PUBLICATION LIST - Prof. Cameron Jones (December 2018)

Review Articles


Book Chapters


Refereed Articles


30. Alkylation of \((\text{As,Sb,Bi})\text{Cl}_3\): Formation of \([\text{(As,Sb,Bi)RCl}_2]\), \((\text{E})-\text{[BiR(CH}_2\text{CH}=\text{C(SiMe}_3\text{)}_2\text{C}_5\text{H}_4\text{N}_2\text{-}2')]\), C. Jones, L.M. Engelhardt, P.C. Junk, D.S. Hutchings, W.C. Patalinghug, C.L. Raston, A.H. White, *J. Chem. Soc., Chem. Commun.*, 1991, 1560.


Low Coordination Arsenic and Antimony Compounds: Synthesis and Characterisation of 2-Arsa- and 2-Stiba-1,3-dionatolithium(I) Complexes, \([\text{Li}\{\text{OC}(\text{R})\text{EC}(\text{R})\text{O}\}(\text{L})]\), \(E = \text{As or Sb}; \ R = \text{Bu}^1, \text{C}_6\text{H}_2\text{Pr}^3\text{Bu}^3\text{P}^2\text{S}^2\text{Bu}^3\text{P}^2\text{S}^2; \ L = \text{Et}_2\text{O}, 1/2 \text{DME or DME}, \) J. Durkin, D.E. Hibbs, P.B. Hitchcock, M.B. Hursthouse, C. Jones, J. Jones, K.M.A Malik, J.F. Nixon, G. Parry, *J. Chem. Soc., Dalton Trans.*, 1996, 3277.


Synthesis, Crystal and Molecular Structure of a novel Organo-Antimony Cage Compound, \(\text{C}_4\text{Bu}_4^1\text{P}_4\text{Sb}_2\), S.J. Black, M.D. Francis, C. Jones, *Chem. Commun.*, 1997,305.


80. First Structural Characterisation of 1,2,4-Selenadiphosphole and 1,2,4-Telluradiphosphole Ring Systems. Crystal and Molecular Structures of the η¹-Complexes [M(CO)₅(P₂SeC₂Bu₄)], (M = Cr, W) and [W(CO)₅(P₂TeC₂Bu₄)], M.D. Francis, D.E. Hibbs, P.B. Hitchcock, M.B. Hursthouse, C. Jones, T. Mackewitz, J.F. Nixon, L. Nyulaszi, M. Regitz and N. Sakarya, *J. Organomet. Chem.*, 1999, 580, 156.


94. The Preparation, Characterization and Reactivity of the Stable Indium Trihydride Complex, [InH₃{CN(Mes)C₂H₂N(Mes)}], C.D. Abernethy, M.L. Cole and C. Jones, Organometallics, 2000, 19, 4852.


110. Reactions of Bulky Alkyl Lithium Reagents with a Phosphaalkyne (P+CBuH): Synthesis and Structural Characterisation of a Mixed Valent Phosphorus Cage Compound, PIII{μ- C(H)(Bu)t}2{μ-C(H)(SiMe3)Si(Me)2C(H)2}P=SC(SiMe3)2, and a Phosphaalkeny1 Substituted η3-Azaallyl-lithium Complex, [Li(tmeda){C(SiMe3)(2-NC5H3Me-6)[P=C(BuH)(SiMe3)]}], C. Jones and A.F. Richards, *J. Organomet. Chem.*, 2002, 645, 256-261.
111. Lithium and Magnesium Complexes of ortho-Dimethylarsinoaniline and a Novel Insertion of Dimethylsilanone into a Mg-N Bond - Molecular Structures of \([\{\text{Li}(\mu-\eta^1-1-\text{NHC}_6\text{H}_4\text{AsMe}_2)(\text{thf})\}_2\}\) and the Insertion Product \([\{\text{Mg}_2(\mu-\eta^1-\text{NHC}_6\text{H}_4\text{AsMe}_2)_2(\mu-\eta^3-\text{OSiMe}_2\text{NC}_6\text{H}_4\text{AsMe}_2)(\text{thf})\}_2\] , M.L. Cole, C. Jones and P.C. Junk, *New. J. Chem.*, 2002, 89 - 93.


113. \([(\eta^5-\text{C}_5\text{H}_5)\text{Fe(CO)}_2\text{B}(2,4,6\text{-Me}_3\text{C}_6\text{H}_2)]:\) Synthesis, Spectroscopic and Structural Characterisation of a Transition Metal Complex Containing an Unsupported Bridging Borylene Ligand, S. Aldridge, D.L. Coombs and C. Jones, *Chem. Commun.*, 2002, 856-857.


119. Synthesis and Structural Characterisation of the First Tris(diacylpnictido)phosphines, \(\text{P}[\text{E}\{\text{C(O)}\text{R}\}_2]\)\(_3\), \(\text{E} = \text{P}\) or As, \(\text{R} = \text{Bu}^t\) or Ph, C. Jones, P.C. Junk and T.C. Williams, *J. Chem.Soc., Dalton Trans.*, 2002, 2417 - 2418.


133. Reactions of a Carbene Stabilised Indium Trihydride Complex, 
[InH$_3$(CN(Mes))C$_2$H$_2$N(Mes))] Mes = mesityl, with Transition Metal Complexes, 
Chemistry*, 2003, 28, 296-299.

134. (2,6-Diisopropylphenyl)isopropylideneammonium Iodide, R.J. Baker, H. Bettentrup 

135. Substitution Chemistry of Sterically Demanding Boryl Ligands, D.L. Coombs, S. 

136. Cationic Terminal Borylenes by Halide Abstraction: Synthesis, Spectroscopic and 
Structural Characterisation of an Fe=B Double Bond, D. L. Coombs, S. Aldridge, C. 

137. The Molecular Structure of [InBr$_2$(N(SiMe$_3$)$_2$)$_2$][Li(DME)$_3$], C. Jones, P.C. Junk and 

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139. Synthesis and Structural Characterization of Thermally Stable Group 13 Hydride 
Complexes Derived from a Gallium(I) Carbone Analogue, R.J. Baker, C. Jones, M. 

140. The Reactivity of Primary and Secondary Amines, Secondary Phosphines and N-
Heterocyclic Carbenes Towards Group 13 Metal(I) Halides, R.J. Baker, H. Bettentrup 

141. Synthesis and Structural Characterisation of Some Highly Hindered 
N-functionalised Organoamido Complexes of Titanium(IV) and Zirconium(IV) C. 
1126-1128.

142. The Reactivity of an Iridaphosphirene Complex, [Ir{=C(Bu')P(Cy)}(CO)(PPh$_3$)$_2$], Cy 
= Cyclohexyl, Toward Electrophiles, M. Brym, C. Jones and M. Waugh, *Dalton 
Trans.*, 2003, 2889-2893.

143. trans-Bromohydridobis(triphenylphosphine)platinum toluene hemisolvate, S. 

144. The Synthesis and Structural Characterisation of [IrCl(COD)(PET$_3$)$_n$], n = 1 or 2, and 
Orthometallated Vaska's Compound, [IrHCl(CO)(PPh$_3$){η$^2$-PPh$_2$(C$_6$H$_4$)}], M. Brym 

145. The Synthesis of Phosphorus Heterocycles from Tetra-tert-butyltetraphosphacubane, 

146. Analogies Between the Reactivities of an Anionic Gallium(I) Heterocycle and N-
Heterocyclic Carbenes Towards Metalloccenes, R.J. Baker, C. Jones and J.A. Platts, *J. 


151. The Molecular Structure of [{μ-Ga(Ar-DAB)}{μ-K(tmeda)}{μ-C5H5}{μ-K(tmeda)}]{(C7H8)1.5}, Ar-DAB = {(C6H3Pr-i-2,6)NC(H)=}2, R.J. Baker and C. Jones, *Main Group Metal Chemistry*, 2003, 26, 267 - 268.


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184. Dinuclear Alkynyllanthanoid(II) Dications with Tri-tert-butylidiphospha-
cyclopentadienyl or Pentaphenylcyclopentadienyl Counter Ions, C. Forsyth, G.B.

185. Four-membered Group 13 Metal(I) N-Heterocyclic Carbene Analogues: Synthesis,
Characterization and Theoretical Studies, C. Jones, P.C. Junk, J.A. Platts and A.

186. Synthesis, Structural Characterization and Theoretical Studies of Magnesium and
Calcium-Gallyl Complexes Containing the First Direct Group 13 Metal–Group 2
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187. Bulky Amidinato Complexes and Amidine Adducts of Al, Ga and In Halides, C.
Jones, P.C. Junk, M. Kloth, K.M. Proctor and A. Stasch, Polyhedron, 2006, 25, 1592 -
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188. Oxidative Addition of an Imidazolium Cation to an Anionic Gallium(I) N-
Heterocyclic Carbene Analogue: Synthesis and Characterisation of Novel Gallium
691, 3060-3064.

189. X-ray structural characterization of diethyl ether solvated lithium iodide derived from

190. Complexes of a Gallium Heterocycle with Transition Metal Sandwich, Half Sandwich
and Dialkyl Fragments, S. Aldridge, R.J. Baker, N.D. Coombs, C. Jones, R.P. Rose,

191. An X-ray Crystallographic Study of the Diphosphacyclobutenyl Gallium Complex,
[Gal₂(C(Bu)₃)P(H)(C(Bu)=P)]₂, M.D. Francis, C. Jones and D.P. Mills, Main Group

192. Rare examples of mononuclear, homoleptic antimony(III) and bismuth(III) aryloxides,

193. The First Complexes and Cyclodimerisations of Methylphosphaalkyne (P≡CMe), C.

194. Complexes of an Anionic Gallium(I) N-Heterocyclic Carbene Analogue with Group
14 Element(II) Fragments: Synthetic, Structural and Theoretical Studies, S.P. Green,
7251.

195. Cationic Terminal Borylene Complexes: Structure/Bonding Analysis and [4+1]
Cycloaddition Reactivity of a BN Vinylidene Analogue, S. Aldridge, C. Jones, T.
Gans-Eichler, A. Stasch, D.L. Kays (née Coombs), N.D. Coombs and D.J. Willock.


201. Homoleptic Lanthanide(II)-Bis(Guanidinate) Complexes, [Ln(Giso)$_2$] (Giso = [(ArN)$_2$CN(C$_6$H$_{11}$)$_2$]$, Ar = C$_6$H$_3$Pri$_2$-2,6): Planar 4-Coordinate (Ln = Sm or Eu) vs Distorted Tetrahedral (Ln = Yb) Geometries, D. Heitmann, C. Jones, P.C. Junk, K.-A. Lippert and A. Stasch, *Dalton Trans.*, 2007, 187 - 189.


Nature of M-Ge Bonds in Metallo-Germylene Complexes of Chromium, Molybdenum and Tungsten [(η⁵-C₅H₅)(CO)₃M(GeN(SiMe₃)R)] and [(η⁵-C₅H₅)(CO)₃M(GeN(Ph)R)] (R = Ph, Mesityl (Mes)): A Theoretical Study, K.K. Pandey and C. Jones, Organometallics, 2013, 32, 3395-3403.


321. Low Coordinate Cobalt(I) Complexes Stabilised by an Extremely Bulky Amide Ligand, J. Hicks, C. Jones, Organometallics, 2015, 34, 2118-2121.


**Invited Lectures**

1. "New Directions in Low Coordination Group 15 Chemistry", Chemistry Department, Tohoku University, Sendai, Japan, April 1995.

2. "New Directions in Low Coordination Group 15 Chemistry", Chemistry Department, University of Leeds, February, 1996.

3. "New Directions in Low Coordination Group 15 Chemistry", Chemistry Department, Imperial College of Science, Medicine and Technology, April, 1996.


5. "New Directions in Low Coordination Group 15 Chemistry", Chemistry Department University of Western Australia, August 1996.

6. "New Directions in Low Coordination Group 15 Chemistry", Chemistry Department University of Waterloo, Canada, April 1997.

7. RSC Sponsored Lecture - "The Low Coordination Chemistry of Arsenic and Antimony" Chemistry Department, University of Wales, Cardiff, October 1997.


10. "The Low Coordination Chemistry of Arsenic and Antimony", Chemistry Department, University of Ohio, Athens, USA, April, 1998.


15. "The Stabilisation of Indium Hydride Complexes"
Invited lecture at 5th International Anglo/German Meeting on Inorganic Chemistry
Sussex University, July, 1999.

16. "The Stabilisation and Reactivity of Indium Hydride Complexes"
Chemistry Department, Oxford University, February, 2000.

17. "The Stabilisation and Reactivity of Indium Hydride Complexes"
Chemistry Department, Bristol University, March, 2000.

18. "The Stabilisation and Reactivity of Indium Hydride Complexes"
Chemistry Department, Southampton University, May, 2000.

19. "The Stabilisation and Reactivity of Indium Hydride Complexes"
Chemistry Department, Nottingham University, May, 2000.

20. "The Stabilisation and Reactivity of Indium Hydride Complexes"
Chemistry Department, University of Western Australia, July, 2000.

21. "The Stabilisation and Reactivity of Indium Hydride Complexes"
Chemistry Department, James Cook University, Townsville, Australia, July, 2000.

22. "The Synthetic Versatility of Phosphavinyl Grignard Reagents"
Chemistry Department, University of Münster, Germany, February, 2001.

23. "The Synthetic Versatility of Phosphavinyl Grignard Reagents"
Chemistry Department, University of Leipzig, Germany, February, 2001.

24. "The Synthetic Versatility of Phosphavinyl Grignard Reagents"
Chemistry Department, UMIST, November, 2001.

25. RSC sponsored lecture - "The Synthetic Versatility of Phosphavinyl Grignard Reagents"
Chemistry Department, Cardiff University, December, 2001.

26. "The Synthetic Versatility of Phosphavinyl Grignard Reagents"
Chemistry Department, Cambridge University, January, 2002.

27. "The Synthetic Versatility of Phosphavinyl Grignard Reagents"
Chemistry Department, Sheffield University, January, 2002.

28. "The Synthetic Versatility of Phosphavinyl Grignard Reagents"
Chemistry Department, Leeds University, January, 2002.

29. "The Synthetic Versatility of Phosphavinyl Grignard Reagents"
Chemistry Department, Newcastle University, May, 2002.

30. "The Synthetic Versatility of Phosphavinyl Grignard Reagents"
Chemistry Department, Monash University, Australia, July, 2002.

31. "Developments in Low Oxidation State Gallium and Indium Chemistry"
invited lecture at the RSC meeting on New Strategies in Metal Chemistry.
Chemistry Department, Nottingham University, February, 2003.


44. "Anionic Gallium(I) Heterocycles: Analogies with N-Heterocyclic Carbenes?" Chemistry Department, Oxford University, February, 2005.


48. "Group 13 Metal(I) Heterocycles: Analogies with N-Heterocyclic Carbenes?"
Texas Christian University, December, 2005.

49. "Group 13 Metal(I) Heterocycles: Analogies with N-Heterocyclic Carbenes?"
University of Texas at Austin, December, 2005.

50. "Group 13 Metal(I) Heterocycles: Analogies with N-Heterocyclic Carbenes?"
University of California at Davis, December, 2005.


52. "Group 13 Metal(I) Heterocycles: Analogies with N-Heterocyclic Carbenes?"
Reading University, February, 2006.


54. "Group 13 Metal(I) Heterocycles: Metal Donor Lewis Bases and N-heterocyclic Carbene Analogues", Bochum University, Germany, November, 2006


"Low Oxidation State Metallocycles: Stabilization and Reactivity Studies", Invited Lecture, Main Group Chemistry Symposium, Nottingham University, October, 2007.

"Low Oxidation State Metallocycles: Stabilization and Reactivity Studies", Oxford University, October, 2007.


"Bulky Guanidinates: New Ligands for the Stabilisation of Very Low Oxidation State Metallacycles" School of Chemistry, Southern Methodist University, Texas, March, 2008.

"Bulky Guanidinates: New Ligands for the Stabilisation of Very Low Oxidation State Metallacycles" School of Chemistry, Texas Christian University, Texas, March, 2008.

"Bulky Guanidinates: New Ligands for the Stabilisation of Very Low Oxidation State Metallacycles" CSIRO Division of Health and Molecular Technologies, Melbourne, March, 2008.

"Bulky Guanidinates: New Ligands for the Stabilisation of Very Low Oxidation State Metallacycles" School of Chemistry, Monash University, April, 2008.


Group 2 Metal(I) Heterocycles: Stabilisation, Verification and Application. Department of Chemistry, University of Sydney, April, 2009.

"Bulky Guanidinates: Analogues of β-Diketimimates for the Stabilisation of low Oxidation State Metallacycles", Department of Chemistry, La Trobe University, June, 2009.

"Bulky Guanidinates: Analogues of β-Diketimimates for the Stabilisation of low Oxidation State Metallacycles", Department of Chemistry, University of Western Australia, June, 2009.


80. "Bulky Guanidinates and Related Ligands for the Stabilisation of Metal(I) Heterocycles", Department of Chemistry, Oxford University, September, 2009.

81. "Bulky Guanidinates and Related Ligands for the Stabilisation of Metal(I) Heterocycles", Invited Humboldt Prize Lecture, Department of Chemistry, Technische Universität, Berlin, Germany, September, 2009.

82. "Bulky Guanidinates and Related Ligands for the Stabilisation of Metal(I) Heterocycles", Department of Chemistry, Essen University, Germany, September, 2009.


87. "Molecular Magnesium(I) Compounds: From Chemical Landmarks to Versatile Reagents", Invited lecture of the German Chemical Society, Department of Chemistry, Münster University, Germany, April, 2010.

88. "Molecular Magnesium(I) Compounds: From Chemical Landmarks to Versatile Reagents", Invited lecture of the German Chemical Society, Department of Chemistry, Marburg University, Germany, April, 2010.


100. "Molecular Magnesium(I) Compounds: "Bespoke" Reducing Agents for the Synthetic Chemist", Department of Chemistry, Heidelberg University, Germany, October, 2011.

101. "Modern Main Group Chemistry: From Fundamental Advances to Functional Molecules" RACI Burrows Award Lecture, IC11, University of Western Australia, December, 2011.


125. "The Stabilization and Transition Metal-Like Reactivity of Low Oxidation State/Low Coordination Number p-Block Complexes", Invited Session Lecture, Pacifichem, Honolulu, USA, December 2015.


130. "The Stabilization and Transition Metal-Like Reactivity of Low Oxidation State/Low Coordination Main Group Complexes", RSC Australasian Lectureship, University of Melbourne, August, 2016.


133. "The Stabilization and Transition Metal-Like Reactivity of Low Oxidation State/Low Coordination Main Group Complexes", Oxford University, UK, September, 2016.

134. "The Stabilization and Transition Metal-Like Reactivity of Low Oxidation State/Low Coordination Main Group Complexes", RSC Australasian Lectureship, University of Tasmania, October, 2016.


156. "Magnesium(I) Dimers 10 Years on: Universal Reductants for the Synthetic Chemist?" Technische University, Berlin, Germany, October, 2018.