

Tuesday 3rd April

- 1330-1345 Welcome and Introduction: **Emma Raven**
- 1345-1430 Inorganic Mechanisms Award 2017
Robert Morris (*University of Toronto*) Mechanisms of the H₂- and transfer hydrogenation of polar bonds catalyzed by iron group hydrides
- 1430-1515 Coordination and Organometallic Discussion Group Plenary Lecture, Session Chair: **Jason Love** (Edinburgh)
Connie Lu (*University of Minnesota*) Innovating bimetallic active sites for small-molecule catalysis
- 1515-1540 Tea/Coffee

Parallel Session 1

	Coordination & Organometallic and Dalton Trans Editorial Board	Coordination & Organometallic	Main Group	Reaction Mechanisms	Inorganic Biochemistry	Coordination & Organometallic
Room	OC1.05 (500)	OC0.03 (250)	OC0.02 (100)	OC0.04 (80)	OC1.06 (60)	OC0.01 (60)
Chair	Graeme Hogarth	Patrick McGowan	Michael Cowley	Alison Parkin	Claudia Blindauer	Joy Farnaby
1540-1600	John Arnold <i>UC Berkeley</i> New Catalytic & Stoichiometric Reactivity Promoted by Early Transition Metals	James Hickson <i>Imperial College London</i> Synthesis and characterisation of rare earth-transition metal heterometallic complexes with a redox-active bridging ligand	Nicola Oldroyd <i>University of Bristol</i> General, metal-free routes to polyphosphinoboranes	Samuel de Visser <i>University of Manchester</i> A novel mechanism for aldehyde deformylation by a side-on manganese(III)-peroxo complex	Pablo Carames-Mendez <i>University of Leeds</i> Breaking the rules, <i>trans</i> -dihalide ruthenium complexes as anticancer agents	Megan Seymour <i>University of Edinburgh</i> Uranium-mediated small molecule activation
1600-1620	Marina Uzelac <i>University of Strathclyde</i> New C-C bond forming strategies mediated by alkali metal manganates	Kay Burrows <i>University of Leeds</i> The influence of chirality on the spin states on Fe(II) pybox derivatives	Rachel Kahan <i>University of Manchester</i> Novel routes to B-doped polycyclic aromatic hydrocarbons	Anders Hammarback <i>University of York</i> Understanding the mechanism of Mn-catalysed C-H Bond functionalisation using time-resolved IR spectroscopy (TRIR)	Rianne Lord <i>University of Bradford</i> Organometallic iridium complexes: highly cytotoxic and selective towards colorectal cancer	Samantha Apps <i>Imperial College London</i> Dinitrogen activation of molybdenum(0) N-triphos complexes
1620-1640	Guo-Xin Jin <i>Fudan University</i> Organometallic macrocycles, cages and their application	Andreas Berkefeld <i>Eberhard Karls Universität Tübingen</i> Structure-property relationship of radical-ligand complex near-infrared chromophores of platinum	Merle Arrowsmith <i>Julius-Maximilians-Universität Würzburg</i> From borylene to diborene and back again: towards a bora-Wanzlick equilibrium?	Antonio Martínez-Martínez <i>University of Oxford</i> Valorisation of light hydrocarbons: solid-state molecular organometallic catalytic nanoreactors (SMOM-cat)	Samya Banerjee <i>University of Warwick</i> Activation of Cp* rings in rhodium(III) anticancer complexes	Robin Perutz <i>University of York</i> Self-complementary nickel halides enable intermolecular halogen bonds
1640-1700	Richard Knighton <i>University of Warwick</i> Solution, solid-state, and computational analysis of agostic interactions in a coherent set of low coordinate Rh(III) and Ir(III) complexes	Rebekah Hailes <i>University of Bristol</i> Synthesis and magnetic properties of polynickelocenes with different main chain spacers	Nicholas Phillips <i>Imperial College London</i> Bespoke dihydridoborane reagents: tuning the environment at boron through hemilabile ligation	Nathan Coles <i>University of Bath</i> Iron catalysed transfer hydrogenation and regioselective deuteration reactions	Isolda Romero-Canelon <i>University of Birmingham</i> Chemical modulation of cellular redox balance for cancer treatment	Sophie Benjamin <i>Nottingham Trent University</i> Pd(II) complexes of Lewis amphoteric halostibines: stoichiometry matters
1700-1720	Thomas Rookes <i>University of Manchester</i> Novel heavy pnictide complexes of U and Th	Sabrina Khoo <i>Nanyang Technological University, Singapore</i> B-H bond activation by an amidinate-stabilized amidosilylene: non-innocent amidinate ligand	Rory Waterman <i>University of Vermont</i> Polymerization of arsine boranes and pyrolysis to boron arsenide	Martin Wills <i>University of Warwick</i> Synthesis and catalytic applications of cyclopentadienyl iron tricarbonyl complexes	Gabriele Agonigi <i>University of Pisa</i> Reactivity of diiron complexes with a bridging amino-alkylidene ligand, and cytotoxicity results	Samantha Lau <i>Imperial College London</i> Tuneable binding of dinitrogen to a series of M•Ru (M = Mg, Al, Zn) heterobimetallic complexes
1720-1740	Matthew Leech <i>University of Sussex</i> Escaping obscurity: transition metal cyaphides	Nikolas Kaltsoyannis <i>University of Manchester</i> Very high spin ground states in Matryoshka actinide nanoclusters	Yashar Soltani <i>Cardiff University</i> Stoichiometric and catalytic C-C and C-H bond formation with B(C ₆ F ₅) ₃ via cationic intermediates	Zoë Turner <i>University of Oxford</i> Evidence for a new mechanism of ethylene polymerisation	Graeme Stasiuk <i>University of Hull</i> Synthesis and validation of a multimodal PET/fluorescence Zn sensing probes as potential imaging agents for prostate cancer	Bradley Cowie <i>University of Edinburgh</i> Reduction, fusion and oxo-group abstraction reactions of the uranyl ion

1830-1930 Dinner – Rootes Restaurant

1930-2200 Posters and Wine/Beer/Soft Drinks

Wednesday 4th April

Lecture Theatre

Session Chair: **Nick Le Brun** (UEA)

0900-0945 Inorganic Biochemistry Discussion Group Plenary Lecture
Kara Bren (University of Rochester)

A metalloprotein mimic of hydrogenase and nitrite reductase

0945-1030 Main Group Chemistry Plenary Lecture
Evamarie Hey-Hawkins (University of Leipzig)

Phosphorus meets carborane

1030-1055 Tea/Coffee

Parallel Session 2

	Coordination & Organometallic and Dalton Trans Editorial Board	Reaction Mechanisms	Main Group	Inorganic Biochemistry	Main Group
Room	OC1.05 (500)	OC0.03 (250)	OC0.02 (100)	OC0.04 (80)	OC0.01 (60)
Chair	David Mills	Mark Muldoon	Michael Ingleson	Peter Sadler	Stuart Robertson
1055-1115	Masahiro Yamashita <i>Tohoku University</i> Quantum molecular spintronics based on single-molecule magnets: single-molecule memory, spin qubits, and Rabi nutation at RT	Paul Hayes <i>University of Lethbridge</i> Rhodium mediated deoxygenative metathesis of CO	Claire Bakewell <i>Imperial College London</i> Reactions of fluoroalkenes with an Al(I) complex	Alevtina Mikhaylina <i>University of Warwick</i> Bacterial metallothioneins that respond to Zn limitation	Richard Procter <i>University of Manchester</i> A zinc catalysed Csp ² -Csp ³ Suzuki-Miyaura cross-coupling reaction
1115-1135	Laurence Kershaw Cook <i>University of Bath</i> Insights into crystal design – polymorphism and phase dependent spin-state switching	James Walton <i>Durham University</i> Catalytic reaction of organometallic ruthenium complexes	Rosalyn Falconer <i>University of Edinburgh</i> Aluminium hydrides stabilised by mixed NP donor ligands	Oliver Daubney <i>University of Birmingham</i> Misbehaving lanthanide binding sites in designed peptide trimers	Andrew Wilson <i>University of Bath</i> Reactivity of a solvent-free calcium hydride
1135-1155	Marinella Mazzanti <i>Ecole Polytechnique Fédérale Lausanne</i> Small molecule activation by multimetallic uranium complexes	Lewis Hall <i>University of York</i> Mechanistic understanding and novel applications of outer-sphere electrophilic fluorination	Lucy Brown <i>Queen's University Belfast</i> The structure of frustrated Lewis pairs in ionic liquids vs. molecular solvents	Amanda Jarvis <i>University of Edinburgh</i> Enzyme activity by design: an artificial rhodium hydroformylase	Felipe Garcia <i>Nanyang Technological University</i> Mechanochemical synthesis of main compound and complexes
1155-1215	William Blackaby <i>University of Bath</i> Synthesis and characterisation of low-coordinate Ni(I) complexes for magnetic applications and small molecule activation	Bryan Ward <i>Imperial College London</i> Magnesium-mediated sp ² C–F and sp ³ C–F bond activation	Petra Vasko <i>University of Oxford</i> Hydroboration of alkynes by an FLP: unexpected bond activation and mechanistic studies	Agnieszka Mierek-Admaska <i>University of Warwick</i> The role of seed-specific type 4 metallothionein in <i>Brassica napus</i> seeds	Ajay Venugopal <i>Indian Institute of Science Education and Research Thiruvananthapuram</i> Distinct reactivity of cationic Mg and Zn alkyls
1215-1235	Wolfgang Tremel <i>Johannes Gutenberg Universität Mainz</i> Applications of inorganic nanoparticle enzyme mimics	Mark Dowsett <i>University of York</i> Capacitance assisted sustainable electrochemical carbon dioxide capture and mineralisation	Ewan Clark <i>University of Kent</i> Phosphenium cations – exploring overlooked catalytic potential	Justin Bradley <i>University of East Anglia</i> Unprecedented iron-oxygen reactivity in a ferritin	Alex Plajer <i>University of Cambridge</i> How does changing the bridgehead affect the properties of tripodal ligands?

1235-1345 Lunch (Rootes Restaurant) and poster browsing

Session Chair: **Jose Goicoechea** (Oxford)

1345-1430 Bioinorganic Chemistry Award 2017

Thomas Ward (University of Basel)

Artificial metalloenzymes: challenges and opportunities

1430-1515 Michael Lappert Memorial Lecturer 2018

François Gabbai (Texas A & M)

Exploiting the non-innocence of antimony ligands in organometallic catalysis

1515-1545 Tea/Coffee

Parallel Session 3

	Coordination & Organometallic	Main Group and Dalton Trans Editorial Board	General Interest Mixer	Reaction Mechanisms	Inorganic Biochemistry
Room	OC1.05 (500)	OC0.03 (250)	OC0.02 (100)	OC0.04 (80)	OC0.01 (60)
Chair	John Fielden	Ian Crossley	Rebecca Melen	Ulrich Hintermair	Rianne Lord
1545-1605	Stephen Mansell <i>Heriot-Watt University</i> Applying phosphinophosphinine ligands to catalysis	Stephen Richards <i>University of Southampton</i> Molecular precursors for the growth of M_2E_3 ($M = Sb, Bi; E = Se, Te$) thin film thermoelectric materials by low pressure chemical vapour deposition	Alexander Hinz <i>University of Oxford</i> Limitations of steric bulk: towards phospho-germynes and phospho-stannynes	Cei Provis-Evans <i>University of Bath</i> Iron catalysed alkyne trimerisation at room temperature	Luca Ronconi <i>National University of Ireland Galway</i> A "sweet approach" to the targeted anticancer chemotherapy: Au-based glycoconjugates
1605-1625	Marcel Philip Lücke <i>Technische Universität Berlin</i> Bis(silylenyl)-substituted ferrocene-stabilized η^6 -arene Fe(0) complexes: synthesis, structure and catalytic application	Frank Tambornino <i>University of Oxford</i> A general synthetic approach towards heavier group 15/16 cyanate homologues $Pn=C=Ch^-$ ($Pn = P, As; Ch = S, Se$).	Richard Layfield <i>University of Manchester</i> Lanthanide SMMs: life beyond the venerable cyclopentadienyl ligand	Sebastian Pike <i>University of Cambridge</i> Titanium-oxo clusters: photoactive materials at the molecular scale	Jonathan Robson <i>Imperial College London</i> Ruthenium(II) complexes for in vitro and ex vivo sensing of carbon monoxide
1625-1645	Pau Farràs <i>NUI Galway</i> Strategies to improve stability and efficiency for solar chemicals production	Chantal Mustoe <i>University of British Columbia</i> Charge transfer in halogen bonds	Warren Piers <i>University of Calgary</i> Synthesis and reactivity of $PC_{\text{carbene}}P$ complexes of first row transition metals	James Barwick-Silk <i>University of Oxford</i> Mechanistic understanding of a selective, non-decarbonylating Rh catalyst for the hydroacylation of β -amido aldehydes	Stuart Archer <i>University of Sheffield</i> Photoinduced guanine oxidation in telomeres by dinuclear Ru(II) polypyridyl complexes
1645-1705	Patrick McGowan <i>University of Leeds</i> <i>Cu-catalysed aryl ether formation and the "caesium effect"</i>	Vadapalli Chandrasekhar <i>Tata Institute of Fundamental Research Hyderabad</i> Synthesis and reactivity of compounds containing Si=N, Si=P or P=P motifs	Mark Muldoon <i>Queen's University Belfast</i> New mechanistic insights into Pd(II) catalysed oxidation of alkenes	Muhammad Adnan Asghar <i>University of Education, Lahore</i> Exploration of hybrid phase transition materials and study of their NLO properties	Nick Le Brun <i>University of East Anglia</i> The mechanism of iron sensing by the iron-sulfur cluster regulator RirA

Session Chair: **Samuel De Visser** (Manchester)

1710-1755 Homogeneous Catalysis Award 2017

Syuzanna Harutyunyan (University of Groningen)

Lewis acids promoted copper catalyzed synthesis of functional molecules

1800-1900 Section Committee meetings

1900-1930 Pre-dinner drinks (The Slate)

1930-2300 Conference Banquet (The Slate)

Thursday 5th AprilOC1.05 Session Chair: **Michael Hill** (Bath)

0915-1000 Harrison Meldola Award 2017

Mark Crimmin (Imperial College London)

Carbon–hydrogen bond activation with intermetallic complexes

1000-1045 Centenary Prize 2017

Odile Eisenstein (*University of Montpellier*)

Analyzing reaction in transition metal species: is there an alternative to energy?

1045-1115 Tea/Coffee

Parallel Session 4

	Coordination & Organometallic and Dalton Trans Editorial Board	Main Group	Reaction Mechanisms and Dalton Trans Editorial Board	Inorganic Biochemistry	Publishing in Science
Room	OC1.05 (500)	OC0.03 (250)	OC0.02 (100)	OC0.04 (80)	OC0.01 (60)
Chair	Stephen Mansell	David Liptrot	Martin Wills	Michelle Ma	
1115-1135	David Mills <i>University of Manchester</i> Molecular magnetic hysteresis at 60 K in dysprosocenium	Martin Stanford <i>University of Edinburgh</i> Disilene vs silylsilylene: substituted analogues of the Si ₂ H ₄ rearrangement	Ulrich Hintermair <i>University of Bath</i> Watching catalysts at work: H transfer reactions investigated with real-time high resolution FlowNMR spectroscopy	Charlotte Eling <i>University of Hull</i> Dual-modal SERS/fluorescence AuNP probe for mitochondrial imaging	Andrew Shore <i>Royal Society of Chemistry</i> Publishing your inorganic chemistry research with the Royal Society of Chemistry
1135-1155	Ryan Kerr <i>University of Edinburgh</i> Cerium-NHC complexes for the activation of CO ₂ and polymerisation of biorenewable monomers	Joshua Sapsford <i>Imperial College London</i> Beyond boranes: achieving moisture-tolerant Frustrated Lewis Pair catalysis with stannylum Lewis acids	Sascha Ott <i>Uppsala University</i> Phosphaalkenes are key intermediates in the reductive cross-coupling of aldehydes to alkenes	Adam Smith <i>Imperial College London</i> Lipophilic and cationic gallium-68 chelates for imaging mitochondrial function	
1155-1215	Nils Metzler-Nolte <i>Ruhr-Universität Bochum</i> Click chemistry for the synthesis of metal-peptide bioconjugates	Haoyu Niu <i>University of Oxford</i> Coordination chemistry and reactivity of the heavier group 14 elements with bulky anionic guanidinato ligands	Luca Rocchigiani <i>University of East Anglia</i> Au(III) hydrides: unexpected interplay of <i>cis</i> - and <i>trans</i> -influence on stability, insertion reactivity and NMR chemical shifts	Jim Thomas <i>University of Sheffield</i> Targeting biomolecules with self-assembled photoactive Ru(II)-based metallomacrocycles	

OC1.05 Session Chair: **Andrew Weller** (Oxford)

1215-1300 Inorganic Reaction Mechanisms Group Plenary Lecture

Mahdi Abu-Omar (UC Santa Barbara)

Mechanistic Studies of Sustainable Catalysis

1300-1305 Concluding remarks: **Emma Raven**