

PUBLICATIONS:

PAPERS:

1. "Haloalkyl complexes of the transition metals VI. A study of the reactions of halomethyldicarbonylcyclopentadienyliron complexes with some tertiary phosphine, amine and sulphur ligands", G.C.A. Bellinger, H.B. Friedrich and J.R. Moss, *J. Organometal. Chem.*, **366** (1989) 175-186.
2. "Haloalkyl complexes of the transition metals VII. The synthesis and properties of the ω -halogenoalkyl complexes $[\eta\text{-C}_5\text{R}_5(\text{CO})_2\text{Fe}(\text{CH}_2)_n\text{X}]$ (R = H, n = 3-10; R = CH₃, n = 3-5, X = Br, I)", H.B. Friedrich, P.A. Makhsha, J.R. Moss and B.K. Williamson, *J. Organometal. Chem.*, **384** (1990) 325-338.
3. "Synthesis and properties of the heterodinuclear alkanediyl complexes of iron(II) containing molybdenum(II), tungsten(II), rhenium(I) and ruthenium(II)", H.B. Friedrich, J.R. Moss and B.K. Williamson, *J. Organometal. Chem.*, **394** (1990) 313-327.
4. "Synthesis and properties of the heterodinuclear complexes $[\text{Cp}(\text{CO})_2\text{Fe}(\text{CH}_2)_n\text{Ru}(\text{CO})_2\text{Cp}]$ (where n = 3-6; Cp = $\eta\text{-C}_5\text{H}_5$)", S.J. Archer, K.P. Finch, H.B. Friedrich, J.R. Moss and A.M. Crouch, *Inorg. Chim. Acta*, **182** (1991) 145-152.
5. "Halogenoalkyl complexes of the transition metals", H.B. Friedrich and J.R. Moss, *Adv. Organometal. Chem.*, **33** (1991) 235-290.
6. "Haloalkyl complexes of the transition metals VIII. The synthesis and properties of $[\text{CpW}(\text{CO})_3\text{CH}_2\text{X}]$ (X = Cl, Br, I) and their reactivity with some neutral donor ligands", H.B. Friedrich and J.R. Moss, *J. Organometal. Chem.*, **453** (1993) 85-95.
7. "Haloalkyl complexes of the transition metals IX. The synthesis and properties of $[\text{CpRu}(\text{CO})_2\{(\text{CH}_2)_n\text{X}\}]$ ", H.B. Friedrich, K.P. Finch, M.A. Gafoor and J.R. Moss, *Inorg. Chim. Acta*, **206** (1993) 225-227.
8. "Reaction studies on heterodinuclear alkanediyl complexes: some examples of metalloselectivity", H.B. Friedrich and J.R. Moss, *J. Chem. Soc., Dalton Trans.*, (1993) 2863-2869.
9. "Silaorganometallic Chemistry on the Basis of Multiple Bonding", C. Zybilla, H. Handwerker and H. Friedrich, *Adv. Organomet. Chem.*, **36** (1994) 229-281.
10. "Polymer-bound Osmium Oxide Catalysts", W.A. Herrmann, R.M. Kratzer, J. Bluemel, H.B. Friedrich, R.W., Fischer, D.C. Apperley, J. Mink and O. Berkesi, *J. Mol. Catal. A*, **120** (1997) 197-205.
11. "High Oxidation State Ruthenium Compounds for the Oxidation of Alcohols to Aldehydes and Ketones", H.B. Friedrich, *Platinum Metals Rev.*, **43** (1999) 94-102.

12. "The Effects of substituents (Y) on pyridine in the Ru (VI) Compounds $\text{RuO}_2\text{Cl}_2(\text{Y-pyridine})_2$ and $\text{RuO}_2\text{Cl}_2\text{Z}$ (Z = bipyridine, phenanthroline)", H.B. Friedrich, E. Friedrich, V. Gokul, K.K. Kubheka and N. Rinder, *S. Afr. J. Chem.*, **53** (2000) 2-8.
13. "The very efficient oxidation alcohols by poly(4-vinylpyridine)-supported sodium ruthenate", H.B. Friedrich and N. Singh, *Tetrahedron Lett.*, **41** (2000) 3971-3974.
14. "The efficient and selective oxidation of alcohols with zeolite NaY-supported sodium ruthenate", H.B. Friedrich and N. Singh, *J. Mol. Catal. A*, **160** (2000) 461-463.
15. "The Ru-Cu-Al hydrotalcite catalysed selective oxidation of alcohols", H.B. Friedrich, F. Khan, N. Singh and M. van Staden, *Synlett.*, (2001) 869-871.
16. "The Preparation and Properties of the Halogenoalkyl Compounds $[(\eta^5\text{-C}_5\text{H}_5)(\text{CO})_2(\text{PPh}_i\text{Me}_{3-i})\text{M}\{(\text{CH}_2)_n\text{X}\}]$ (n = 3, 4; i = 0 – 3; X = Br, I) and $[\{\eta^5\text{-C}_5(\text{CH}_3)_5\}(\text{CO})_3\text{M}\{(\text{CH}_2)_n\text{X}\}]$ and the Crystal Structures of $[(\eta^5\text{-C}_5\text{H}_5)(\text{CO})_3\text{W}\{(\text{CH}_2)_5\text{I}\}]$, $[(\eta^5\text{-C}_5\text{H}_5)(\text{CO})_3\text{W}\{(\text{CH}_2)_3\text{Br}\}]$, and $[(\text{C}_5\text{H}_5)(\text{CO})_2(\text{PPh}_3)\text{Mo}\{(\text{CH}_2)_3\text{Br}\}]$ ", H.B. Friedrich, M.O. Onani and O.Q. Munro, *J. Organometal. Chem.*, **633** (2001) 39-50.
17. "[Dicarbonyl(η^5 -cyclopentadienyl)iron(II)]- μ^2 -1,3-propandiyl-[dicarbonyl(η^5 -cyclopentadienyl)ruthenium(II)]", H.B. Friedrich, R.A. Howie and M.O. Onani, *Acta Crystallogr.*, **E59** (2003) m145-m147.
18. "The Os/Cu-Hydrotalcite catalysed hydroxylation of alkenes", H.B. Friedrich, M. Govender, X. Makhoba, D. Ngcobo and M.O. Onani, *Chem. Commun.*, (2003) 2922-2923.
19. "Transition metal substituted paraffins: synthesis and properties of some μ -saturated heterobimetallic complexes containing Mo and W or Fe and the crystal structures of $[(\eta^5\text{-C}_5\text{H}_5)(\text{CO})_3\text{W}(\text{CH}_2)_3\text{Mo}(\text{CO})_2(\text{PPh}_3)(\eta^5\text{-C}_5\text{H}_5)]$ and $[(\eta^5\text{-C}_5\text{H}_5)(\text{CO})_2(\text{PPh}_3)\text{Mo}(\text{CH}_2)_3\text{Fe}(\text{CO})_2(\eta^5\text{-C}_5\text{H}_5)]$ ", H.B. Friedrich, R.A. Howie, M. Laing, M.O. Onani, *J. Organometal. Chem.*, **689** (2004) 181-193.
20. "Bromopropyl dicarbonyl(η^5 -pentamethylcyclopentadienyl)iron(II)", H.B. Friedrich, M.O. Onani, M. Rademeyer, *Acta Crystallogr.*, **E60** (2004) m551-m553.
21. "Factors influencing the conversion of n-butane over promoted VPO catalysts at low temperature", N. Govender, H.B. Friedrich and M.J. Janse van Vuuren, *Catal. Today*, **97** (2004) 315-324.
22. "(3-carboxy-propyl)(η^5 -cyclopentadienyl)tricarbonyl tungsten(II)", H.B. Friedrich, R.A. Howie, M.O. Onani, *Acta Crystallogr.*, **E60** (2004) m1641-m1643.
23. "Iodopropyl tricarbonyl(η^5 -cyclopentadienyl)tricarbonyl tungsten(II)", H.B. Friedrich, M.O. Onani and M. Rademeyer, *Acta Crystallogr.*, **E61** (2005) m144-m146.
24. "The effect of voids and dilution on n-hexane oxidation over a VMgO catalyst", H.B. Friedrich, N. Govender and M.R. Mathebula, *Appl. Catal. A*, **297** (2006) 81-89.
25. "A study of zeolite NaY-supported ruthenate in the oxidation of alcohols", H.B. Friedrich and N. Singh, *J. Mol. Catal. A*, **245** (2006) 266-271.

26. “[μ -1 κ C¹:2(C²,C³- η)-Allyl]tetracarbonyl-1 κ^2 C,2 κ^2 C-(1 η^5 -cyclopentadienyl)(2 η^5 -pentamethylcyclopentadienyl)rutheniumiron hexafluorophosphate”, H.B. Friedrich, E.O. Changamu and M. Rademeyer, *Acta Crystallogr.*, **E62** (2006) m405-m407.
27. “[μ -1 κ C¹:2(C²,C³- η)-Allyl]tetracarbonyl-1 κ^2 C,2 κ^2 C-(1 η^5 -cyclopentadienyl)(2 η^5 -pentamethylcyclopentadienyl)rutheniumiron hexafluorophosphate”, E.O. Changamu, H.B. Friedrich and M. Rademeyer, *Acta Crystallogr.*, **E62** (2006) m442-m444.
28. “A study of poly(4-vinylpyridine)-supported ruthenate in the oxidation of alcohols”, H.B. Friedrich and N Singh, *Catal. Lett.* **110** (2006) 61-70.
29. “Reaction studies on some functionalized alkyl transition metal compounds and the crystal structure of [Cp(CO)₃W{(CH₂)₃NO₂}]”, E.O. Changamu, H.B. Friedrich, M.O. Onani, M. Rademeyer, *J. Organometal. Chem.* **691** (2006) 4615-4625.
30. “A Study of β -Hydride Abstraction from Alkanediyl Homobimetallic Complexes [Cp(CO)₂Fe]₂{ μ -(C_nH_{2n})} (n = 4 -10, Cp = η^5 -C₅H₅)”, E.O. Changamu, H.B. Friedrich, *J. Organometal. Chem.*, **692** (2007) 1138-1149.
31. “Synthesis and characterization of transition metal stabilised carbocations of the types [Cp*(CO)₂Fe{ μ -(C_nH_{2n-1})}M(CO)_xCp]PF₆ (x = 2, M = Fe or Ru; x = 3, M = W, Cp* = η^5 -C₅(CH₃)₅; Cp = η^5 -C₅H₅; n = 3 - 6) and [Cp(CO)₂Ru{ μ -(C_nH_{2n-1})}W(CO)₃Cp]PF₆ (n = 3 - 5) and the crystal structures of the complexes [Cp*(CO)₂Fe(CH₂)₃Ru(CO)₂Cp], [Cp*(CO)₂Fe(CH₂)₅Ru(CO)₂Cp], [Cp*(CO)₂Fe-(CH₂)₅W(CO)₃Cp], and [Cp(CO)₂Ru(CH₂)₅W(CO)₃Cp]”, E.O. Changamu, H.B. Friedrich and M. Rademeyer, *J. Organometal. Chem.*, **692** (2007) 2456-2472.
32. “A comparative study of the ruthenium(VI)dioxocarboxylato salts, [PPh₄][RuO₂(OCOR)Cl₂] (R = CH₃, CF₃, C₆H₅, C₆F₅, C₅H₁₁), in the oxidation of alcohols”, H.B. Friedrich and V. Gokul, *J. Mol. Catal. A*, **271** (2007) 277-283.
33. “A structural investigation of the carbocation complex [Cp*(CO)₂Fe]₂{ μ -(C₃H₅)}PF₆”, E.O. Changamu, H. B. Friedrich, R.A. Howie and M. Rademeyer, *J. Organometal. Chem.*, **692** (2007) 5091-5096.
34. “7,11,15,28-Tetrakis(bromomethyl)-1,21,23,25-tetrapentylresorcin[4]arene cavitand”, M.G. McKay, H.B. Friedrich, G.E.M. Maguire, *Acta Crystallogr.*, **E63** (2007) o4345.
35. “5,11,17,23-Tetramethyl-2,8,14,20-tetrakis(2-phenylethyl)-4,6,10,12,16,18,22,24-octahydroxycalix[4]arene methanol pentasolvate 0.10-hydrate”, H.B. Friedrich, R.A. Howie, G.E.M. Maguire, M.G. McKay, *Acta Crystallogr.*, **E63** (2007) o4346.
36. “Synthesis and structure of the monometallic cationic complex [Cp(CO)₂Fe{ η^2 -(CH₂CHCH₂CH₃)}PF₆ (Cp = η^5 -C₅H₅)”, E.O. Changamu, H.B. Friedrich, M. Rademeyer, *J. Organometal. Chem.*, **693** (2008) 164-168.
37. “7,11,15,28-Tetramethyl-1,21,23,25-tetrakis(2-phenylethyl)resorcin[4]arene cavitand ethyl acetate clathrate”, M.G. Mc Kay, H.B. Friedrich and G.E.M. Maguire, *Acta Crystallogr.*, **E64** (2008) o98.
38. “4, 6-Bis(diphenylphosphino)phenoxazine (nixantphos)”, T. Marimuthu, M.D. Bala,

- H.B. Friedrich, *Acta Crystallogr.*, **E64** (2008) o711.
39. “Substitutional disorder in the substituted nixantphos ligand C₃₉H₃₂Br_{0.27}Cl_{0.73}NOP₂”
T. Marimuthu, M.D. Bala, H.B. Friedrich, *Acta Crystallogr.*, **E64** (2008) o772.
 40. “The oxidative dehydrogenation of n-octane to styrene using catalysts derived from hydrotalcite-like precursors”, H.B. Friedrich, A.S. Mahomed, *Appl. Catal. A*, **347** (2008), 11–22.
 41. “Redetermination of chlorido(terpyridino-κ³-N, N', N'')gold(I)dichloride trihydrate at 173 K”, H.B. Friedrich, G.E.M. Maguire, B.S. Martincigh, M.G. Mc Kay and L.K. Pietersen, *Acta Crystallogr.*, **E64** (2008) m1240.
 42. “P, O, P - mixed donor scorpionate ligand: [6-(4,6-bis(diphenylphosphino)-10H-phenoxazin-10-yl)hexan-1-ol]”, T. Marimuthu, M.D. Bala and H.B. Friedrich, *Acta Crystallogr.*, **E64** (2008) o1984-o1985.
 43. "Synthesis, characterization and reactions of the transition metal halogenoalkyl carbocation complexes [Cp(CO)₂M{η²-CH₂CH(CH₂)_nX}]PF₆ (n = 1 - 8, 10, M = Fe; n = 3, 4 M = Ru; X = Br, I)", E.O. Changamu, H. B. Friedrich, *J. Organometal. Chem.* **693** (2008) 3351-3356.
 44. “A comparative study of Os-hydrotalcites for the *cis*-dihydroxylation of cyclohexene”, T. Naicker, A.K. Datye, H.B. Friedrich, *Appl. Catal. A*, **350** (2008) 96-102.
 45. “Dicarbonyl(5-cyclopentadienyl)-bis(trimethylphosphine)-molybdenum(II)triflate”, S. Jali, H.B. Friedrich and M.D. Bala, *Acta Crystallogr.*, **E64** (2008) m1401.
 46. “7,11,15,28-Tetrabromo-1,21,23,25-tetrakis(2-phenethyl)-resorcin[4]arene cavitand-acetone-chloroform (1/1.31/0.69) at 173 K.”, M.G. Mc Kay, H.B. Friedrich, R.A. Howie and G.E.M. Maguire, *Acta Crystallogr.*, **E65** (2009) o631-o632.
 47. “7,11,15,28-Tetrakis[(2-formylphenoxy)-methylene]-1,21,23,25-tetramethyl-resorcin[4]arene cavitand ethyl acetate clathrate at 173K”, M.G. Mc Kay, H.B. Friedrich, R.A. Howie and G.E.M. Maguire, *Acta Crystallogr.*, **E65** (2009) o692-o693.
 48. “2, 8-dimethyl-10-p-tolyl-10H-phenoxaphosphine”, T. Marimuthu, M.D. Bala, H.B. Friedrich, *Acta Crystallogr.*, **E65** (2009) o828.
 49. “Synthesis and characterisation of a large bite angle iridium nixantphos complex”, T. Marimuthu, M.D. Bala and H.B. Friedrich, *J. Coord. Chem.*, **62** (2009) 1407–1414.
 50. “A structural investigation of the heterobimetallic carbocation complex [Cp*(CO)₂Fe{μ-CH₂CH(CH₂)₃}W(CO)₃Cp]BPh₄”, E.O. Changamu, H.B. Friedrich, M.A. Fernandes, *Inorg. Chim. Acta*, **362** (2009) 2947-2950.
 51. “The oxidative dehydrogenation of n-hexane over Ni-Mo-O catalysts”, B. Pillay, M.R. Mathebula, H.B. Friedrich, *Appl. Catal. A*, **361** (2009) 57-64.
 52. “Microwave-assisted synthesis of a new series of resorcin[4]arene cavitand-capped porphyrin capsules” M.G. McKay, T. Cwele, H.B. Friedrich, G.E.M. Maguire, *Org. Biomol. Chem.*, **7** (2009) 3958-3968.

53. "Oxidative Dehydrogenation of *n*-Octane Using Vanadium-Magnesium Oxide Catalysts with Different Vanadium Loadings", E.A. Elkhalfa and H.B. Friedrich, *Appl. Catal. A*, **373** (2010) 122-131.
54. "cis-N-(2-Hydroxycyclohexyl)-p-toluene-sulfonamide", M.I. Fadlalla, H.B. Friedrich, G.E.M. Maguire, M.D. Bala, *Acta Crystallogr.*, **E66** (2010) o463.
55. "Methyl-2R-hydroxy-3S-(4-methylphenylsulfonamido)-3-phenylpropanoate", M.I. Fadlalla, H.B. Friedrich, G.E.M. Maguire and B. Omondi, *Acta Crystallogr.*, **E66** (2010) o3279-o3280.
56. "Synthesis and characterization of amine complexes of the cyclopentadienyliron dicarbonyl complex cation, $[\text{Cp}(\text{CO})_2\text{Fe}]^+$ ", C.M. M'Thiruaine, H.B. Friedrich, E.O. Changamu, M.D. Bala, *Inorg. Chim. Acta*, **366** (2011) 105-115.
57. "2,6-Bis(tosyloxymethyl)pyridine", L. Komarsamy, M.D. Bala, H.B. Friedrich, B. Omondi, *Acta Crystallogr.*, **E67** (2011) o302.
58. "Phase transformations of the FePO_4 catalyst pre- and post-oxidative dehydrogenation reactions to form an alkyl methacrylate", F.B. Khan, K. Bharuth-Ram and H.B. Friedrich, *Hyperfine Interact.*, **197** (2011) 317-323.
59. "tert -Butyl 2-hydroxy-3-(4-methylbenzenesulfonamido)butanoate", M.I. Fadlalla, H.B. Friedrich, G.E.M. Maguire and B. Omondi, *Acta Crystallogr.*, **E67** (2011) o648
60. " $(\mu\text{-Ethane-1,2-diamine-}\kappa^2\text{N:N})\text{bis}[\text{dicarbonyl}(\eta^5\text{-cyclopentadienyl})\text{iron(II)}]\text{bis-}(\text{tetrafluoridoborate})$ ", C.M. M'thiruaine, H.B. Friedrich, E.O. Changamu and B. Omondi, *Acta Crystallogr.*, **E67** (2011) m485.
61. "Acetonitriledicarbonyl(η^5 -pentamethylcyclopentadienyl)iron(II) tetrafluoridoborate", C.M. M'thiruaine, H.B. Friedrich, E.O. Changamu and M.D. Bala, *Acta Crystallogr.* **E67** (2011) m924.
62. "On the effect of hydrocarbon/oxygen ratios during the dehydrogenation of n-octane over a VMgO catalyst", E.A. Elkhalfa and H.B. Friedrich, *Catal. Lett.*, **141** (2011) 554-564.
63. "A catalytic route to lower alcohols from glycerol using Ni supported catalysts", E. van Ryneveld, A.S. Mahomed, P.S. van Heerden, M.J. Green and H.B. Friedrich, *Green Chem.*, **13** (2011) 1819-1827.
64. "Direct hydrogenolysis of highly concentrated glycerol solutions over supported Ru, Pd and Pt catalyst systems", E. van Ryneveld, A.S. Mahomed, P.S. van Heerden and H.B. Friedrich, *Catal. Lett.*, **141** (2011) 958-967.
65. " $(\mu\text{-Formato-}\kappa^2\text{O:O'})\text{bis}[\text{dicarbonyl}(\eta^5\text{-cyclopentadienyl})\text{iron(II)}]\text{ tetrafluoridoborate}$ " C.M. M'thiruaine, H.B. Friedrich, E.O. Changamu and B. Omondi, *Acta Crystallogr.*, **E67** (2011) m1252.
66. "The oxidative dehydrogenation of n-hexane over a $\beta\text{-NiMoO}_4$ catalyst", B. Pillay, M.R. Mathebula, H.B. Friedrich, *Catal. Lett.*, **141** (2011) 1297-1304.

67. “3,3’-Diphenyl-1,1’-(butane-1,4-diyl)-Dithiourea”, P. Pansuriya, H.B. Friedrich and G.E.M. Maguire, *Acta Crystallogr.*, **E67** (2011) o2380.
68. “1,1’-(propane-1,3-diyl)bis(3-phenylurea)”, P. Pansuriya, H. Naidu, H.B. Friedrich and G.E.M. Maguire, *Acta Crystallogr.*, **E67** (2011) o2552.
69. “The effect of Mo(CO)₆ as a co-catalyst in the carbonylation of methanol to methyl formate catalyzed by potassium methoxide under CO, syngas and H₂ atmospheres. HP-IR observation of the methoxycarbonyl intermediate of Mo(CO)₆”, S. Jali, H.B. Friedrich and G. Julius, *J. Mol. Catal. A*, **348** (2011) 63-69.
70. “4,6,10,12,16,18,22,24-Octa-O-methyl-2,8,14,20-tetrapentylresorcin[4]arene”, P.B. Pansuriya, H.B. Friedrich and G.E.M. Maguire, *Acta Crystallogr.* **E67** (2011) o2565.
71. “1-(2-Aminoethyl)-3-phenylthiourea”, P.B. Pansuriya, H.B. Friedrich and G.E.M. Maguire, *Acta Crystallogr.* **E67** (2011) o2621.
72. “1,1’-(Ethane-1,2-diyl)bis(3-phenylthiourea)”, P.B. Pansuriya, H.B. Friedrich and G.E.M. Maguire, *Acta Crystallogr.* **E67** (2011) o2819
73. “4,10,16,22-Tetrakis(2-chloroacetoxy)-6,12,18,24-tetramethoxy-2,8,14,20-tetrapentylresorcin[4]arene”, P.B. Pansuriya, H.B. Friedrich and G.E.M. Maguire, *Acta Crystallogr.* **E67** (2011) o2907
74. “4,5,6,10,11,12,16,17,18,22,23,24-Dodecakis[(methoxycarbonyl)methoxy]-2,8,14,20-tetrapentylresorcin[4]arene”, P.B. Pansuriya, H.B. Friedrich and G.M. Maguire, *Acta Crystallogr.* **E67** (2011) o3305-o3306
75. “4,6-Bis(diphenylphosphanyl)dibenzo[b, d]furan”, T. Marimuthu, H.B. Friedrich and M.D. Bala, *Acta Crystallogr.* **E67** (2011) o3319
76. “6,12,18,24-Tetramethoxy-4,10,16,22-tetrakis[(methoxycarbonyl)methoxy]-2,8,14,20-tetrakis(2-phenylethyl)resorcin[4]arene”, Pramod B. Pansuriya, Holger B. Friedrich and Glenn E. M. Maguire, *Acta Crystallogr.* **E68** (2012) o97-o98
77. "Structure of Three Related Diphosphorus Ligands: Highlighting the Significance of the Backbone", T. Marimuthu, M.D. Bala, H.B. Friedrich, *J. Chem. Cryst.* **42** (2012) 251-257.
78. “Synthesis, characterization and structural elucidation of water-soluble 1-aminoalkane and α,ω -diaminoalkane complexes of the pentamethylcyclopentadienyliron dicarbonyl cation, [Cp*(CO)₂Fe]⁺“, C.M. M’thiruaine, H.B. Friedrich, E.O. Changanu, M.D. Bala, *Inorg. Chim. Acta* **382** (2012) 27-34.
79. “Synthesis, characterization and reactions of some short chain alkoxycarbonyl molybdenum compounds [M][Mo(CO)₅(COOR)] (M=PPN, Et₄N and R= Me, Et, ⁱPr) and [Ph₄As]₂[Mo(CO)₄{(COOCH(CH₃)₂)₂}]. X-ray structure of [Et₄N]₂[Mo₄O₁₃]”, S. Jali, H.B. Friedrich, M.D. Bala, *Inorg. Chim. Acta* **383** (2012) 52-59.
80. “4,6-Bis(diphenylphosphanyl)-2,8-dimethylphenoxathiin dichloromethane monosolvate”, T. Marimuthu, H.B. Friedrich and M.D. Bala, *Acta Crystallogr.* **E68** (2012) o1040.

81. "Oxidative dehydrogenation of *n*-octane using vanadium pentoxide-supported hydroxyapatite catalysts", V.D.B.C. Dasireddy, S. Singh and H.B. Friedrich, *Appl. Catal. A*, **421-422** (2012) 58-69.
82. "Reactions of *N*-heterocyclic ligands with substitutionally labile organometallic complexes, $[(\eta^5\text{-C}_5\text{R}_5)(\text{CO})_2\text{FeE}]\text{BF}_4$ (R = H, CH₃; E = THF, Et₂O)", C.M. M'thuruaine, H.B. Friedrich, E.O. Changamu, M.D. Bala, *Inorg. Chim. Acta*, **390** (2012) 83-94.
83. "Syntheses, structural elucidation and reactions of allylamino complexes of the type, $\eta^5\text{-C}_5\text{R}_5(\text{CO})_2\text{Fe}(\text{NH}_2\text{CH}_2\text{CH}=\text{CH}_2)\text{BF}_4$ ", C.M. M'thuruaine, H.B. Friedrich, E.O. Changamu and B. Omondi, *Polyhedron*, **40** (2012) 81-92.
84. "Dicarbonyl(hexamethylene-1,3,5,7-teramine- κN^1)(η^5 -cyclopentadienyl)iron(II) tetrafluoridoborate", C.M. M'thuruaine, H.B. Friedrich, E.O. Changamu, M.A. Fernandes, *Acta Cryst.*, **E68** (2012) m931.
85. "Dicarbonyl(η^5 -cyclopentadienyl)(2,3-dibromopropanamine- κN)iron(II) tetrafluoridoborate", C.M. M'thuruaine, H.B. Friedrich, E.O. Changamu, M.A. Fernandes, *Acta Cryst.*, **E68** (2012) m932.
86. Dicarbonyl(η^5 -cyclopentadienyl)(hexamethylenetetramine- $\kappa\text{N}1$)iron(II) tetrafluoridoborate C.M. M'thuruaine, H.B. Friedrich and B. Omondi, *Acta Cryst.* **E68** (2012) m1077.
87. "Regioselective reactions of electrophilic iron dicarbonyl cations, $[(\eta^5\text{-C}_5\text{R}_5)(\text{CO})_2\text{Fe}]^+$ (R = H, CH₃) with heterofunctional amine ligands", C.M. M'thuruaine, H.B. Friedrich, E.O. Changamu, B. Omondi, *J. Organometal. Chem.*, **717** (2012) 52-60.
88. "The effects of SCILL catalyst modification on the competitive hydrogenation of 1-octyne and 1,7-octadiene versus 1-octene", S.F. Miller, H.B. Friedrich and C.W. Holzapfel, *ChemCatChem*, **4** (2012) 1337-1344.
89. "Heterogenization of Some PNP Ligands for the Oligomerisation of Ethylene", M.L. Shoji and H.B. Friedrich, *S. Afr. J. Chem.*, **65** (2012) 214-222.
90. "Catalytic Oxidation of *n*-Octane over Cobalt Substituted Ceria (Ce_{0.90}Co_{0.10}O_{2- δ}) Catalysts", M. Narayanappa, V.D.B.C. Dasireddy, H.B. Friedrich, *Appl. Catal. A*, **447-448** (2012) 135-143.
91. "Microwave-Assisted Transfer Hydrogenation of ketones by Ru(xantphos) arene complexes", T. Marimuthu and H.B. Friedrich, *ChemCatChem*, **4** (2012) 2090-2095.
92. "Bisthiourea: Thermal and Structural Investigation", P.B. Pansuriya, H.M. Parekh, H.B. Friedrich, G.E.M. Maguire, *J. Therm. Anal. Calorim.*, **111** (2013) 597-603.
93. "Synthesis and characterisation of a large bite angle xantphos iridium complex", T. Marimuthu, M.D. Bala, H.B. Friedrich, *J. Coord. Chem.*, **66** (2013) 780-788.
94. "Activation of *n*-octane using vanadium oxide supported on alkaline earth hydroxyapatites" V.D.B.C. Dasireddy, S. Singh, H.B. Friedrich, *Appl. Catal. A*, **456** (2013) 105-117.
95. "Hexane activation over vanadium modified zeolite ZSM-5", T. Naicker, H.B. Friedrich, *J. Porous Mater.*, **20** (2013) 763-775.

96. "Synthesis, characterization and crystal structures of two polymorphs of the iodo-bridged ruthenium salt, μ -iodido-bis $\{\eta^5$ -cyclopentadienyl-dicarbonyl-ruthenium(II) $\}$ tetrafluoroborate", E. A. Nyawade, H.B. Friedrich, C.M. M'thuruaine and B. Omondi, *J. Mol. Struct.*, **1048** (2013) 426-433.
97. "Mixed Cu-Ni-Co nano-metal oxides: A new class of catalysts for styrene oxidation", J. Valand, H. Parekh, H.B. Friedrich, *Catal. Commun.* **40** (2013) 149-153.
98. "Studies towards a mechanistic insight into the activation of n-octane using vanadium supported on alkaline earth metal hydroxyapatites", V.D.B.C. Dasireddy, H.B. Friedrich and S. Singh, *Appl. Catal. A*, **467** (2013) 142-153.
99. "Synthesis, Characterization, and Antibacterial Activity of some Chelates in O,N-Donor Coordination Pattern involving Schiff bases derived from 4-Acetyl/Benzoyl-1-(4'-Nitrophenyl)-3-Methyl-2-Pyrazolin-5-one and Sulfamoxole", A.S. Thakar, H.B. Friedrich, K.T. Joshi, *Asian J. Research Chem.*, **6** (2013) 540-545.
100. "A structural investigation of the D₂O solvated, acetone solvated and nonsolvated 1,4-diazabicyclo[2.2.2]octane complexes of the half sandwich moiety $[(\eta^5\text{-C}_5\text{H}_5)(\text{CO})_2\text{Fe}]$ ", C.M. M'thuruaine, H.B. Friedrich, B. Omondi, E.O. Changamu, *S. Afr. J. Chem.*, **66** (2013) 237-243.
101. "The selective continuous flow synthesis of lower alcohols from polyols - a mechanistic interpretation of the results", E. van Ryneveld, A.S. Mahomed, P.S. van Heerden, M.J. Green, C. Holzapfel, H.B. Friedrich, *Catal. Sci. Technol.*, **4** (2014) 832 - 837.
102. "Crystal structure of 5-methyl-4-[1-(5-methyl-4-phenyl-thiazol-2-ylamino)-ethylidene]-2-p-tolyl-2,4-dihydro-pyrazol-3-one, C₂₃H₂₂N₄OS", A.S. Thakar, H.B. Friedrich, K.T. Joshi and G.E.M. Maguire, *Z. Kristallogr. NCS*, **228** (2014) 457-458
103. "Crystal structure of 2-(3-chloro-phenyl)-5-methyl-4-[1-(5-methyl-4-ptolyl-thiazol-2-ylimino)-ethyl]-2,4-dihydro-pyrazol-3-one, C₂₃H₂₁ClN₄OS", A.S. Thakar, H.B. Friedrich, K.T. Joshi and G.E.M. Maguire, *Z. Kristallogr. NCS*, **228** (2014) 471-472.
104. "Activation of n-heptane: a study with VMgO catalysts", V.D.B.C. Dasireddy, F.B. Khan, S. Singh and H.B. Friedrich, *Catal. Lett*, **144** (2014) 590-597.
105. "Effect of the NaY matrix in the oxidation of n-octane, cyclohexane, 1-octene and 4-octene by encapsulated porphyrin and Fe-NaY" M.D. Cele, H.B. Friedrich, M.D. Bala, *Reac. Kinet. Mech. Cat.*, **111** (2014) 737-750.
106. "Characterisation and application of montmorillonite-supported Fe Schiff base complexes as catalysts for the oxidation of n-octane", E. Kadwa, M.D. Bala, H.B. Friedrich, *Appl. Clay Sci.*, **95** (2014) 340-347.
107. "Synthesis, characterization and crystal structures of new water-soluble 1-alkanamedicarbonyl(η^5 -cyclopentadienyl)ruthenium(II) tetrafluoroborate complex salts", E.A. Nyawade, H.B. Friedrich, B.O. Omondi, *Inorg. Chim. Acta*, **415** (2014) 44-51.
108. "The preparation of enantiomerically pure C₄-symmetric tetramethoxy-resorcarenes obtained from (S)-(-)-1-phenylethyl isocyanate derivatives", A.S. Thakar, H.M. Parekh,

- P.B. Pansuriya, H.B. Friedrich and G.E.M. Maguire, *Eur. J. Org. Chem.*, (2014) 4600 - 4609.
109. "Oxidative dehydrogenation and aromatization of n-octane over VMgO catalysts: Effect of support precursors and precursors treatments", E.A. Elkhalfa and H.B. Friedrich, *J. Mol. Catal. A*, **392** (2014) 22-30.
 110. "The remarkable effect of various Au/Al₂O₃ preparations on the catalytic behaviour during the continuous flow hydrogenation of an octanal/octene mixture", T. Chetty, H.B. Friedrich, V.D.B.C. Dasireddy, A. Govender, P.J. Mohlala and W. Barnard, *ChemCatChem*, **6** (2014) 2384-2393.
 111. "Liquid phase oxidation of n-octane to C₈ oxygenates over modified Fe-MOF-5 catalysts", M.D. Cele, H.B. Friedrich, M.D. Bala, *Catal. Commun.*, **57** (2014) 99-102.
 112. "Vanadium oxide supported on non-stoichiometric strontium hydroxyapatite catalysts for the oxidative dehydrogenation of n-octane", V.D.B.C. Dasireddy, S. Singh and H.B. Friedrich, *J. Mol. Catal. A*, **395** (2014) 398-408.
 113. "Coordination chemistry of Co complexes containing tridentate SNS ligands and their application as catalysts for the oxidation of n-octane", L. Soobramony, M.D. Bala, H.B. Friedrich, *Dalton Trans.* **43** (2014) 15968-15978.
 114. "Syntheses and Structural Characterization of 2,4,6-trimethylaniline complexes of iron carbonyls", C.M. M'thiruaine, H.B. Friedrich, E.A. Nyawade, B. Omondi, *Inorg. Chim. Acta*, **423** (2014) 550-554.
 115. "The effect of the oxidation environment on the activity and selectivity to aromatics and octenes over cobalt molybdate in the oxidative dehydrogenation of n-octane", M.I. Fadlalla, H.B. Friedrich, *Catal. Sci. Technol.*, **4** (2014) 4378-4385.
 116. "Octenes and aromatics from the oxidative dehydrogenation of n-octane over Co/TiO₂ catalysts", N. Gounden, H.B. Friedrich, N. Mahadevaiah, M.I. Fadlalla, *Catal. Lett.*, **144** (2014) 2043-2051.
 117. "Crystal structure of 5-methyl-2-phenyl-4-[1-(4-p-tolyl-thiazol-2-ylamino)-ethylidene]-2,4-dihydropyrazol-3-one, C₂₂H₂₀N₄OS", A.S. Thakar, H.B. Friedrich, K.T. Joshi and G.E.M. Maguire, *Z. Kristallogr. NCS*, **229** (2014) 313-314.
 118. "Crystal structure of 2-(3-chloro-phenyl)-5-methyl-4-[1-(4-p-tolyl-thiazol-2-ylamino)-ethylidene]-2,4-dihydro-pyrazol-3-one, C₂₂H₁₉ClN₄OS", A.S. Thakar, H.B. Friedrich, K.T. Joshi and G.E.M. Maguire, *Z. Kristallogr. NCS*, **229** (2014) 319-320.
 119. "Crystal structure of 1,21,23,25-tetrapentyl-2,20:3,19-dimetheno-1*H*,21*H*,23*H*,25*H*-bis[1,3]dioxocino[5,4-*i*:5',4'-*i*]benzo[1,2-*d*:5,4-*d'*]-bis-[1,3]benzodioxocin-7,11,15,28-tetrol], C₅₆H₇₂O₁₄", H.M. Parekh, P.B. Pansuriya, H.B. Friedrich and G.E.M. Maguire, *Z. Kristallogr. NCS*, **229** (2014) 479-481.
 120. "Isolation, Characterization and X-ray Structure Determination of the Schiff Base Ligand: 5-Methyl-2-phenyl-4-[phenyl-(4-phenyl-thiazol-2-ylamino)-methylene]-2,4-dihydropyrazol-3-one", A.S. Thakar, H.B. Friedrich, K.T. Joshi and G.E.M. Maguire, *S. Afr. J. Chem.*, **68** (2015) 39-44.

121. "Effect of the Support on the Oxidation of Heptane Using Vanadium Supported on Alkaline Earth Metal Hydroxyapatites", V.D.B.C. Dasireddy, S. Singh and H. B. Friedrich, *Catal. Lett.*, **145** (2015) 668-678.
122. "Effects of Boron and Barium Dopants on VMgO Catalysts Employed in the Oxidative Dehydrogenation of *n*-Octane", E.A. Elkhalfa, H.B. Friedrich, *Kinet. Catal.*, **56** (2015) 214-222.
123. "Crystal structure of 1-[2-[(2-chloro-3-thienyl)methoxy]-2-(2,4-dichlorophenyl)ethyl]-1*H*-imidazole, C₁₆H₁₃Cl₃N₂OS", P.B. Pansuriya, H.B. Friedrich and G.E.M. Maguire, *Z. Kristallogr. NCS*, **230** (2015) 5-6.
124. "Tetramethoxy resorcin[4]arene-tetraester derivatives: Synthesis, characterization and thermal degradation studies", P.B. Pansuriya, H.M. Parekh, G.E.M. Maguire, H.B. Friedrich, *J. Therm. Anal. Calorim.*, **120** (2015) 653-665.
125. "Synthesis and structural elucidation of a novel polymorph of Alcaftadine", P.B. Pansuriya, H.B. Friedrich, G.E.M. Maguire, *Spectrochim. Acta A*, **142** (2015) 311-319.
126. "A study of the effect of cesium loading on the phase transformation of iron in iron phosphate over the oxidative dehydrogenation reactions" F.B. Khan, V.D.B C. Dasireddy, K. Bharuth-Ram, H. Masenda, H.B. Friedrich, *Hyperfine Interact.*, **231** (2015) 123-129.
127. "Phase transformation of iron in hydroxyapatite in the activation of *n*-octane", D. Padayachee, V.D.B.C. Dasireddy, K. Bharuth-Ram, S. Singh, H.B. Friedrich, *Hyperfine Interact.*, **231** (2015) 131-136.
128. "Fe phase complexes and their thermal stability in iron phosphate catalysts supported on silica", V.D.B.C. Dasireddy, K. Bharuth-Ram, A. Harilal, S. Singh, H.B. Friedrich, *Hyperfine Interact.*, **231** (2015) 137-142.
129. "Effect of different weight loadings of MoOx/SBA-15 on the oxidative dehydrogenation of *n*-octane", A.J. Golundaj, A.S. Mahomed, S. Singh, H.B. Friedrich, *J. Porous Mater.*, **22** (2015) 787-796.
130. "Preferential oxidation of CO in a hydrogen rich feed stream using Co-Fe mixed metal oxide catalysts prepared from hydrotalcite precursors", L.Q. Qwabe, H.B. Friedrich, S. Singh, *J. Mol. Catal. A*, **404** (2015) 167-177.
131. "Hydrogen bonded co-crystallised layered isopropanol-pyrogallol[4]arenes", P.B. Pansuriya, M. Bala, H.B. Friedrich and G.E.M. Maguire, *Supramolec. Chem.*, **27** (2015) 545-551. [front cover]
132. "Cobalt "PNP" aminodiphosphine complexes as catalysts in the oxidation of *n*-octane", D. Naicker, H.B. Friedrich, B. Omondi, *RSC Adv.*, **5** (2015) 63125-63129.
133. "A Kinetic Insight in to the Activation of *n*-Octane with Alkaline Earth Metal Hydroxyapatites", V.D.B.C. Dasireddy, H.B. Friedrich and S. Singh, *S. Afr. J. Chem.*, **68** (2015) 195-200.

134. "Effects of organic modifiers on a palladium catalyst in the competitive hydrogenation of 1-octene versus octanal, an evaluation of some SCILL catalysts", S.F. Miller, H.B. Friedrich, Cedric W. Holzapfel and V.D.B.C. Dasireddy, *ChemCatChem*, **7** (2015) 2628-2636.
135. "Synthesis and characterization of new α,α' -diaminoalkane-bridged dicarbonyl(η^5 -cyclopentadienyl)ruthenium(II) complex salts: Antibacterial activity tests of η^5 -cyclopentadienyldicarbonylruthenium(II) amine complexes", E.A. Nyawade, H.B. Friedrich, B. Omondi, H.Y. Chenia, M. Singh, S. Gorle, *J. Organometal. Chem.*, **799-800** (2015) 138-146.
136. "Synthesis and characterization of new η^5 -cyclopentadienyldicarbonylruthenium(II) amine complexes: Their application as homogeneous catalysts in styrene oxidation", E.A. Nyawade, H.B. Friedrich, B. Omondi and P. Mpungose, *Organometallics*, **34** (2015) 4922-4931
137. "The preferential oxidation of CO in hydrogen rich streams over platinum doped nickel oxide catalysts", Z. Mohamed, V.D.B.C Dasireddy, S. Singh and H.B. Friedrich, *Appl. Catal. B*, **180** (2016) 687-697.
138. "Effect of Cu additives on the performance of a cobalt substituted ceria ($\text{Ce}_{0.90}\text{Co}_{0.10}\text{O}_{2-\delta}$) catalyst in total and preferential CO oxidation", T. Cwele, N. Mahadevaiah, S. Singh and H.B. Friedrich, *Appl. Catal. B*, **182** (2016) 1-14.
139. "Synthesis, characterization and structural elucidation of dicarbonyl(η^5 -pentamethylcyclopentadienyl)ruthenium(II) complex salts of 1-alkylamines", E.A. Nyawade, H.B. Friedrich and B. Omondi, *Inorg. Chim. Acta*, **441** (2016) 9-14.
140. "Synthesis and characterisation of a novel mixed donor P,O,P' nixantphos ligand and its metal complex", T. Marimuthu, M.D. Bala, H.B. Friedrich, *J. Mol. Struct.*, **1106** (2016) 5-9.
141. "The influence of Montmorillonite K10 as a support in the nickel catalyzed hydrogenation of octanal", J. Valand, A.S. Mahomed, S. Singh and H.B. Friedrich, *J. Porous Mater.*, **23** (2016) 175-183.
142. "Heterogeneous catalysed ozonation using Cu-Ni-Co oxides for degradation of dichlorophenol", J. Valand, S. Maddila, H. B. Friedrich, S.B. Jonnalagadda, *Ozone: Sci. Eng.*, **38** (2016) 14-24.
143. "Synthesis, Characterization, Antiproliferative and Molecular Docking Study of New Half Sandwich Ir(III), Rh(III) and Ru(II) Complexes", S. Thangaval, M. Paulpandi, H.B. Friedrich, K. Murugan, S. Kalva and A.A. Skelton, *J. Inorg. Biochem.*, **159** (2016) 50-61.
144. "Application of Arene ruthenium(II) complexes with pyridine-2-carboxaldimine ligands in the transfer hydrogenation of ketones", J.M. Gichumbi, H.B. Friedrich, B. Omondi, *J. Mol. Catal. A*, **416** (2016) 29-38.
145. "Clathrate tetraldehyde cavitand: Single crystal structure and NMR study", P.B. Pansuriya, H.M. Parekh, G.E.M. Maguire and H.B. Friedrich, *Supramolec. Chem.*, **28** (2016) 329-334.
146. "Efficient Solvent Free Knoevenagel Condensation over Vanadium containing Heteropolyacid Catalysts", V. Balaga, J. Pedada, K.V.R. Chary, H.B. Friedrich, S. Singh, *Catal. Lett.*, **146** (2016) 364-372.

147. "Preferential CO oxidation in a hydrogen-rich stream over gold supported on Ni-Fe mixed metal oxides for fuel cell applications", L. Qabe, V.D.B.C. Dasireddy, S. Singh, H.B. Friedrich, *Int. J. Hydrogen Energy*, **41** (2016) 2144-2153.
148. "Binding interaction, conformational change, and molecular docking study of N-(pyridin-2-ylmethylene)aniline derivatives and carbazole Ru(II) complexes with human serum albumins", S. Thangavel, R. Rajamanikandan, H.B. Friedrich, M. Ilanchelian, and B. Omondi, *Polyhedron*, **107** (2016) 124-135.
149. "Solvato-polymorph of $[(\eta^6\text{-C}_6\text{H}_6)\text{RuCl(L)}]\text{PF}_6$ (L = (2,6-dimethyl- phenyl- pyridin-2-yl methylene amine)", J.M. Gichumbi, H.B. Friedrich, B. Omondi, *J. Mol. Struct.*, **1113** (2016) 55-59.
150. "Physicochemical characterization and decomposition kinetics of (S) -4-[1-(2,3-dimethylphenyl)ethyl]-3H-imidazole HCl / S-enantiomer of medetomidine HCl", P.B. Pansuriya, G.E.M. Maguire, H.B. Friedrich, *J. Therm. Anal. Calorim.*, **124** (2016) 269-278.
151. "Synthesis and characterization of piano-stool ruthenium complexes with N, N'-pyridine imine bidentate ligands and their application in styrene oxidation", J.M. Gichumbi, H.B. Friedrich, B. Omondi, *J. Organomet. Chem.*, **808** (2016) 87-96.
152. "Iridium and rhodium "PNP" aminodiphosphine complexes used as catalysts in the oxidation of styrene", D. Naicker, P. Pansuriya, H.B. Friedrich, *RSC Adv.*, **6** (2016) 31005-31013.
153. "Crystal structure of N-phenyl-2-(pyridin-4-ylcarbonyl)hydrazinecarboxamide with $Z' = 4$, $\text{C}_{13}\text{H}_{12}\text{N}_4\text{O}_2$ ", P.B. Pansuriya, C. Patel, H.B. Friedrich and G. E. M. Maguire, *Z. Kristallogr. NCS*, **231** (2016) 649-652. "
154. "N,N-Bis(diphenylphosphanyl)cyclohexyleamine $\text{C}_{30}\text{H}_{31}\text{NP}_2$ ", D. Naicker, P.B. Pansuriya, H.B. Friedrich, *Z. Kristallogr. NCS*, **231** (2016) 653-656
155. "An oxidative route for the production of methyl methacrylate: A study over iron phosphate catalysts", A. Harilal, V.D.B.C. Dasireddy, H.B. Friedrich, *Catal. Lett.*, **146** (2016) 1169-1181.
156. "Crystal structure of 3,6-di-2-pyridinyl-4-pyridazine carbonitrile $\text{C}_{15}\text{H}_9\text{N}_5$ ", J. Gichumbi, H.B. Friedrich and B. Omondi, *Z. Kristallogr. NCS*, **231** (2016) 741-743.
157. "Catalytic Oxidation of Primary Aromatic Alcohols Using Half Sandwich Ir(III), Rh(III) and Ru(II) Complexes: A Practical and Theoretical study", S. Thangavel, S. Boopathi, N. Mahadevaiah, P. Kolandaivel, P. Pansuriya, H.B. Friedrich, *J. Mol. Catal. A*, **423** (2016) 160-171.
158. "The Role of Copper Exchanged Phosphomolybdic Acid Catalyst for Knoevenagel Condensation", B. Viswanadham, J. Pedada, H.B. Friedrich & S.Singh, *Catal Lett.*, **146** (2016) 1470-1477.
159. "Tuning Surface Composition of Cs Exchanged Phosphomolybdic Acid Catalysts in C-H Bond Activation of Toluene to Benzaldehyde at Room Temperature", B. Viswanadham, J. Pedada, H.B. Friedrich & S.Singh, *J. Mol. Catal. A*, **425** (2016) 116-123.

160. "Hydrogenolysis of glycerol to mono-alcohols over supported Mo and W catalysts", M. L. Shoji, V.D.B.C. Dasireddy, S. Singh, P. Mohlala, D.J. Morgan and H.B. Friedrich, *ACS Sustain. Chem. Eng.*, **4** (2016) 5752-5760.
161. "Synthesis and characterization of half-sandwich ruthenium(II) complexes with N-alkyl pyridyl-imine ligands and their application in transfer hydrogenation of ketones", J. Gichumbi, H.B. Friedrich and B. Omondi, *Transition Met. Chem.*, **41** (2016) 867-877.
162. "Synthesis, characterization, cytotoxic and antimicrobial activities of ruthenium(II) arene complexes with N, N-bidentate ligands", J.M. Gichumbi, H.B. Friedrich, B. Omondi, M. Singh, K. Naidoo, H.Y. Chenia, *J. Coord. Chem.*, **69** (2016) 3531-3544.
163. "CO oxidation activity enhancement of Ce_{0.95}Cu_{0.05}O_{2-δ} induced by Pd co-substitution", T. Cwele, N. Mahadevaiah, S. Singh, H. B. Friedrich, A.K. Yadav, S.N. Jha, D. Bhattacharyya and N. K. Sahoo, *Catal. Sci. Technol.*, **6** (2016) 8104-8116.
164. "A comparative study of NiO/Al₂O₃ catalysts prepared by different combustion techniques for octanal hydrogenation", M.D. Farahani, J. Valand, A.S. Mahomed and H.B. Friedrich, *Catal. Lett.*, **146** (2016) 2441-2449.
165. "Heterogeneous oxidation of alkenes: The role of silica supported bimetallic and trimetallic catalysts", H. M. Parekh, J.K. Valand and H.B. Friedrich, *S. Afr. J. Chem.*, **69** (2016) 227-235.
166. "The oxidative aromatization of n-hexane over VMgO catalysts", J. Chetty, S. Singh, H.B. Friedrich, *Reac. Kinet. Mech. Cat.*, **120** (2017) 307-321.
167. "Efficient and expeditious chemoselective BOC protection of amines in catalyst and solvent free media", B. Viswanadham, A.S. Mahomed, H.B. Friedrich, S. Singh, *Res. Chem. Intermed.* **43** (2017) 1355-1363.
168. "Synthesis and characterization of some new half-sandwich ruthenium(II) complexes with bidentate N,N'-ligands and their application in alcohol oxidation", J.M. Gichumbi, H.B. Friedrich, B. Omondi, *Inorg. Chim. Acta.*, **456** (2017) 55-63.
169. "Ternary (Cu, Ni and Co) nanocatalysts for hydrogenation of octanal to octanol: An insight into the cooperative effect", J. Valand, V.D.B.C. Dasireddy, S. Singh and H.B. Friedrich, *Catal. Lett.*, **147** (2017) 525-538.
170. "A study of new half-sandwich Osmium(II) complexes with bidentate N,N-chelating ligands and their use in the transfer hydrogenation of ketones", J.M. Gichumbi, B. Omondi, H.B. Friedrich, *Eur. J. Inorg. Chem.*, **2017** (2017) 915-924.
171. "Crystal structure of (η⁶-1-Isopropyl-4-methyl benzene)-4-methyl phenyl-(pyridin-2-yl) methylene amine ruthenium hexafluorophosphate", J.M. Gichumbi, H.B. Friedrich, B. Omondi, *Z. Kristallogr. NCS*, **232** (2017) 285-287.
172. "(η⁶-benzene)-2,6-dimethyl phenyl-(pyridin-2-yl) methylene amine ruthenium perchlorate hydrate", J.M. Gichumbi, H.B. Friedrich, B. Omondi, *Z. Kristallogr. NCS*, **232** (2017) 301-303.

173. “Crystal structure of (η^6 -1-Isopropyl-4-methyl benzene)-2,5-dichloro phenyl-(pyridin-2-yl) methylene amine) ruthenium tetrafluoroborate”, J.M. Gichumbi, H.B. Friedrich, B. Omondi, *Z. Kristallogr. NCS*, **232** (2017) 309-311.
174. “Peroxide oxidation of n-octane over Na-Fe-silicalite-1 and H-Fe-Silicalite-1 catalysts”, M.N. Cele, H.B Friedrich and M.D. Bala, *J. Mol. Catal. A*, **427** (2017) 39-44. [Editor’s choice paper]
175. “Syntheses and Structural Investigations of New Half Sandwich Ir(III) and Rh(III) amine Compounds and Their Catalytic Transfer Hydrogenation of Aromatic Ketones and Aldehydes in Water”, S. Thangavel, H.B. Friedrich, B. Omondi, *J. Mol. Catal. A*, **429** (2017) 27-42.
176. “Base metal Schiff base complexes applied as catalysts for the oxidation of n-octane”, E. Kadwa, M.D. Bala, H.B. Friedrich, *Inorg. Chim. Acta*, **463** (2017) 112-117.
177. “Dehydrocyclization of n-octane over boron- and barium-doped vanadium-magnesium oxide catalysts: Influence of n-octane/oxygen ratios”, E.A. Elkhalfifa, H.B. Friedrich, *Appl. Petrochem. Res.*, **7** (2017) 23-32.
178. “Influence of halogen substitution in the ligand sphere on the antitumor and antibacterial activity of half-sandwich ruthenium(II) complexes $[\text{RuX}(\eta^6\text{-arene})(\text{C}_5\text{H}_4\text{N-2-CH=N-Ar})]^+$ ”, J.M. Gichumbi, B. Omondi, G. Lazarus, M. Singh, N. Shaikh, H.Y. Chenia and H.B. Friedrich, *Z. Anorg. Allg. Chem.*, **643** (2017) 699-711.
179. “An investigation of Cu-Re-ZnO catalysts for the hydrogenolysis of glycerol under continuous flow conditions”, M.L. Shoji, V.D.B.C. Dasireddy, S. Singh, P. Mohlala, D.J. Morgan, S. Iqbal and H.B. Friedrich, *Sustain. Eng. Fuels*, **1** (2017) 1437-1445.
180. “Designing new catalysts for synthetic fuels: general discussion“, K. Holt, L. Jewell, H. Niemantsverdriet, L. Macheli, M. Shoji, G. Hutchings, T. Wezendonk, M. Bowker, R. Catlow, S. Adam, P. Kooyman, E. Hensen, J. Hayward, N. Coville, K.-J. Weststrate, N. Fischer, A. Roldan, E.y Redekop, E. van Steen, H. Friedrich, D.-H. Kuo, H. Bandaru, L. Deepal, A. Zivkovic, K. Naiker, C. Tucker, T.P.O. Mkhwanazi, D. Bahnemann, M. Neurock, A. Petersen, R.P. Forbes, T. Phaahlamohlaka, H. Schulz, D. Lennon, U. Olsbye, M. Wolf, S. Kondrat, P. Collier, X. Sun, Y. Zheng, A. Corma, E. Iglesia, T. Nyathi, D. Ma, M. Bremmer, M. Claeys and F. Kapteijn, *Faraday Disc.* **197** (2017) 353-388.
181. “An investigation of iron modified hydroxyapatites used in the activation of n-octane Molecular Catalysis”, D. Padayachee, V. D.B.C. Dasireddy, S. Singh, H.B. Friedrich, K. Bharuth-Ram and A. Govender, *Mol. Catal.*, **438** (2017) 256-266
182. “Crystal structure of 5,11,17,23-tetra(*tert*-butyl)-25,26,27,28-tetrahexoxycalix[4]arene, $\text{C}_{68}\text{H}_{104}\text{O}_4$ ”, C.R. Patel, M. Samipillai, H.B. Friedrich, H. G. Kruger, T. Govender, G.E.M. Maguire, *Z. Kristallogr. NCS*, **232** (2017) 397-402.
183. “Monoliths: A review of the basics, preparation methods and their relevance to oxidation”, S. Govender, H.B. Friedrich, *Catalysts*, **7** (2017) 62 (29 pp).

184. “Density Functional Theory Studies of the Uncatalysed Gas-Phase Oxidative Dehydrogenation Conversion of n-Hexane to Hexenes”, N.E. Damoyi, H.B. Friedrich, G.H. Kruger, D. Willock, *Comp. Theor. Chem.*, **1114** (2017) 153-164.
185. “Pd_{0.02}Ce_{0.98}O_{2-δ}: A copper- and ligand-free quasi-heterogeneous catalyst for aquacatalytic Sonogashira cross-coupling reactions.” P.P. Mpungose, N.I. Sehloko, T. Cwele, G.E. Maguire and H.B. Friedrich, *J. South. Afr. Inst. Min. Metall.*, **117** (2017) 955-962.
186. “Pd_{0.09}Ce_{0.91}O_{2-δ}: A sustainable ionic solid-solution precatalyst for heterogeneous, ligand free Heck coupling reactions”, P.P. Mpungose, N.I. Sehloko, V.D.B.C. Dasireddy, N. Mahadevaiah, H.B. Friedrich, *Mol. Catal.*, **443** (2017) 60-68.
187. “PdCuCeO–TPAB: a new catalytic system for quasi-heterogeneous Suzuki–Miyaura cross-coupling reactions under ligand-free conditions in water”, P.P. Mpungose, N.I. Sehloko, T. Cwele, G.E. Maguire and H.B. Friedrich, *New J. Chem.*, **41** (2017) 13560-13566.
188. “Investigation of conventional and non-conventional hydrogen bonds: A comparison of fluorine substituted and non-fluorine substituted compounds“, S. Alapour, M. D. Farahani, J.R.A. Silva, C.N. Alves, H.B. Friedrich, D. Ramjugernath, N. A. Koorbanally, *Monatsh. Chem.*, **148** (2017) 2061-2065.
189. “The effect of Mo incorporation on the CO oxidation activity of ceria and ceria-palladium solution combustion synthesized catalysts”, S. Naidoo, S. Singh and H.B. Friedrich, *Proc. AMI Precious Metals 2017, Symposium Series S94*, (2017) pp 159- 171, ISBN: 978-1-928410-00-3.
190. “A study on the deactivation and reactivation of a Ni/Al₂O₃ aldehyde hydrogenation catalyst: Effects of regeneration on the activity and properties of the catalyst”, S.V.L. Mahlaba, J. Valand, A.S. Mahomed, H.B. Friedrich, *Appl. Catal. B*, **224** (2018) 295–304. [dx.doi.org/10.1016/j.apcatb.2017.10.064]
191. “Oxidation of olefins catalyzed by half-sandwich osmium(II) arene complexes”, J.M. Gichumbi, B. Omondi, H.B. Friedrich, *J. Organometal. Chem.*, **856** (2018) 56-62. [doi.org/10.1016/j.jorganchem.2017.12.038]
192. “Synthesis, characterization, antiproliferative and antimicrobial activity of osmium(II) halfsandwich complexes”, J.M. Gichumbi, H.B. Friedrich, B. Omondi, K. Naicker, M. Singh, H.Y. Chenia, *J. Coord. Chem.*, **71** (2018) 342-354. [doi.org/10.1080/00958972.2018.1434164]
193. “Effect of water and methanol in the production of methyl methacrylate over iron phosphate catalysts”, A. Harilal, V.D.B.C. Dasireddy, H.B. Friedrich, *Reac. Kinet. Mech. Cat.*, **124** (2018) 265-277. [doi.org/10.1007/s11144-017-1331-7]
194. “The role of alkali metal exchanged phosphomolybdic acid catalysts in the solvent free oxidation of styrene to benzaldehyde at room temperature”, J. Pedada, H.B. Friedrich and S. Singh, *Catal. Lett.*, **148** (2018) 1355-1365. [doi.org/10.1007/s10562-018-2352-1]

195. "A DFT mechanistic study of the ODH of n-hexane over isolated H_3VO_4 ", N.E. Damoyi, H.B. Friedrich, G.H. Kruger, D. Willock, *Mol. Catal.* **452** (2018) 83-92. [doi.org/10.1016/j.mcat.2018.03.019]
196. "Oxidative dehydrogenation of n-octane over niobium doped NiAl_2O_4 : An example of beneficial coking in catalysis over spinel", M.D. Farahani, V.D.B.C. Dasireddy and H.B. Friedrich, *ChemCatChem*, **10** (2018) 2059-2069. [DOI: 10.1002/cctc.201701940].
197. "Synergistic role of Brønsted and Lewis acidity in alkali metal exchanged heteropolyacid catalysts for esterification of acetic acid at room temperature", J. Pedada, H.B. Friedrich and S. Singh, *J. Iran. Chem. Soc.*, **15** (2018) 1411-1418. [doi.org/10.1007/s13738-018-1341-z]
198. "Synthesis, characterization, anticancer and antimicrobial study of arene ruthenium(II) complexes with 1,2,4-triazole ligands containing an alpha-diimine moiety", J.M. Gichumbi, H.B. Friedrich, B. Omondi, G.G. Lazarus, M. Singh, H.Y. Chenia, *Z. Naturforsch. B: Chem. Sci.*, **73** (2018) 167 – 178. [doi.org/10.1515/znb-2017-0145]
199. "The effect of ionic liquid on alumina supported copper catalysts for the competitive hydrogenation of octanal in the presence of octene", L. Naicker, H.B. Friedrich, A. Govender, P. Mohlala, *Appl. Catal. A*, **562** (2018) 37-48 [doi.org/10.1016/j.apcata.2018.05.018].
200. "Half-sandwich complexes of platinum group metals (Ir, Rh, Ru and Os) and some recent biological and catalytic applications", J.M. Gichumbi and H.B. Friedrich, *J. Organomet. Chem.*, **866** (2018) 123-143.
201. "The Current Status of Heterogeneous Palladium Catalysed Heck and Suzuki Cross-Coupling Reactions", P.P. Mpungose, Z.P. Vundla, G.E.M. Maguire and H.B. Friedrich, *Molecules*, **23** (2018) 1676. [[doi:10.3390/molecules23071676](https://doi.org/10.3390/molecules23071676)]
202. "Continuous Flow Preferential Hydrogenation of an Octanal/Octene Mixture Using $\text{Cu}/\text{Al}_2\text{O}_3$ Catalysts", T. Chetty, V.D.B.C. Dasireddy, L.H. Callanan and H.B. Friedrich, *ACS Omega*, **3** (2018) 7911-7924. [DOI: 10.1021/acsomega.7b01993]
203. "Crystal structure of $(\eta^6\text{-1-isopropyl-4-methyl benzene})-(N-(2,5\text{-dichlorophenyl})-1\text{-pyridin-2-yl)methanimine-}\kappa^2N,N')$ ruthenium(II) perchlorate, $\text{C}_{22}\text{H}_{22}\text{Cl}_4\text{N}_2\text{O}_4\text{Ru}$ ", J.M. Gichumbi, B. Omondi and H.B. Friedrich, *Z. Kristallogr. NCS*, **233** (2018) 423-425. [doi.org/10.1515/ncrs-2017-0327]
204. "Utilisation of new NiSNS pincer complexes in paraffin oxidation", L. Soobramony, M.D. Bala and H.B. Friedrich, *Inorg. Chim. Acta*, **479** (2018) 97-105. [doi.org/10.1016/j.ica.2018.04.033]
205. "Methyl 1-phenylethylcarbamate, $\text{C}_{10}\text{H}_{13}\text{NO}_2$ ", PB Pansuriya, H.B. Friedrich, G.E.M. Maguire, *Z. Kristallogr. NCS*, **233** (2018) 561-563. [doi.org/10.1515/ncrs-2017-0320]
206. "New Ru(II) half sandwich complexes bearing the N,N' bidentate (9-ethyl-N-(pyridin-2-ylmethylene)9H-carbazole-3-amine ligand: Effects of halogen (Cl-, Br- and I-) leaving groups vs in vitro activity on HepG2 cancer cells, cell cycle, fluorescence study, cellular

- accumulation and DFT study”, S. Thangaval, M. Paulpandi, H.B. Friedrich, K. Sukesh, A.A. Skelton, *Polyhedron*, **152** (2018) 37-48. [doi.org/10.1016/j.poly.2018.05.060]
207. “The Role of Brønsted and Lewis Acidity in the Green Synthesis of Homopropargyl Alcohols over HZSM-5”, B. Viswanadham S. Singh, H.B. Friedrich and A.S. Mahomed, *S. Afr. J. Chem.*, **71** (2018) 62-67. [doi.org/10.17159/0379-4350/2018/v71a8]
208. “Regeneration of a 15 % Ni/SiO₂ phosphorus poisoned catalyst and subsequent effects of the support on recovery of the catalytic activity”, S.V.L. Mahlaba, A.S. Mahomed, H.B. Friedrich, *Appl. Catal. A*, **565** (2018) 163-169. [doi.org/10.1016/j.apcata.2018.08.009]
209. “The effect of varying the metal ratio in a chromium molybdate catalysts for the oxidative dehydrogenation of n-octane”, H. Bandaru, A.S. Mahomed, S. Singh, H.B. Friedrich, *Mol. Catal.*, **460** (2018) 74-82. [doi.org/10.1016/j.mcat.2018.09.017]
210. “Water: Friend or Foe in catalytic hydrogenation? A case study using copper catalysts”, A. Govender, A.S. Mahomed, H.B. Friedrich, *Catalysts*, **8** (2018) 474. [[doi:10.3390/catal8100474](https://doi.org/10.3390/catal8100474)]
211. “Transition metal oxide (Cu, Ni and Co) supported catalysts: A comparative study for the hydrogenation of octanal”, J. Valand, V.D.B.C. Dasireddy, A.S. Mahomed and H.B. Friedrich, *S. Afr. J. Chem.*, **71** (2018) 135-139. [doi.org/10.17159/0379-4350/2018/v71a17]
212. “Magnesium oxide as a catalyst for the dehydrogenation of n-octane”, E.A. Elkhalfa and H.B. Friedrich, *Arab. J. Chem.*, **11** (2018) 1154-1159. [doi.org/10.1016/j.arabjc.2014.10.002 1878-5352]
213. “The heterogeneous aminohydroxylation reaction using hydrotalcite-like catalysts containing osmium”, M.I. Fadlalla, G.E.M. Maguire and H.B. Friedrich, *Catalysts*, **8** (2018) 547. [[doi:10.3390/catal8110547](https://doi.org/10.3390/catal8110547)].
214. “Three inter-linked active sites in the dehydrogenation of n-octane over magnesium molybdate based catalysts and their influences on coking and cracking side reactions”, M.I. Fadlalla, M. D. Farahani, H.B. Friedrich, *Mol. Catal.* **461** (2018) 86-96. [doi.org/10.1016/j.mcat.2018.10.006]
215. "TiO₂ and ZrO₂ supported Ru catalysts for CO mitigation following the water-gas shift reaction", Z. Mohamed, V.D.B.C. Dasireddy, S. Singh, H.B. Friedrich, *Int. J. Hydrogen Energy*, **43** (2018) 22291-22302. [doi.org/10.1016/j.ijhydene.2018.10.061]
216. "Remediation of CO by oxidation over Au nanoparticles supported on mixed metal oxides", L. Qabe, S. Singh, H.B. Friedrich, *J. Environ. Chem. Eng.*, **7** (2019) 102827. [doi.org/10.1016/j.jece.2018.102827]
217. “Selected metal oxides for C-H bond activation of n-octane and propensity for CO_x formation: an empirical study”, D. Padayachee, S. Singh, A.S. Mahomed, H.B. Friedrich, *Mol. Catal.*, **464** (2019) 1-9. [doi.org/10.1016/j.mcat.2018.12.008] [Editor’s choice]
218. “Structural identification of products in the chloromethylation of salicylaldehyde”, E. Kadwa, M.D. Bala, H.B. Friedrich, *Synlett*. **30** (2019) 44-48. [DOI: 10.1055/s-0037-1610334]

219. “Flexible SNS pincer complexes of copper: synthesis, structural characterisation and application in *n*-octane oxidation”, L. Soobramoney, M.D. Bala, H.B. Friedrich and M.N. Pillay, *Polyhedron*, **163** (2019) 67-70. [doi.org/10.1016/j.poly.2019.02.016]
220. “Synthesis and characterization of water soluble arene-ruthenium complexes and their application in biphasic olefin oxidation”, J.M. Gichumbi, B. Omondi, H.B.Friedrich, *J. Coord. Chem.*, **72** (2019) 135-147. [doi.org/10.1080/00958972.2018.1548702]
221. “Influence of preparation method of high surface area MnO_x/SBA-15 catalysts for the activation of *n*-octane”, K. Naicker, A.S. Mahomed, H.B. Friedrich, S. Singh, *J. Porous Mater.*, **26** (2019) 301-309. [doi.org/10.1007/s10934-018-0648-6]
222. “Nickel-Doped Ceria Catalyst for Selective Acetylene Hydrogenation”, C. Riley, A. De La Riva, S. Zhou, E. Peterson, D. Kunwar, R. Payne, K. Artyushkova, M.D. Farahani, H.B. Friedrich, S. Lin, H. Guo, L. Burkemper, N.-V. Atudorei, A. Datye, *ChemCatChem*, **11** (2019) 1526-1533. [dx.doi.org/10.1002/cctc.201801976]
223. “Synthesis of Co(II) NNN-pyridine based complexes and their activity in the partial oxidation of *n*-octane”, R. Chanerika, H.B. Friedrich, M.L. Shoji, , *Inorg. Chim. Acta*, **495** (2019) 118992. [doi.org/10.1016/j.ica.2019.118992]
224. “The ligand free heterogeneous Sonogashira crosscoupling reaction over an in situ organoiodine capsulized palladium anchored to perovskite catalyst”, S. Alapour, M.D. Farahani, D. Ramjugernath, N.A. Koorbanally and H.B. Friedrich, *ACS Sustain. Chem. Eng.*, **7** (2019) 12697-12706. [DOI: 10.1021/acssuschemeng.8b05772]
225. “The continuous flow Ag/ γ -Al₂O₃ catalysed preferential hydrogenation of octanal in an octanal/octene mixture”, T. Chetty, V.D.B.C. Dasireddy and H.B. Friedrich, *Catal. Lett.* **149** (2019) 2787-2793. [doi.org/10.1007/s10562-019-02812-9]
226. “The effect of rhenium in the conversion of glycerol to mono-alcohols over nickel catalysts under continuous flow conditions”, M.L. Shoji, V. D.B.C. Dasireddy, S. Singh, A. Govender, P. Mohlala and H.B. Friedrich, *Sustain. Eng. Fuels*, **3** (2019) 2038 - 2047 [DOI: 10.1039/C9SE00045C.]
227. “Evaluation of silanization of Fe-silcalite-1, Na-Fe-ZSM-5 and solvent concentration on the oxidation of *n*-octane to C₈ oxygenates”, M.N.Cele, H.B.Friedrich, M.D.Bala , *J. Porous Mater.*, **26** (2019) 1447-1454. [doi.org/10.1007/s10934-019-00731-z]