## **Conference and invited talks**

1. New Directions in Transition Metal Boryl Chemistry. MICRA 2000, University of Exeter, September 2000.

2. New Directions in Transition Metal Boryl Chemistry. Intraboron Meeting, University of Bath, August 2000.

3.  $\pi$ -Bonding in Transition Metal Boryl Complexes. Invited talk to the RSC Coordination Chemistry Discussion Group Meeting, University of York, July 2001.

4. *Boryl and Borylene Complexes of Iron and Manganese*. South West Regional Meeting of the Dalton Division, University of Bath, April 2002.

5. *Boryl and Borylene Complexes of Iron and Manganese*. International Conference on Organometallic Chemistry, Corfu, July 2002.

6. Boryl and borylene complexes of iron and manganese. Invited talk given at the 224<sup>th</sup> ACS Meeting, Boston, USA, September 2002.

7. Boryl and Borylene Complexes of Iron and Manganese. MICRA 2002, Cardiff University, September 2002.

8. Boranes, Boryls and Borylenes: Lewis Acids in Transition Metal Chemistry. Invited talk at University College London, October 2002.

9. Boranes, Boryls and Borylenes: Lewis Acids in Transition Metal Chemistry. Invited talk at the University of Southampton, November 2002.

10. *New Boron-containing Lewis Acids: Fluoride Ion Sensing by Multi- and Monodentate Species*. South West Regional Meeting of the Dalton Division, University of Exeter, April 2003.

11. *Carbene Analogues: Synthesis of an Fe=B Double Bond*. Dalton Division, Chemistry of Groups 13, 14 and 15 Meeting, King's College London, May 2003.

12. Boranes, Boryls and Borylenes: Lewis Acids in Transition Metal Chemistry. Invited talk at the University of Bath, November 2003.

13. *Transition Metal - Group 13 Element Multiple Bonds*. Invited talk to the 6th Anglo-Dutch Conference on Organometallic Chemistry and Catalysis, Cardiff School of Chemistry, April 2004.

14. *Chemistry of Cationic Terminal Diyl Complexes*. Invited talk to the Dalton Division, Coordination Chemistry Discussion Group Meeting, University of Leicester, July 2004.

15. *Chemistry of Cationic Terminal Diyl Complexes*. 36th International Coordination Chemistry Conference, Merida, Mexico, July 2004.

16. *Chemistry of Cationic Terminal Diyl Complexes*. Invited talk to the 3rd European Conference on Boron Chemistry, Pruhonice, Czech Republic, September 2004.

17. *Cationic Terminal Diyl Complexes - Multiple Bonding between Transition Metals and Group 13 Elements?* Invited talk at the University of Oxford, November 2004.

18. *Cationic Terminal Diyl Complexes - Multiple Bonding between Transition Metals and Group 13 Elements?* Invited talk at the University of Bristol, November 2004.

19. *Cationic Terminal Diyl Complexes - Multiple Bonding between Transition Metals and Group 13 Elements?* Invited talk at the University of Reading, January 2005.

20. *Unique chemistries for the detection of chemical warfare agents*. Invited talk at the Home Office Police Scientific Development Branch (PSDB), Sandridge February 2005.

21. *Cationic Terminal Diyl Complexes - Multiple Bonding between Transition Metals and Group 13 Elements?* Invited talk at RSC one-day meeting, University of Southampton, April 2005.

22. Anion and Whole Acid Binding for the Detection of Chemical Warfare Agents. McCamley Memorial Lecture, University of York, June 2005.

23. *Cationic Terminal Diyl Complexes - Multiple Bonding between Transition Metals and Group 13 Elements?* Keynote lecture to the 12th International Conference on Boron Chemistry, Sendai, September 2005.

24-26. *Transition metal – group 13 element multiple bonds*. Invited talks at the Universities of Tubingen, Würzburg and Frankfurt, January 2006.

27. Transition metal – group 13 element multiple bonds. Invited talk at Heriot Watt University, February 2006.

28. Anion and Whole Acid Binding for the Detection of Chemical Warfare Agents. Invited talk at the EPSRC Crime Prevention and Technologies Event, London, March 2006.

29. Transition metal – group 13 element multiple bonds. Invited talk at Oxford University, May 2006.

30. *Transition metal – group 13 element multiple bonds*. Invited talk at Bristol University, July 2006.

31. Transition metal – group 13 element multiple bonds. Invited talk at Durham University, July 2006.

32. *Group 13 analogues of classical organometallic ligand systems*. Invited presentation at the 'Transatlantic Frontiers in Chemistry' joint RSC, ACS, GDCh Symposium, University of New Hampshire, August 2006.

33. *Lewis acids for anion and neutral molecule sensing*. Invited talk at the 232<sup>nd</sup> ACS Meeting, San Francisco, USA, September 2006 – symposium titled 'Polyfunctional organoboranes - from molecules to materials.'

34. *Transition metal – group 13 element multiple bonds.* Invited talk at the University of Notre Dame, USA, September 2006.

35. *Transition metal – group 13 element multiple bonds.* Invited talk at the University of California Davis, USA, September 2006.

36. *Transition metal – group 13 element multiple bonds*. Invited talk given at Imperial College, London, March 2007.

37. *Transition metal – group 13 element multiple bonds.* Invited talk given at the University of Wales, Bangor, April 2007.

38. *Group 13 analogues of carbenes, vinylidenes and CO.* Invited talk given at the 4th European Conference on Boron Chemistry, Bremen, Germany, September 2007.

39. *Group 13 analogues of classical organometallic ligands*. Invited talk given at the University of Oxford, October 2007.

40. *Group 13 analogues of classical organometallic ligands*. Invited talk given at the University of Nottingham, October 2007.

41. *Chemical sensors for chemical warfare agents*. Invited talk given at 'Nanotechnology for Security and Crime Prevention III,' The Royal Society, London, January 2008.

42. Group 13 analogues of classical organometallic ligands. Invited talk given at the University of Sussex, March 2008.

43. *Group 13 analogues of classical organometallic ligands*. Invited talk given at the Anglo-German International Conference on Inorganic Chemistry, Cardiff, April 2008

44. Group 13 analogues of classical organometallic ligands. Invited talk given at Texas Christian University, June 2008.

45. Group 13 analogues of classical organometallic ligands. Invited talk given at Texas A and M University, June 2008.

46. *Group 13 analogues of classical organometallic ligands.* Invited (plenary) lecture given to the RSC Main Group Chemistry Meeting, Bristol, September 2008.

47. *Group 13 analogues of classical organometallic ligands.* Invited (plenary) lecture given to the 13th International Conference on Boron Chemistry, Platja D'Aro, Spain, September 2008.

48. *Group 13 analogues of classical organometallic ligands.* Invited lecture given at the Université Paul Sabatier, Toulouse, France, October, 2008.

49. *Cyanide and fluoride ion detection by ferrocene derivatized Lewis acids.* Invited lecture given to the RSC Macrocycles and Supramolecular Chemistry Group, University of Birmingham, December 2008.

50. *Group 13 analogues of classical organometallic ligands.* Invited lecture given at the University of Edinburgh, January 2009.

51. *Group 13 analogues of classical organometallic ligands*. Invited lecture given at the University of Newcastle, March 2009.

52. *Coordination chemistry of Group 13 monohalides*. Invited lecture given at the 237<sup>th</sup> ACS Meeting, Salt Lake City, USA, March 2009.

53. *Group 13 analogues of classical organometallic ligands.* Invited lecture given at the RSC Dalton Transactions Symposium, Shanghai, China, October 2009.

54. *Group 13 analogues of classical organometallic ligands.* Invited lecture given at the RSC Dalton Transactions Symposium, Nanjing, China, October 2009.

55. *Group 13 analogues of classical organometallic ligands.* Invited lecture given at the 2<sup>nd</sup> Asian Coordination Chemistry Conference, Nanjing, China, November 2009.

56. Group 13 analogues of classical organometallic ligands. Invited lecture given at Leeds University, December 2009.

57. *Chemical sensors for chemical warfare agents.* Invited lecture given at the Institute of Nanotechnology Conference 'Converging Technologies for 21<sup>st</sup> Century Security', Royal College of Physicians, London, November 2009.

58. *Strong Lewis acids in Main Group and Transition Metal Chemistry: fundamentals and applications.* Invited lecture given at Glasgow University, March 2010.

59. *Group 13 analogues of classical organometallic ligands.* Invited plenary (conference opening) lecture given at the 5<sup>th</sup> European Conference on Boron Chemistry, Edinburgh, August 2010.

60. *Coordination and activation of B-H bonds in amineboranes at late transition metal centres*. Invited lecture given at the Joint SWRM/ SERMACS Regional ACS Meeting, New Orleans, December 2010.

61. *Cationic terminal borylene complexes: synthetic, structural and reaction chemistry*. Invited lecture given at the PACIFICHEM 2010 Meeting, Honolulu, December 2010.

62-64. *Group 13 analogues of classical organometallic ligands*. Invited lectures given at Queen's University Belfast, the University of Manchester and University College London as part of RSC Main Group Chemistry award 2009/10, December 2010-March 2011.

65-67. *Group 13 analogues of classical organometallic ligands.* Invited lectures given at the Universities of Bochum, Düsseldorf and Münster, July 2011.

68. *Coordination and activation of aminoboranes*. Invited lecture given to the RSC Coordination Chemistry Discussion Group Meeting, University of East Anglia, July 2011.

69. *Coordination and activation of aminoboranes*. Invited lecture given to the biennial meeting of the Royal Society of Chemistry of Spain (RSEQ), Valencia, July 2011.

70. Coordination and activation of aminoboranes. Invited lecture given at the University of Cambridge, October 2011.

71. Coordination and activation of E-H bonds at Main Group and Transition Metal centres. Invited lecture given at the University of Bath, April 2012.

72. *Boryl ligands: activation or bespoke innocent donors?* Invited lecture given at Karlsruhe Institute of Technology, June 2012.

73. *Exploitation of boryl substituents for the stabilization of novel sub-valent Main Group systems*. Invited lecture given at the ISACS 8 meeting, Toronto, Ontario, July 2012.

74. *Exploitation of boryl substituents for the stabilization of novel sub-valent Main Group systems*. Invited lecture given at the IRIS 13 meeting, Victoria, British Colombia, July-August 2012.

75. Coordination and activation of B-H bonds. Invited lecture given at LaTrobe University, October 2012.

76. Coordination and activation of B-H bonds. Invited lecture given at Monash University, November 2012.

77. *Exploitation of boryl substituents for the stabilization of novel sub-valent Main Group systems*. Invited lecture given at the Australian National University, November 2012.

78. *Exploitation of boryl substituents for the stabilization of novel sub-valent Main Group systems*. Invited lecture given at Freie Universität Berlin, January 2013.

79. *Exploitation of boryl substituents for the stabilization of novel sub-valent Main Group systems*. Invited lecture given at the Peter Timms Symposium, University of Bristol, February 2013.

80. *Exploitation of boryl substituents for the stabilization of novel sub-valent Main Group systems*. Invited lecture given at the joint Chem. Comm. / Dalton Transactions Symposium, Regensburg, Germany, March 2013.

81. *E-H bond activation by Main Group systems*. Invited lecture given at Trinity College, Dublin, March 2013.

82. *Exploitation of boryl substituents for the stabilization of novel sub-valent Main Group systems.* Invited lecture given at the Canadian Chemistry Conference, Quebec, May 2013.

83. *Stabilization of 5- and 6-valence electron species: designing Main Group molecules for bond activation*. Invited lecture given at the Universities of Scotland Inorganic Conference (USIC), Edinburgh, July 2013.

84. *Stabilization of 5- and 6-valence electron species: designing Main Group molecules for bond activation.* Invited lecture given at UEA, Norwich, October 2013.

85. *Stabilization of 5- and 6-valence electron species: designing Main Group molecules for bond activation.* Invited lecture given at Albert-Ludwigs-Universität Freiburg, February 2014.

86. *Stabilization of 5- and 6-valence electron species: designing Main Group molecules for bond activation.* Invited lecture given at the University of Strathclyde, Glasgow, February 2014.

87. *Radicals, E-H bond activation and nanoparticles: tuning Main Group elements to behave as Transition Metals.* Invited lecture given at Georg-August-Universität Göttingen, April 2014.

88. *Radicals, E-H bond activation and nano-particles; tuning main group elements to behave as transition metals.* Invited lecture given as Distinguished Lecturer, Hong Kong Baptist University, Hong Kong, July 2014.

89. *New approaches to bond activation.* Invited lecture given as Distinguished Lecturer, Hong Kong Baptist University, Hong Kong, July 2014.

90. *Radicals, E-H bond activation and nano-particles; tuning main group elements to behave as transition metals.* Invited lecture given at the Chinese University of Hong Kong, Hong Kong, July 2014.

91. *Boryl ligands: bespoke donors for the stabilization of unsaturated Main Group complexes.* Invited lecture given at the 41<sup>st</sup> International Conference on Coordination Chemistry (ICCC-41), Singapore, July 2014.

92. Radicals, E-H bond activation and nano-particles; tuning main group elements to behave as transition metals

Invited lecture given at EPFL Lausanne, August 2014

93. *Boryl ligands: bespoke donors for the stabilization of unsaturated Main Group complexes.* Invited lecture given at the 15<sup>th</sup> International Meeting on the Chemistry of Boron (IMEBORON XV), Prague, August 2014.

94. *Radicals, nanoparticles and E-H bond activation: tuning Main Group elements to behave as Transition Metals.* Invited lecture given at Chuo University, Japan, September 2014.

95. *New approaches to E-H bond activation using non-transition elements.* Invited lecture given at 2<sup>nd</sup> UK/Japan Symposium, Tokyo, Japan, September 2014.

96. *New approaches to E-H bond activation using non-transition elements.* Plenary lecture given at IRIS-14, Regensburg, Germany, July 2015.

97. *New approaches to E-H bond activation and catalysis.* Invited lecture given to the UK Catalysis Hub Winter Conference, November 2015.

98. *Designing and exploiting frustrated Lewis pairs for reversible small molecule capture and activation*. Invited lecture given at 251<sup>st</sup> meeting of the American Chemical Society, San Diego, USA, March 2016.

99. *Bond activation by highly reactive low valent germanium complexes.* Lecture given at 251<sup>st</sup> meeting of the American Chemical Society, San Diego, USA, March 2016.

100. *Bond activation by highly reactive low valent germanium complexes.* Invited lecture given at the Dalton 2016 Inorganic Chemistry Meeting, Warwick, March 2016.

101. *Main group systems for redox-based bond activation and functionalization.* Keynote lecture given to the 27<sup>th</sup> International Conference on Organometallic Chemistry (ICOMC), Melbourne, Australia, July 2016.

102. *Enabling and harnessing unusual reactivity in germanium and tin boryl complexes.* Invited lecture given at the Chemistry of Germanium, Tin and Lead Meeting, Pardubice, Czech Republic, August 2016.

103. *Designing main group systems for small molecule activation and functionalization.* Invited lecture given at the New Frontiers in Inorganic Chemistry: UK-China Perspectives meeting, Shanghai, China, September 2016.

105. *Designing main group systems for small molecule activation and functionalization.* Invited lecture given at the University of Toronto, December 2016.

106. *Designing main group systems for small molecule activation and functionalization.* Invited lecture given at the University of California Los Angeles, January 2017.

107. *Designing main group systems for small molecule activation and functionalization.* Invited lecture given at the University of Bristol (Gordon Stone Symposium), January 2017.

108. *Designing main group systems for small molecule activation and functionalization.* Invited lecture given at the University of Newcastle, March 2017.

109. *Snapshots in the coordination and activation of E-H bonds (E = B, Al, Ga) at transition metal centres.* Lecture given at ISACS: Challenges in Inorganic Chemistry, University of Manchester, April 2017.

110. *Exploitation of the boryl ligand class in Main Group chemistry*. Keynote lecture given at IMEBORON16, Hong Kong, July 2017.

112. *Designing main group systems for small molecule activation and functionalization.* Plenary lecture given at 3<sup>rd</sup> Singapore Inorganic Chemistry Symposium (SICS 2017), National University of Singapore, July 2017.

113. *Designing main group systems for small molecule activation and functionalization.* Invited lecture given at AGICHEM 2017, Göttingen, August 2017.

114. *Bond activation by hypovalent group 13 and 14 metal complexes.* Invited lecture given at 'Perspectives in Hypovalent Chemistry' Rheinische Friedrich-Wilhelms-Universität Bonn, October 2017.

115-120. *New perspectives in small molecule activation using low valent Main Group compounds*. Invited lectures given at Universitat Jaume I (Castellon), Universitat Rovira i Virgili (Tarragona), Universidad de Zaragoza, Universidad de Sevilla, Universidad de Castilla La Manchà (Ciudad Real) and Universidad de Alcalá as part of GEQO/RESQ lecture tour, March 2018.

121. *Non-conventional approaches to bond activation and catalysis.* Invited lecture given at LIKAT, Rostock, May 2018.

122. *Non-conventional approaches to bond activation using main group compounds.* Invited lecture given to Catalysis CDT, Cardiff University, June 2018.

123. *Synthesis, structural and reaction chemistry of novel silylene compounds.* Plenary lecture at 9<sup>th</sup> European Silicon Days meeting, Saarbruken, September 2018.

124. *New perspectives in small molecule activation using low valent main group compounds.* Frankland Award Lecture, Southern Regional Dalton Meeting, Royal Society of Chemistry, London, September 2018.

125. *Novel bond activation processes exploiting main group metals.* Frankland Award Lecture, Royal Society of Chemistry, University of Bath, November 2018.

126. *Bond activation by group 13 and 14 systems.* Invited lecture given to CHAINS2018 conference (Dutch inorganic chemistry meeting), Eindhoven, December 2018

127. *Turning aluminium chemistry on its head: reactivity patterns of aluminyl nucleophiles.* Invited lecture given at 'Frontiers in Main Group Chemistry' symposium, University of Amsterdam, December 2018.

128. *Small molecule activation using main group compounds: Turning aluminium chemistry on its head.* Invited lecture given at Philipps-Universität Marburg, January 2019.

128. *Small molecule activation using main group compounds: Turning aluminium chemistry on its head.* Invited lecture given at Université Paul Sabatier Toulouse, January 2019.

130. *Turning aluminium chemistry on its head: Making and breaking C-C bonds with an aluminyl nucleophile.* Frankland Award Lecture, Royal Society of Chemistry, University of Edinburgh, February 2019.

131. *New perspectives in small molecule activation using low valent main group compounds.* Frankland Award Lecture, Royal Society of Chemistry, Open University, March 2019.

132. *Turning aluminium chemistry on its head: Making and breaking C-C bonds with an aluminyl nucleophile.* Invited lecture, International Conference on Heteroatom Chemistry, Prague, June 2019.

133. *New perspectives in small molecule activation using low valent main group compounds*. MChG invited lecture, TU Munich, November 2019.

134. *New perspectives in small molecule activation using low valent main group compounds.* Plenary lecture, PBSi Conference, Rome, December 2019.

135. *New perspectives in small molecule activation using low valent main group compounds*. XIII International School on Organometallic Chemistry 'Marcial Moreno Mañas,' Santiago de Compostela, June 2020 (postponed to June 2022 due to COVID-19 outbreak).

136. *Small molecule activation by silylene and aluminyl compounds*. International Symposium on Silicon Chemistry, Toulouse, July 2020 (held online due to COVID-19 outbreak).

137. *New perspectives in small molecule activation using low valent main group compounds*. International Conference on Coordination Chemistry, Rimini, July 2020 (postponed to September 2022 due to COVID-19 outbreak).

138. *New perspectives in small molecule activation using group 13 nucleophiles.* International meeting on Boron Chemistry (IMEBORON-17), Rennes, July 2020 (postponed to July 2023 due to COVID-19 outbreak).

139. *Making and breaking chemical bonds with electron rich Main Group compounds*. GDCh Wöhlentagung (German Chemical Society Inorganic Chemistry Meeting), Köln, September 2020 (held online due to COVID-19 outbreak).

140. *Making and breaking chemical bonds with electron rich Main Group compounds*. Invited lecture given at Dalhousie University, Halifax, Nova Scotia, October 2021 (held online due to COVID-19 outbreak).

141. *Making and breaking chemical bonds with electron rich Main Group compounds*. Invited lecture given at University of Helsinki, Finland, February 2022.

142. *Making and breaking chemical bonds with electron rich Main Group compounds*. Invited lecture given at Cardiff University, February 2022 (held online due to COVID-19 outbreak).

143. *Making and breaking chemical bonds with electron rich Main Group compounds*. Invited lecture given at Sheffield University, March 2022 (held online due to COVID-19 outbreak).

144. *Making and breaking chemical bonds with electron rich Main Group compounds*. Invited lecture given at Albert-Ludwigs-Universität Freiburg, July 2022.

145. C-X bond activation (X = H, C, O, F) using electron-rich anionic aluminium(I) compounds. Lecture given to the Midwest Regional Meeting of the American Chemical Society, Iowa City, IA, United States, October 2022.

146. *Making and breaking chemical bonds with electron rich Main Group compounds*. Invited lecture given at Nankai University (online), October 2022.

147. *Harvesting and delivering fluoride via molecular complexes of the Group 2 metals.* RSC Fluorine interest group PG meeting, Oxford, April 2023.

148. *Boryl and Boryloxy ligands in Main Group chemistry*. Keynote lecture at International Meeting on Boron Chemistry, Rennes, July 2023.

149. *Engineering novel patterns of germylene and stannylene reactivity*. Keynote lecture at the Chemistry of Germanium, Tin and Lead Meeting, Wellington New Zealand, August 2023.

150. Unleashing new patterns of chemical reactivity with electron rich Main Group compounds Keynote lecture at European Organometallic Meeting (EuCOMC XXV), Alcalá de Henares, Spain, September 2023.

151. Unleashing new patterns of chemical reactivity with electron rich Main Group compounds. Plenary lecture at Modern Trends in Inorganic Chemistry (MTIC XX), Bangalore, India, December 2023.

152. *Engineering novel patterns of germylene and stannylene reactivity*. Invited lecture at IIT Madras, India, December 2023.