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Publikasies 2013 - RIMS

1. **von Eschwege, K.G.** 2013. Synthesis and kinetics of electronically altered photochromic dithizonatopenylmecury(II) complexes. *Journal of Photochemistry and Photobiology A: Chemistry* **252:** 159-166.

2. **Zanotto A. Luyt, A.S., Spinella, A. and Caponetti, E.** 2013. Improvement of interaction in and properties of PMMA-MWNT nanocomposites through microwave assisted acid treatment of MWNT. *Europen Polymer Journal* **49:** 61-69.

3. **He, W., Zhuang, M., Yanxin, Li., Luyt, A.S. and Ge, T-J.** 2013. In-Situ Polymerization Organic-Inorganic Hybrid Materials Monomer Casting Polyamide 6/ Nanorods Yttrium Hydroxide. *Advanced Materials Research* **662:** 24-27.

4. **Venter, G.J.S., Steyl, G. and Roodt, A.** 2013. 2,6-Dichloroaniline-4-(2,6-dichloro-anilino)pent-3-en-2-one (1/2). *Acta Crystallographica Section E* **E69:** o34-o35.

5. **Ahmad, E.E., Luyt, A.S. and Djokovic, V.** 2013. Thermal and dynamic mechanical properties of bio-based poly(furfuryl alcohol)/sisal whiskers nanocomposites. *Polymer Bull.* **70:** 1265-1276.

6. **Klepac, D., Scetar, M., Kurek, M., Mallon, P.E., Luyt, A.S., Galic, K. and Valic, S.** 2913. Oxygen permeability, electron spin resonance, differential scanning calorimetry and positron annihilation lifetime spectroscopy studies of uniaxially deformed linear low-density polyethylene film. *Polymer Int* 62: 474-481.

7. **Motaung, T.E., Luyt, A.S., Saladino, M.L. and Caponetti, E.** 2013. Study of Morphology, Mechanical Properties, and Thermal Degradation of Polycarbonate-Titania Nanocomposites as Function of Titania Crystalline Phase and Content. *Polymer Composites* **34:** 164-172.

8. **Morselli, D., Nondioli, F., Luyt, A.S., Mokhothu, T.H. and Messori, M.** 2013. Preparation and Characterization of EPDM Rubber Modified with *in Situ* Generated Silica. *Journal of Applied Polymer* **128: 2525-**2532.

9. **Purcell, W., Conradie, J., Chiweshe, T.T., Venter, J.A., Visser, H.G. and Coetzee, M.P.** 2013. Characterization of acetylacetonato carbonyl diphenyl-2-pyridylphosphine rhodium(I): Comparison with other carbonyl complexes. *Journal of Molecular Structure* **1038:** 220-229.

10. **Warsink, S., Fessha, F.G., Purcell, W.P. and Venter, J.A.** 2013. Synthesis and characterization of rhodium(I) 2-methylcupferrate complexes and their kinetic behavior in iodomethane oxidative addition. *Journal of Organometallic Chemistry* **726**: 14-20**.**

11. **Steyn, M., Visser, H.G. and Roodt, A.** 2013. Evaluation of oxine-type ligand coordination to zirconium(IV). *The Journal of The Southern African Institute of Mining and Metallurgy* **113:** 105-108.

12. **Ndlovu, S.S., van Reenen, A.J. and Luyt, A.S.** 2013. LDPE-wood composites utilizing degraded LDPE as compatibilizer. *Composites: Part A* **51:** 80-88.

13. **Sluijter, D.N., Warsink, S., Lutz, M. and Elsevier, C.J.** 2013. Synthesis of palladium(O) and –(II) complexes with chelating *bis*(*N*-heterocyclic carbine) ligands and their application in semihydrogenation. *Dalton Transactions* **42:** 7365-7372.

14. **Bozanic, D.K., Luyt, A.S., Trandafilovic, L.V. and Djokovic, V.** 2013. Glycogen and gold nanoparticle bioconjugates: controlled plasmon resonance *via* glycogen-induced nanoparticle aggregation. *RSC Advances* **3:** 8705-8713.

15. **Hill, T.N.** 2013. Crystal structure of phosphide-*tris*-(triphenylphosphine)copper(I) acetone solvate, $C_{57}H_{51}CuOP_4$. *Zeitschrift fur Crystallographie: New Crystal Structures* **228:** 120-122.

16. **Hill, T., Roodt, A. and Steyl, G.** 2013. Probing the 'Venus fly-trap' parameters of cyclo-octadiene in selected β-diketonato complexes of platinum(II) and the nickel-triad from a spectroscopic, X-ray crystallographic and DFT study. *Polyhedron* **50:** 82-89.

17. **Hill, T.N., Roodt, A. and Steyl, G.** 2013. Electronic influence of β-diketonato-type ligands on the coordination of 1,5-cyclooctadiene to palladium(II) as defined by 'Venus fly trap' geometric parameters. *Acta Crystallographica Section B Structural Science, Crystal Engineering and Materials* **B69:** 36-42.

18. **Cloete, N., Visser, H.G., Engelbrecht, I., Overett, M.J., Gabrielli, W.F. and Roodt, A.** 2013. Ethylene Tr- and Tetramerization: a Steric Parameter Selectivity Switch from X-ray Crystallography and Computational Analysis. *Inorganic Chemistry* **52:** 2268-2270.

19. **Brink, A., Visser, H.G. and Roodt, A.** 2013. Novel imino rhenium(I) tricarbonyl complexes of salicylidene-derived ligands: Synthesis, X-ray crystallographic studies, spectroscopic characterization and DFT calculations. *Polyhedron* **52:** 416-423.

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23. **Conradie, J.** 2013. Carbonyl Substitution in β-Diketonatodicarbonyl-rhodium(I) by Cyclo-octadiene: Relationships with Experimental, Electronic and Calculated Parameters. *South Africa Journal of Chemistry* **66:** 54-59.

24. **Stuurman, N.F., Muller, A. and Conradie, J.** 2013. Structural trends in [Rh(PhCOCHCO$(CH_2)_n$$CH_3$)(CO)($PPh_3$)] (n = 0-3) and related complexes: crystal structure of [Rh(PhCOCHCO$(CH_2)_2$(CO)(PPh_3)]. *Transition Metal Chemistry* **38:** 4290440.

25. **Erasmus, J.J.C. and Conradie, J.** 2013. Chemical and electrochemical oxidation of [Rh(β-diketonato)(CO)(P$(OCH_2)_3CCH_3$)]: an experimental and DFT study. *Dalton Transactions* **42:** 8655-8666.

26. **Stuurman, N.F., Muller, Muller, A. and Conradie, J.** 2013. Conformational analysis of triphenylphosphine in square planar [Rh(β-diketonato)(CO)(PPh3)] complexes. Crystal structure of [Rh(PhCOCHCO$(CH_2)_3CH_3$(CO)(PPh_3)]. *Inorganica Chimica ACTA* **395:** 237-244.

27. **Gohain, M., Van Tonder, J.H., and Bezuidenhoudt, B.C.B..** 2013 $Bi(OTf)_3$-catalyzed solvent-free synthesis of pyrano[3,2-*c*]-coumarins through a tandem addition/annulation reaction between chalcones and 4-hydroxycoumarins. *Tetrahedron Lett.,* **54:** 3773-3776.

28. **Sunil, A.C., Langner. E.H.G., Marais, C., Bezuidenhoudt, B.C.B.** 2013. Thermo-analytical determination of intermediates in the copper catalysed rearrangement of *o*-toluic acid to *meta*-cresol. *Catal. Sci. Technol.,* **3:** 2227-2233.

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31. **Gomo, M., van Tonder, G.J. en Steyl, G.** 2013. Investigation of the hydrogeochemical processes in an alluvial channel aqifer located in a typical Karoo Basin of Southern Africa. *Environ Earth Sci* **70:** 227-238.

32. **Purcell, W., Conradie, J., Chiweshe, T.T., Venter, J.A., Twigge, L. and Coetzee, M.P.** 2013. Characterization and oxidative addition reactions of rhodium(I) carbonyl cupferrate diphenyl-2-pyridylphosphine complexes. *Journal of Organometallic Chemistry* **745-746:** 439-453.

33. **Hennion, C., Jonasson, K.J., Wendt, O.F. and Roodt, A.** 2013. Kinetic and mechanistic investigation of the substitution reactions of four and five co-ordinated rhodium stibine complexes with a bulky phosphite. *Dalton Transactions* **42:** 14134-14139.

34. **Sibeko, M.A. and Luyt, A.S.** 2013. Preparation and Characterization of Vinylsilane Crosslinked High-Density Polyethylene Composites Filled with Nanoclays. *Polymer Composites* **34:** 1720-1727.

35. **Pieterse, T.** 2013. *N*-Methylmorpholine *N*-Oxide. *Synlett* **24:** 2175-2176.

36. **von Eschwege, K.G., van As, L., Joubert, C.C., Swarts, J.C., Aquino, M.A.S. and Cameron, T.S.** 2013. Intramolecular interactions in a new *tris*-dithizonatocobalt(III) complex. *Electrochimica Acta* **112:** 747-755.

37. **du Plessis, M**. 2013. Aluminum Trifluoromethanesulfonate. *Synlett* **24***:* 2329-2330.

38. **Warsink, S., Roodt, A., Venter, J.A., Kotze, P.D.R. and Otto, S.** 2013. Crystal structure of (*N*-benzoyl-*N*'-(2,4,6-trimethylphenyl)thiourea-κS)chloride(η4-cycloocta-1,5-diene) rhodium(I), $C_{25}H_{30}CIN_2ORhS$). *Zeitschrift fur Kristallographie: New Crystal Structures* **228:** 335-336.

39. **Warsink, S., Roodt, A., Venter, J.A., Kotze, P.D.R. and Otto, S.** 2013. Crystal structure of is(triphenylphosphine)(carbonyl)(*N*-benzoyl-*N'*-(2-methyl-4-hydroxyphenyl)thioureato-κS,κN)rhodium(I), $C_{52}H_{43}N_2O_3P_2RhS$. *Zeitschrift fur Kristallographie: New Crystal Structures* **228:** 428-430.

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46. **van der Westhuizen, B., Swarts, P.J., Strydom, I., Liles, D.C., Fernandez, I., Swarts, J.C. and Bezuidenhoudt, D.I.** 2013. Electrochemical illumination of thienyl and ferrocenyl chromium(O) Fisher carbine complexes. *Dalton Transactions* **42:** 5367–5378.

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51 **Buitendach, B.E., Gagor, A. and Swarts, J.C.** 2013. Electrochemical Evidence of Intramolecular Electronic Communication in Zr and Hf Phthalocyanines Bearing Ferrocene-Containing β-Diketonato Axial Ligands: Structure of [PcHf($FcCOCHCOC_6H_5)_2$]. *Inorganic Chemistry* **52:** 10245-10257.

52. **Ferreira, H., Conradie, M.M. and Conradie, J.** 2013. Electrochemical study of carbonyl phosphine β-diketonato rhodium(I) complexes. *Electrochimica Acta* **113:** 519-526.

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66. **Viljoen, J.A., Visser, H.G., Roodt, A. And Engelbrecht, I.** 2013. Crystal structure of tetrakis(5,7-dibromoquinolin-8-olato-κ^2N,O)hafnium(IV) dimethylformamide trisolvate, $C_{45}H_{37}Br_8HfN_7O_7$. *Zeitschrift fur Kristallographie: New Crystal Structures* **228:** 485-487.

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68. **Gohain, M., Jacobs, Jc., Marais, C. and Bezuidenhoudt, BCB.** 2013. $Al(OTf)_3$ Catalysed Friedel Crafts Michael Type Addition of Indoles to α,β-Unsaturated Ketones with PEG-200 as Recyclable Solvent. *Aust. J. Chem* **66:** 1594-1599.

69. **Bezuidenhoudt, D.I., Fernandez, I., van der Westhuizen, B., Swarts, P.J. and Swarts, J.C.** 2013. Electrochemical and Computational Study of Tungsten(O) Ferrocene Complexes: Observation of the Mono-Oxidized Tungsten(O) Ferrocenium Species and Intramolecular Electronic Interactions. *Organometallics* **32:** 7334-7344.