) International Conference on Pure and Applied Chemistry, Mauritius, 23 – 27 June 2014.[ufs-019757](#)
13. **Chiweshe, T.T., Venter, J.A. and Purcell, W.** 2014. PGM Quantification using Different Internal Standards. (Poster). International Conference on Pure and Applied Chemistry, Mauritius, 23 – 27 June 2014.[ufs-019760](#)
14. **Freitag, R. and Conradie, J.** 2014. “Utilization of Computational chemistry and X-ray crystallography to study the Jahn-Teller distortion in $\text{Mn}(\text{dbm})_3$ (Poster). IYCr2014Africa: International Year of Crystallography conference, CR Swart Auditorium, University of the Free State, Bloemfontein, South Africa, 12-15 Oct 2014.[ufs-019761](#)
15. **Conradie, J.** 2014. X-ray Crystallographic and Computational chemistry study of selected molecular systems. (Poster) IYCr2014Africa: International Year of Crystallography conference, CR Swart Auditorium, University of the Free State, Bloemfontein, South Africa, 12-15 Oct 2014.[ufs-019762](#)
16. **Mofokeng, T.G., Luyt, A.S., Djokovic, V. And Dudic, D.** 2014. Preparation and Characterization of polymer nanocomposites with piezoelectric properties. (Poster). POLYCHAR 22 World Forum on Advanced Materials, Stellenbosch, South Africa 7-11 April.[ufs-019764](#)
17. **Dudic, D. And Luyt, A.S.** 2014. The formation of piezoelectric (β) phase of poly(vinylidene fluoride) from electrically treated melt. (Poster). POLYCHAR 22 World Forum on Advanced Materials, Stellenbosch, South Africa 7-11 April.[ufs-019772](#)
18. **Molaba, M.P., Luyt, A.S. and Dudic, D.** 2014. Improving of thermal and electrical conductivities of IPP/Wax/ag nanocomposites through different melt-mixing conditions. (Poster). POLYCHAR 22 World Forum on Advanced Materials, Stellenbosch, South Africa 7-11 April.[ufs-019773](#)

19. **Venter, G.J.S., Steyl, G., Roodt, A.** 2014. Enaminoketones and Rh(I): influencing dicarbonyl and phosphine complexes through substitution. (Poster). International Year of Crystallography 2014 Africa Conference (IYCr2014Africa), Bloemfontein, South Africa, 12-17 October. **ufs-019778**
20. **Brink, A.** 2014. Crystallography in South Africa: thoughts from the young. (Oral) IYCr2014Africa: Pan African Conference and Summit, Bloemfontein, South Africa 12-17 October 2014. **ufs-019845**
21. **Alexander, O.T., Brink, A. and Visser, H.G.** 2014. Modulated Luminescent Chemistry of tris-Quinoline-Trivalent Metals (Al, Ga and In) Specimens. (Poster). IYCr2014Africa: Pan African Conference and Summit, Bloemfontein, South Africa 12-17 October 2014. **ufs-019847**
22. **Esterhuysen, M. Visser, H.G., Brink, A. and Roodt, A.** 2014. Gallium(III) based Complexes as Models for Radiopharmaceuticals. (Poster). IYCr2014Africa: Pan African Conference and Summit, Bloemfontein, South Africa 12-17 October 2014. **ufs-019871**
23. **Kama, D.V., Visser, H.G. and Brink, A.** 2014. Synthesis of diphosphinoamine ligands (PNP) for hydroformylation reactions and their coordination with Pt and Pd . (Poster). IYCr2014Africa: Pan African Conference and Summit, Bloemfontein, South Africa 12-17 October 2014. **ufs-019872**
24. **Marake, T.D., Brink, A. and Roodt, A.** 2014. Synthesis and characterization of rhenium(I) tricarbonyl complexes with N,O ligands as potential radiopharmaceuticals. (Poster). IYCr2014Africa: Pan African Conference and Summit, Bloemfontein, South Africa 12-17 October 2014. **ufs-019873**
25. **Mokolokolo, P.P., Brink, A. and Visser, H.G.** 2014. Manganese tricarbonyl as model radiopharmaceutical agents. (Poster). IYCr2014Africa: Pan African Conference and Summit, Bloemfontein, South Africa 12-17 October 2014. **ufs-019874**
26. **Nkoe, P.I., Schutte-Smith, M and Alice Brink, A.** 2014. Synthesis of rhenium (I) tricarbonyl complexes using sulphur, oxygen and nitrogen containing ligands and the potential use as radiopharmaceuticals. (Poster). IYCr2014Africa: Pan African Conference and Summit, Bloemfontein, South Africa 12-17 October 2014. **ufs-019875**
27. **Pretorius, C., Brink, A. and Roodt, A.** 2014. Rhodium containing 1-D Metallic Chains – A Structural Study. (Poster). IYCr2014Africa: Pan African Conference and Summit, Bloemfontein, South Africa 12-17 October 2014. **ufs-019876**
28. **Tsosane, M.S., Alice Brink., Visser, H.G. and Roodt, A.** 2014. X-ray crystallographic study of the coordination of N,O-Bid ligands with rhenium complexes. (Poster). IYCr2014Africa: Pan African Conference and Summit, Bloemfontein, South Africa 12-17 October 2014. **ufs-019877**

29. **Manicum, A-L, Schutte-Smith, M., Visser, H.G. and Roodt, A.** 2014. β -diketone based ligands coordinated to Re(I) metal: structural and kinetic studies (Poster 21) IYCr2014Africa: Pan African Conference and Summit, CR Swart Auditorium, University of the Free State, Bloemfontein, South Africa, 12-17 Oct 2014.**ufs-019902**
30. **Swarts, J.C., Cook, M.J.** 2014. Electrochemical and XPS studies on non-peripherally substituted octaalkyl phthalocyanines, tetrabensotri-, -di-, and-monazaporphyrins, and tetrabenzoporphyrins. (Lecture). The 8th International Conference on Porphyrins and Phthalocyanines (ICPP8), Istanbul, Turkey, 22 June – 27 June.**ufs-019903**
31. **Kuo, C-M., Marais, C. and Bezuidenhoudt, B.C.B.** 2014. Preparation of a series of homoisoflavanone isomers in order to unambiguously establish the position of a possible methoxy substituent. (Poster) Binational South African – USA Organic Chemistry Conference (BOCC-2014), Stellenbosch, South Africa, 30 November – 4 December 2014.**ufs-019905**
32. **Bungu, P.** 2014. Isomerization Behavior of Functionalized Tropolone in Oxidative Addition Processes. (Poster) IYCr2014Africa: Pan African Conference and Summit, Bloemfontein, South Africa, 12-17 October.**ufs-019906**
33. **Smit, J.B.M., Marais, C. and Bezuidenhoudt, B.C.B.** 2014. Evaluation of the hydroformylation reaction as new methodology for the synthesis of monomeric flavonoids. (Poster) Binational South African – USA Organic Chemistry Conference (BOCC-2014), Stellenbosch, South Africa, 30 November – 4 December 2014.**ufs-019936**
34. **du Plessis, M., Marais, C. and Bezuidenhoudt, B.C.B.** 2014. Methoxycarbonylation of alkynes: A new catalytic method for the preparation of isoflavonoids. (Poster) Binational South African – USA Organic Chemistry Conference (BOCC-2014), Stellenbosch, South Africa, 30 November – 4 December 2014.**ufs-019940**
35. **Pieterse, T. and Bezuidenhoudt, B.C.B.** 2014. Ring-closing metathesis as new methodology for the synthesis of monomeric flavonoids. (Poster) Binational South African – USA Organic Chemistry Conference (BOCC-2014), Stellenbosch, South Africa, 30 November – 4 December 2014.**ufs-019981**
36. **van Tonder, J.H. and Bezuidenhoudt, B.C.B.** 2014. Synthesis of alkyl and alkoxy substituted ruthenium phthalocyanines as epoxidation catalysts. (Poster) Binational South African – USA Organic Chemistry Conference (BOCC-2014), Stellenbosch, South Africa, 30 November – 4 December 2014.**ufs-019982**
37. **Engelbrecht, I., Visser, H.G., Roodt, A.** 2014. Structural and catalytic evaluation of phosphorous containing complexes of rhodium and iridium for use in olefin hydroformylation. (Poster). IYCr2014Africa: Pan African Conference and Summit, Bloemfontein, South Africa, 12-17 October.**ufs-019985**

38. **Majola, S.V., van Tonder, J.H. and Bezuidenhoudt, B.C.B.** 2014. Alkyl and alkoxy substituted ruthenium phthalocyanines as epoxidation catalysts. (Poster) Binational South African – USA Organic Chemistry Conference (BOCC-2014), Stellenbosch, South Africa, 30 November – 4 December 2014.[ufs-019990](#)
39. **Visser, H.G.** 2014. The History of Crystallography at the UFS: Past, Present and Future. (Poster). IYCr2014Africa: Pan African Conference and Summit, Bloemfontein, South Africa, 12-17 October 2014.[ufs-020016](#)
40. **Muller, T.J., Visser, H.G. and Roodt, A.** 2014. Crystallographic and kinetic investigation of nitrosyl, cyanide and acetonitrile complexes of Rh(I)/(III). (Poster). IYCr2014Africa: Pan African Conference and Summit, Bloemfontein, South Africa, 12-17 October 2014.[ufs-020017](#)
41. **Koen, R., Visser, H.G. and Roodt, A.** 2014. New approaches in tantalum and niobium separation. (Poster). IYCr2014Africa: Pan African Conference and Summit, Bloemfontein, South Africa, 12-17 October 2014.[ufs-002021](#)
42. **Koen, R., Visser, H.G. and Roodt, A.** 2014. The Coordination of Novel, Hard Ligand Systems to Tantalum(V) and Niobium(V) Metal Centres. (Poster). AMI Light Metals Conference 2014 Pilansberg, 15-17 October 2014.[ufs-020022](#)
43. **Marake, T.D., Brink, A. and Roodt, A.** 2014. Synthesis and characterization of rhenium(I) tricarbonyl complexes with N, O ligands as potential radiopharmaceuticals. (Poster). IYCr2014Africa: Pan African Conference and Summit, Bloemfontein, South Africa, 12-17 October 2014.[ufs-020023](#)
44. **Mphure, T.L., Visser, H.G. and Roodt, A.** 2014. The Separation of Hafnium and Zirconium: Crystal Structure of Tetrakis(trifluorothiophenylacetato)-zirconium. (Poster). IYCr2014Africa: Pan African Conference and Summit, Bloemfontein, South Africa, 12-17 October 2014.[ufs-020024](#)
45. **Molokoane, P.P., Steyl, G. and Roodt, A.** 2014. Square planar nano-particles with Cu(II) on inversion centers for catalytic oxidation. (Poster). IYCr2014Africa: Pan African Conference and Summit, Bloemfontein, South Africa, 12-17 October 2014.[ufs-020025](#)
46. **Molokoane, P.P., Steyl, G. and Roodt, A.** 2014. Biomimetic Modelling of Catechol Oxidase Activity. 10th Inkaba yeAfrica/!Khure Africa (AEON) Conference/Workshop, Lord Milner Hotel, Matjiesfontein – Karoo 29 September – 3 October 2014.[ufs-020027](#)
47. **Muller, K.A., Roodt, A., Schutte-Smith, M. And Steyl, G.** 2014. Solid State Investigation of Numerous Novel Copper(II) Bis-O,O'-Bidentate Complexes and Copper(I) Phenyl Complexes. (Poster). IYCr2014Africa: Pan African Conference and Summit, Bloemfontein, South Africa, 12-17 October 2014.[ufs-020028](#)

48. **Loganathan, N. and Roodt, A.** 2014. Tetra-, Deca- and Dodecanuclear Copper(II) Phosphonate Cages Built from Pyrazole, t-Butylphosphonate and/or Carboxylate Ligands. (Poster). IYCr2014Africa: Pan African Conference and Summit, Bloemfontein, South Africa, 12-17 October 2014.**ufs-020052**
49. **Loganathan, N. and Roodt, A.** 2014. Reactivity of 2-Thenoyltrifluoroacetone towards First Row Transition Metal Ions. (Poster). IYCr2014Africa: Pan African Conference and Summit, Bloemfontein, South Africa, 12-17 October 2014.**ufs-020053**
50. **Pretorius, C., Brink, A. and Roodt, A.** 2014. Rhodium containing 1-D Metallic Chains-A Structural Study. (Poster). IYCr2014Africa: Pan African Conference and Summit, Bloemfontein, South Africa, 12-17 October 2014.**ufs-020054**
51. **Schutte, M., Visser, H.G. and Roodt, A.** 2014. Rhenium (I) tricarbonyl complexes: solution and solid state effects of coordinated ligands. (Poster). IYCr2014Africa: Pan African Conference and Summit, Bloemfontein, South Africa, 12-17 October 2014.**ufs-020055**
52. **Tsosane, M.S., Brink, A., Visser, H.G. and Roodt, A.** 2014. X-ray crystallographic study of the coordination of N,O-Bid ligands with rhenium complexes. (Poster). IYCr2014Africa: Pan African Conference and Summit, Bloemfontein, South Africa, 12-17 October 2014.**ufs-020057**
53. **Venter, J.A.** 2014. Crystallographic and kinetic study of ligand effects in the oxidative addition of rhodium cupferrate and related complexes. (Poster). IYCr2014Africa: Pan African Conference and Summit, Bloemfontein, South Africa, 12-17 October 2014.**ufs-020058**
54. **Warsink, S., Roodt, A. and Venter, J.A.** Structural investigations and reactivity of Rh(NHC-amido) complexes. (Poster). IYCr2014Africa: Pan African Conference and Summit, Bloemfontein, South Africa, 12-17 October 2014.**ufs-020059**
55. **Elmakki, M. and Venter, J.A.** 2014. Coordination behaviour of biuret in different metal complexes. (Poster). IYCr2014Africa: Pan African Conference and Summit, Bloemfontein, South Africa. 12-17 October 2014.**ufs-020060**
56. **Zbačnik, M., Nogalo, I. and Cinčič, D.** 2014. Polymorphism Control of a Schiff base via solvent-free and solution based synthesis. (Poster). IYCr2014Africa: Pan African Conference and Summit, Bloemfontein, South Africa, 12-17 October 2014.**ufs-020061**
57. **Taoana, T., Roodt, A., Twigge, L. and Venter, J.A.** 2014.. Structural study of Rh-acac complexes for use in oxidative addition. (Poster). IYCr2014Africa: Pan African Conference and Summit, Bloemfontein, South Africa, 12-17 October 2014.**ufs-020064**

58. **Belay, A., Yadav, O.P., and Tadesse, A.** 2014. Synthesis, Characterization and Photocatalytic Activity of Cr-N co-Doped ZnO Nanoparticles for Degradation of Thymol Blue (TB). (Poster). IYCr2014Africa: Pan African Conference and Summit, Bloemfontein, South Africa, 12-17 October.**ufs-020077**
59. **Wilhelm, A.** 2014. The syntheses and biological activity of nitrogen containing chalcones and analogues (Oral). Symposium to celebrate the 15th Anniversary of the Postgraduation Program in Pharmacy, Universidade Federal de Santa Catarina, Florianopolis, Brazil, 12 September.**ufs-020809**
60. **Gibhard, L. Pravin, K., Abay, E., Taylor, D., Wilhelm, A., Swart, K., van der Westhuizen, J.H., Smith, P. and Wiesner, L..** 2014. Pharmacokinetic evaluation of an antimalarial compound, NP-102, in mice (Poster). 17th World Congress of Basic and Clinical Pharmacology, Cape Town, South Africa, 13 - 18 July.**ufs-020853**
61. **Noreljaleel, A.E.M., Kemp, G., Wilhelm, A., Bonnet, S.L. and van der Westhuizen, J.H.** 2014. Sulfitation of flavon-3-ols and procyanidin B-3 (Poster). SACI - ACS Bi-national Organic Chemistry Conference, Stellenbosch, South Africa, 30 November - 4 December.**ufs-020871**
62. **Phungula, K.V., Khamane, M., Marston[†], A. and Bonnet, S.L.** 2014. Tuberculosis in the Free State province, South Africa: Ethnobotanical survey of plants used by traditional health healers (Poster). 62nd International Congress and Annual Meeting of the Society for Medicinal Plant and Natural Product Research (GA), 31 August – 4 September, Guimarães, Portugal.**ufs-020873**
63. **Phungula, K.V., Marston[†], A., van Vuuren, S., Zietsman, P.C., Bonnet, . and van der Westhuizen, J.H.** 2014. Antioxidant, acetylcholinesterase inhibitory and antimicrobial activities of dichloromethane extracts from the aerial parts of *Galenia africana* L. (Poster). 62nd International Congress and Annual Meeting of the Society for Medicinal Plant and Natural Product Research (GA). 31 August – 4 September, Guimarães, Portugal.**ufs-020874**
64. **Phungula, K.V., Marston[†], A., Khamane, M., Zietsman, P.C. and Bonnet, S.L.** 2014. Ethnobotanical survey of plants used by traditional health practitioners for the treatment of tuberculosis in the Free State Province, South Africa (Poster). SACI - ACS Bi-national Organic Chemistry Conference, Stellenbosch, South Africa, 30 November - 4 December.**ufs-020875**
65. **Correia, M., Kendrekar, P., van der Westhuizen, J.H., van der Merwe, M.J.** 2014. Facile preparation of an internal standard for the quantitative determination of fusidic acid in a biological matrix (Poster). SACI - ACS Bi-national Organic Chemistry Conference, Stellenbosch, South Africa, 30 November - 4 December.**ufs-020878**
66. **Wilhelm, A., van der Westhuizen, J.H., Bonnet, S.L., Zietsman, P.C.** 2014. hERG channel blockers and safe phytomedicines (Poster). SACI - ACS Bi-national Organic Chemistry Conference, Stellenbosch, South Africa, 30 November - 4 December.**ufs-020887**

67. **Sekhoathane, K., Kendrekar, P., Wilhelm, A., Bonnet, S.L. and van der Westhuizen, J.H.** 2014. Synthesis of aminoalkylated diarylpropanes (Poster). SACI - ACS Bi-national Organic Chemistry Conference, Stellenbosch, South Africa, 30 November - 4 December.**ufs-020889**
68. **Montsho, R.M., Bonnet, S.L. and van der Westhuizen, J.H.** 2014. The syntheses and bioactivity of *alpha*-aryl-*beta*-amino acids and the Michael addition of amines to *alpha*-aryl acrylates (Poster). SACI - ACS Bi-national Organic Chemistry Conference, Stellenbosch, South Africa, 30 November - 4 December.**ufs-020891**
69. **Du, K., Marston, A., van Vuuren, S., van Zyl, R., Coleman, C., Zietsman, P.C., Bonnet, S.L., Ferreira, D. and van der Westhuizen, J.H.** 2014. Flavonol acyl glycosides from the aril of *Schotia brachypetala* Sond. and their antioxidant, antimicrobial and antimalarial activities (Poster). SACI - ACS Bi-national Organic Chemistry Conference, Stellenbosch, South Africa, 30 November - 4 December.**ufs-020893**
70. **Kendrekar, P., Wilhelm, A., Bonnet, S.L. and van der Westhuizen, J.H.** 2014. Syntheses and in vitro biological activity of aminoalkylated chalcones and analogues (Poster). SACI - ACS Bi-national Organic Chemistry Conference, Stellenbosch, South Africa, 30 November - 4 December.**ufs-020914**
71. **Conradie, J.** 2014. Density Functional Theory insight into the electrochemical behaviour of Group 6 Fischer carbenes. (Oral). Centre for High Performance Computing (CHPC) National Meeting, 1 - 5 December 2014, Kruger National Park, Mpumalanga, RSA.**ufs-020917**
72. **Landman, M., Levell, T., van Rooyen, P. and Conradie, J.** 2014. Computational and Experimental Structural Studies of Selected Molybdenum(0) Monocarbene Complexes. (Oral). Centre for High Performance Computing (CHPC) National Meeting, 1 - 5 December 2014, Kruger National Park, Mpumalanga, RSA.**ufs-020978**