

**Curriculum vitae**  
**Jose M. Goicoechea**

**Contact Details**

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**1. EMPLOYMENT**

Jan. 2023 to date Veronica Siedle Chair in Inorganic Chemistry, IU Bloomington  
July 2016 to Dec. 2022 Professor of Inorganic Chemistry, University of Oxford  
Jan. 2014 to July 2016 Associate Professor of Inorganic Chemistry, University of Oxford  
Oct. 2006 to Dec. 2013 University Lecturer in Inorganic Chemistry, University of Oxford  
Dec. 2003 to Sept. 2006 Postdoctoral Research Assistant with Professor Slavi C. Sevov  
University of Notre Dame, U.S.A.

**2. EDUCATION**

2006 M.A., Oxford. Awarded by resolution (*Honorary Degree*)  
2003 Ph.D. in Inorganic Chemistry, University of Bath, U.K.  
Thesis: *Structure, Property, and Reactivity Relations in Organometallic Aqua Complexes of Ruthenium (II)*. Supervised by Professor Michael K. Whittlesey.  
Ph.D. awarded December 3<sup>rd</sup> 2003.  
2000 *Licenciatura en Ciencias Químicas*, Universidad de Zaragoza (Spain)  
Spanish B.Sc. equivalent (Honours).

**3. PUBLICATIONS**

152 papers in internationally recognized peer-reviewed journals (140 since the start of independent research career; see Publications List for details). An additional four manuscripts are currently in preparation or under consideration. Citations (WoS): 5,662; *h*-index: 44. Citations (Google Scholar): 7260; *h*-index: 50.

**4. RECENT INVITED PAPERS AND LECTURES**

A full list of invited lectures and seminars is available on request.

- Invited lecturer 45<sup>th</sup> International Conference on Coordination Chemistry (Fort Collins; July 28 – Aug. 3 2024).
- Keynote speaker 14<sup>th</sup> International Conference on Heteroatom Chemistry (Tianjin, China; July 14–19 2024).
- Invited lecturer ACS Spring 2024 Meeting (New Orleans; March 17–21 2024).
- Invited lecturer CSC 2023 Meeting (Vancouver; June 4–8 2023).
- Invited lecturer ACS Spring 2023 Meeting (Indianapolis; March 26–30 2023).
- Invited lecturer ACS Fall 2022 Meeting (Chicago; August 21–25 2022).
- Invited lecturer 23<sup>rd</sup> Intl. Conference on Phosphorus Chemistry (ICPC23; virtual; July 5–9 2021)
- Invited lecturer 13<sup>th</sup> Intl. Conference on Heteroatom Chemistry (ICHAC; Prague; June 30–July 5 2019).
- Invited lecturer Intl. Conference on Chemical Bonding (Kauai; July 13–17 2018).
- Invited speaker 2017 Frankland Symposium (Imperial College London; June 21 2017).

- Invited speaker 12<sup>th</sup> Intl. Conference on Heteroatom Chemistry (ICHAC; Vancouver; June 11–16 2017).
- Invited speaker 27<sup>th</sup> Intl. Conference on Organometallic Chemistry (ICOMC; Melbourne; July 17–27 2016).
- Invited speaker 2016 Inorganic Gordon Research Conference (Biddeford, Maine; June 18–24 2016).
- 2014 “Organometallics Young Investigator Fellow” ACS San Francisco meeting (Aug. 10–14 2014).  
<http://acsdic.org/wordpress/2014/05/organometallics-announces-winners-of-the-senior-and-young-investigator-fellowships/>
- Selected speaker for ICC41 “Rising Star” symposium (Singapore; July 21–25 2014).
- University seminar invitations (U.S.A./Canada): McMaster, Brock, University of Illinois Champaign-Urbana, University of Toronto, University of Pennsylvania, UC Riverside, UC Berkeley, Notre Dame, Rice, Texas A&M, University of Missouri, UC San Diego.
- University seminar invitations (international): VU Amsterdam (June 3 2014), Université Paul Sabatier, Toulouse (March 30 2017), Universidad de Zaragoza (September 28 2017), Charles University, Prague (October 9 2017), Universidad de Alcalá (April 12 2018), Universidad de Almería (April 14 2018), IU Bloomington (December 3 2018), ETH Zürich (May 14 2019), Universität Bern (December 3 2019), York University, CA (November 5 2020), and Nankai (October 15 2021).
- University seminar invitations (Germany): Freiburg (×2), Karlsruhe (×2), Essen, Würzburg (×2), Regensburg (×2), LMU Munich (×2), Tübingen, Saarbrücken, Marburg, Bonn, Stuttgart, Göttingen, TU Braunschweig, Heidelberg, Dresden.
- University seminar invitations (U.K.): Oxford, Bath (×2), Sheffield, Manchester, Heriot-Watt (×2), Sussex, Bristol, UCL, York (×3), Edinburgh, Nottingham (×2), Southampton, Leeds, Imperial, Cardiff, Strathclyde, Warwick, Newcastle and the University of South Wales.
- 2008 McCamley memorial lecturer at the University of York (October 22<sup>nd</sup> 2008).

## 5. UNDERGRADUATE TEACHING

### 5.1. Teaching responsibilities

- *Undergraduate teaching (Indiana University)*. CHEM-J117: Principles of Chemistry and Biochemistry for Science Majors (Fall 2023).
- *Undergraduate teaching (Oxford)*. Between 2006 and 2022 Goicoechea delivered four lecture courses at the departmental level: 1) *Symmetry II* (2<sup>nd</sup> year course; basic group theory and its chemical applications), 2) *Periodic trends in Main Group Chemistry* (2<sup>nd</sup> year course; descriptive chemistry of the *p*-block elements), 3) *Acids, Bases and Solution Equilibria* (1<sup>st</sup> year course; solution reactivity of inorganic compounds), and 4) *Modern Main-Group chemistry* (3<sup>rd</sup> year course; recent developments in the chemistry of the *s*- and *p*-block elements). The latter course was entirely new to the Oxford Chemistry syllabus and was developed in collaboration with Professor Simon Aldridge. In addition, JMG was a senior laboratory demonstrator for the undergraduate practical course.
- *Graduate teaching (Indiana University)*. CHEM-C636: Organometallic Chemistry and Catalysis Syllabus (Spring 2024).
- *Graduate teaching (Oxford)*. As a part of the EPSRC OxICFM CDT, Goicoechea taught courses on main group chemistry, organometallic chemistry, reactive molecular compounds, and single-crystal X-ray diffraction.

### 5.2. Collegiate teaching responsibilities

Fellow and Inorganic Chemistry tutor at Lady Margaret Hall College (LMH), Oxford (October 2006 to date). Responsibilities included the tutorial teaching of Inorganic Chemistry to all LMH Chemistry undergraduate students (approx. 22 undergraduates; 6 weighted hours/week), setting and marking collection papers and the moral supervision of Chemistry undergraduates at LMH.

## 6. SUPERVISION AND GRADUATE TEACHING

- JMG currently supervises *eight* D.Phil./Ph.D. students and *two* PDRAs. *Fifteen* D.Phil. students (Binbin Zhou, Mark Irwin, Caroline Knapp, Robert Turbervill, Gabriela Espinoza Quintero, Andrew Jupp, Jordan Waters, David

Lo, Érica Neves de Faria, Daniel Wilson, Oliver Townrow, Joey Feld, Lingyu Liu, Jack Howley, Eric Yang) have graduated the JMG group since October 2006.

- *Eleven* PDRAs have since left the group (Mark Denning, Thomas Robinson, Alex Hinz, Sebastian Bestgen, Frank Tambornino, Meera Mehta, Roy Schreiber, Stefan Mitzinger, Josh Abbenseth, Stephanie Urwin, Lilian Szych).
- At Oxford Goicoechea also supervised *over forty* Part II (M.Chem.) and *ten* visiting undergraduate students.

## 7. EXAMINING

### 7.1. Undergraduate Examination responsibilities

Part IA Inorganic Chemistry examiner: 2021–2022, 2017–2018, 2013–2014 and 2008–2009. Part IB Inorganic Chemistry examiner: 2018–2019, 2014–2015 and 2009–2010. Part II Inorganic Chemistry examiner: 2019–2020, 2015–2016 and 2010–2011.

### 7.2. Graduate Examination responsibilities

External examiner for *seventeen* U.K. Ph.D. students: York (December 7<sup>th</sup> 2012), Bristol (December 5<sup>th</sup> 2013), Nottingham (August 7<sup>th</sup> 2015), Strathclyde (December 14<sup>th</sup> 2016), Leeds (August 30<sup>th</sup> 2017), St. Andrews (September 8<sup>th</sup> 2017), Bristol (October 31<sup>st</sup> 2017), Sheffield (November 17<sup>th</sup> 2017), Edinburgh (May 25<sup>th</sup> 2018), Kent (October 8<sup>th</sup> 2018), Newcastle (November 16<sup>th</sup> 2018), Manchester (June 11<sup>th</sup> 2018), Nottingham (November 20<sup>th</sup> 2019), Cardiff (May 18<sup>th</sup> 2020), Imperial (September 27<sup>th</sup> 2021), UCL (February 21<sup>st</sup> 2022), Edinburgh (May 25<sup>th</sup> 2022); and two Masters students: Cambridge (July 29<sup>th</sup> 2016), Edinburgh (December 16<sup>th</sup> 2023).

External Ph.D. examiner for *eight* international students: IIT Madras, Nanyang Technological University (×2), Universidad de Zaragoza (×2), Universidad de Alcalá, University of British Columbia, Monash University.

Internal examiner for *thirty-two* D.Phil. students and *one* M.Sc. student.

D.Phil. Transfer of Status (ToS) and Confirmation of Status (CoS) examiner (>50 students).

## 8. ADMINISTRATION

### 8.1 Departmental administrative duties (Indiana University)

- Member of Policy Committee (August 2023 to date)
- Member of Graduate Admissions Committee (August 2023 to date)

### 8.2. Departmental administrative duties (Oxford; 2006-2022)

- ICL representative on the appointment panel for an APTF in Inorganic Chemistry (2021).
- Associate Director (Student Experience) OxICFM CDT. April 2019 to Oct. 2022.
- Academic representative on the Equality and Diversity Committee. Oct. 2019 to Oct. 2022.
- Inorganic Chemistry representative on the Chemistry Teaching Committee. Oct. 2016 to Sept. 2019.
- Representative on Chemistry Departmental Committee. Oct. 2016 to Sept. 2018.
- ICL seminar organizer. Oct. 2016 to Sept. 2018.
- Representative on the appointment board for the ICL Teaching Laboratory Supervisor and Manager (Interviews May 13<sup>th</sup> 2015).
- Academic representative on the Chemistry Consultative Committee. Oct. 2014 to July 2016.
- Academic representative on the Inorganic Practical Committee. Spring 2009 to date.
- Academic representative for the Inorganic Chemistry Laboratory (ICL) on the Chemists' Joint Consultative Committee (CJCC). Oct. 2008 – June 2010.
- ICL representative on the appointment board for a URL position in Inorganic Chemistry associated with Keble College, Oxford (Interviews June 3<sup>rd</sup> 2008).

### 8.3. College administrative duties (Lady Margaret Hall; 2006-2022)

- College representative on the appointment panel for an APTF in Organic Chemistry (2022).
- College advisor for D.Phil. students.

- Dean (Oct. 2013 – Sept. 2016).
- Committee membership: Member of Governing Body (GB; permanent), Education Committee (EC; permanent), Library Steering Committee (TT 2017 to date), Grants and Bursaries Committee (Oct. 2016 to date), Academic Policy Committee (APC; Oct. 2008 – Sept. 2011) and Finance Committee (FC; Oct. 2011 – Sept. 2014).

## 9. AWARDS AND PRIZES

- 2024 Rafael Usón Lectureship, 15<sup>th</sup> International School on Organometallic Chemistry, Alicante.
- EPSRC Doctoral Prize awarded to Oliver Townrow (providing salary/consumables for a six-month PDRA).
- 2020 Friedrich Wilhelm Bessel Research Award from the Alexander von Humboldt Foundation.
- Winner of the 2018 RSC Main Group Chemistry Award  
(<http://www.rsc.org/ScienceAndTechnology/Awards/MainGroupChemistryAward/Index.asp>).
- A PDRA from the JMG group (Alexander Hinz) was awarded the RSC Dalton Emerging Investigator Award (<http://www.rsc.org/ScienceAndTechnology/Awards/DaltonYoungResearchersAward/>).
- A D.Phil. student from the JMG group (Andrew Jupp) was awarded the Reaxys Ph.D. prize (<http://www.elsevier.com/connect/3-winners-announced-for-the-2015-reaxys-phd-prize>).
- Selected as an “Organometallics Young Investigator Fellow” by the ACS journal Organometallics to speak the 2014 ACS National Meeting in San Francisco (Aug. 10<sup>th</sup>–14<sup>th</sup> 2014).
- Invited speaker for prestigious lectures including the ICC41 “Rising Star” symposium and the University of York McCamley Memorial lecture.
- A D.Phil. student from the JMG group (Robert Turbervill) was recently awarded a thesis commendation by the University of Oxford (<http://www.wadham.ox.ac.uk/news/2014/april/a-catalyst-for-success>).
- EPSRC Doctoral Prize awarded to Rob Turbervill (providing salary/consumables for a six-month PDRA).
- Awarded the Dalton prize for best oral presentation at MICRA 2008 (Leicester, September 8<sup>th</sup>–10<sup>th</sup> 2008).
- Goicoechea group students are the recipients of numerous departmental prizes for academic work and winners of several poster/oral presentation prizes at meetings in the U.K. and abroad.

## 10. OTHER PROFESSIONAL ACTIVITIES

### 10.1. Journal refereeing

Journal referee for over twenty scientific publications including, amongst others, *Science*, *Nature Chem.*, *Nature Commun.*, *J. Am. Chem. Soc.*, *Angew. Chem.*, *Chem. Sci.*, *Chem. Commun.*, *Organometallics*, *Inorg. Chem.* and *Dalton Trans.*

### 10.2 Proposal refereeing

Proposal referee for the EPSRC, ERC, Leverhulme Trust, Royal Society, DFG, SNSF, IRF, the ACS Petroleum Research Fund, and the Austrian Science Fund (FWF Der Wissenschaftsfonds).

### 10.3. Professional Memberships and Affiliations

Member of the American Chemical Society and the Royal Society of Chemistry.

Member of the Editorial Advisory Board of *Organometallics*.

Member of the International Editorial Advisory Board of *Helvetica Chimica Acta*.

Chair of RSC Main Group Chemistry Interest Group (2018 to date).

Treasurer and Secretary of RSC Coordination and Organometallic Chemistry Discussion Group (2015–2018)

### 10.4. Conference organization

Joint organizer of the 2007 RSC Dalton Division Southwest Region Symposium (Oxford, September 19<sup>th</sup> 2007), the 2010 RSC Main Group Chemistry Interest Group Meeting (LMH, July 9<sup>th</sup> 2010) and the 2013 RSC Main Group Chemistry Interest Group Meeting (Queen’s College, September 27<sup>th</sup> 2013), 2019 RSC Main Group Chemistry Interest Group Meeting (London, September 12<sup>th</sup> 2010). Organizer of the RSC Coordination and Organometallic Chemistry Discussion Group Meeting (Oxford, September 3<sup>rd</sup>–4<sup>th</sup> 2015).

## 11. FUNDING

National Science Foundation (*PI*; \$575k; 2348777). Title: Novel Molecules and Solids Derived from the Cyaphide Ion. Three-year grant to work on the chemistry  $CP^-$  and  $CAs^-$  and their use in cross-coupling reactions and the synthesis of multi-metallic complexes. Aug. 2024–Sept. 2027.

EPSRC Strategic Equipment Award (*PI*; £688k; EP/V028995/1). Title: *A single-crystal X-ray diffractometer for the structural analysis of molecular compounds, macromolecules and materials*. Grant for the purchase of a new single crystal X-ray diffractometer for Oxford Chemistry.

John Fell Fund (*PI*; £212k). Title: *A single-crystal X-ray diffractometer for the structural analysis of molecular compounds, macromolecules and materials*.

EPSRC Standard Research (*PI*; £410.3k over a three-year period; EP/T010681/1). Title: *Beyond cyanide: Future synthons based on the cyaphide and cyarside ions for the synthesis of designer magnetic coordination polymers*. Three-year grant to work on the chemistry  $CP^-$  and  $CAs^-$  and their use as building blocks for the synthesis of extended solids with designer magnetic properties. Jan. 2020–Dec. 2022.

EPSRC Standard Research (*PI*; £364.6k over a three-year period; EP/M027732/1). Title: *Mapping the chemistry of phosphorus-containing analogues of urea. From fundamental chemistry to high-performance compounds and materials*. Proposal was awarded for a three-year postdoctoral research associate to work on the chemistry of phosphinecarboxamides (phosphorus-containing analogues of urea). Oct. 2015–March 2019.

EPSRC Standard Research (*PI*; £349.4k over a three-year period; EP/K039954/1). Title: *Exploring alternative phosphorus and heavier pnictogen feedstocks for bespoke chemical transformations*. The proposal was awarded for a three-year postdoctoral research associate to work on the chemistry of novel organophosphorus compounds. Nov. 2013–Oct. 2016. Expired.

EPSRC Doctoral Prize award (*PI*; £25k over a six month period). Title: *Redox active “carbon-copy” ligands as building blocks for solids and supramolecular assemblies*. Awarded to a former D.Phil. in the Goicoechea group (Robert Turbervill) for a project focused on employing main-group organometallic compounds for the synthesis of novel materials. Feb. 2014–Sept. 2014. Expired.

Royal Society International Exchange Scheme (*PI*; £11.5k over a two-year period). Title: *Unsaturated molecular complexes containing both silicon and phosphorus*. In collaboration with Professor David Scheschkewitz (Universität des Saarlandes). March 2013–March 2015. Expired.

EPSRC First Grant Scheme (*PI*; £282k over a two-year period; EP/F00186X/1). Title: *Synthesis of novel nanometric clusters by controlled oxidation of negatively-charged metal species*. The proposal was awarded for a two-year postdoctoral research associate to work on the chemistry of negatively-charged metal clusters. Expired.

Royal Society Research Grant (*PI*; £15k). Title: *Controlled oxidation of highly-reduced anionic metal species: cluster, molecular alloy and nanoparticle synthesis*. Expired.

EPSRC Centre for Doctoral Training (**Co-investigator**; £6,241k; EP/S023828/1). Title: *Inorganic Chemistry for Future Manufacturing (OxICFM)*. The OxICFM CDT, centred in Oxford University's Department of Chemistry, and involving eight key industrial stakeholders, two STFC national facilities, and faculty from Oxford Materials, Physics and Engineering seeks to address a UK-wide need for the training of doctoral scientists in the synthesis of inorganic materials relevant to the future prosperity of the manufacturing sector. Professors Simon Aldridge (*PI*), Simon J. Clarke, Jose M. Goicoechea, Andrew S. Weller (co-investigators). April 2019–September 2027.

Leverhulme Trust (**Co-investigator**; £278k; RPG-2018-246). Title: *Turning Aluminium Chemistry on its Head: Aluminyl Nucleophiles*. Collaborative proposal with Professor Simon Aldridge (Oxford) awarded for a 46 month

period. The project focuses on the synthesis and reactivity of aluminyl anions which act as nucleophiles. Oct. 2018–March 2022.

EPSRC Standard Research (**Co-investigator**; £151k; EP/I020691/1). Title: *Multi-disciplinary Centre for In-situ Processing Studies (CIPS)*. Expired.

John Fell Fund (**Co-investigator**; £116k). Title: *Coupling an Electrospray Mass Spectrometer with an Inert Atmosphere Glove Box: A Unique Resource For Oxford*. Expired.

## 12. EXTERNAL CONSULTANCY WORK

Independent third-party expert consulting for BASF regarding synthetic aspects of organophosphorus chemistry, specifically with regard to the BASF process patents EP 1 135 399 and EP 1 648 908.

## 13. COLLABORATIONS

Simon Aldridge (Oxford), John Arnold (UC Berkeley), Guy Bertrand (UC San Diego), Duncan Carmichael (École Polytechnique), Hansjörg Grützmacher (ETH Zurich), John McGrady (Oxford), Manfred Scheer (University of Regensburg), David Scheschkewitz (Universität des Saarlandes), Sven Schneider (Göttingen) Matthias Tamm (TU Braunschweig), Andrew Weller (Oxford), Robert Wolf (University of Regensburg).

## 14. PUBLICATION LIST

### Publications since 2006

152) *Mixed-Valence Iron Complexes Containing End-On Bridging Cyaphide Ions*. E. S. Yang, A. García-Romero, C. Hu, J. Fletcher, C. M. Thomas, J. M. Goicoechea\*, *J. Am. Chem. Soc.* **2024**, *146*, 29207–29213.

151) *A Transient Iron Carbide Generated by Cyaphide Cleavage*. D. C. Wannipurage, E. S. Yang, A. D. Chivington, J. Fletcher, D. Ray, N. Yamamoto, M. Pink, J. M. Goicoechea\*, J. M. Smith\* *J. Am. Chem. Soc.* **2024**, *146*, 27173–27178.

150) *Isolation and characterization of a two-coordinate phosphinidene oxide*. C. Hu, N. H. Rees, M. Pink, J. M. Goicoechea\* *Nat. Chem.* **2024**, *16*, 1855–1860.

149) *Carbamoylphosphinidene: A Phosphorus Analogue of Carbonyl Nitrene*. B. Lu, J. Jiang, L. Wang, A. R. Jupp, J. M. Goicoechea\*, S. Liu, Z. Li, M. Zhou, X. Zeng\* *J. Am. Chem. Soc.* **2024**, *146*, 18699–18705.

148) *A Phosphanyl Phosphagermene and its Reactivity*. J. Feld, E.S. Yang, S. J. Urwin, J. M. Goicoechea\* *Chem. Eur. J.* **2024**, e202401736.

147) *Trapping an Elusive Phosphanyl-Phosphaalumene*. L. S. Szych, L. Denker, J. Feld, J. M. Goicoechea\* *Chem. Eur. J.* **2024**, *30*, e202401326.

146) *Ligand Centered Reactivity of a Transition Metal Bound Geometrically Constrained Phosphine*. A. J. King, J. M. Goicoechea\* *Chem. Eur. J.* **2024**, *30*, e202400624

145) *Softer is Better for Titanium. Molecular Titanium Arsenido Anions Featuring Ti≡As Bonding and a Terminal Parent Arsinidene*. M. Bhunia, J. Mohar, C. Sandoval-Pauker, D. Fehn, D.; E. S. Yang, M. Gau, J. M. Goicoechea, A. Ozarowski, J. Krzystek, J. Telsler, K. Meyer, D. J. Mindiola\*, *J. Am. Chem. Soc.* **2024**, *146*, 3609–3614.

- 144) *Metal Influence on Cyaphide-Azide 1,3-Dipolar Cycloaddition Reactions: Aromaticity and Activation Strain*. D. González-Pinardo, J. M. Goicoechea\*, I. Fernández\*, *Chem. Eur. J.* **2024**, *30*, e202303977.
- 143) *Controlled Cluster Expansion at a Zintl Cluster Surface*. O. P. E. Townrow, A. S. Weller\*, J. M. Goicoechea\*, *Angew. Chem. Int. Ed.* **2024**, *63*, e202316120.
- 142) *Aluminium and Gallium Silylimides as Nitride Sources*. A. Heilmann, A. M. Saddington, J. M. Goicoechea\*, S. Aldridge\*, *Chem. Eur. J.* **2023**, *29*, e202302512.
- 141) *Hydroelementation and Phosphinidene Transfer: Reactivity of Phosphagermenes and Phosphastannenes Towards Small Molecule Substrates*. M. J. Reveley, J. Feld, D. Temerova, E. S. Yang, J. M. Goicoechea\*, *Chem. Eur. J.* **2023**, *29*, e202301542.
- 140) *Phosphinecarboxamide based InZnP QDs – An Air Tolerant Route to Luminescent III–V Semiconductors*. Y. Wang, J. Howley, E. N. Faria, C. Huang, S. Carter-Searjeant, S. Fairclough, A. Kirkland, J. J. Davis, F. Naz, M. Tariq Sajjad, J. M. Goicoechea\*, M. Green\*, *Nanoscale Horiz.* **2023**, *8*, 1411–1416.
- 139) *An Inorganic Click Reaction for the Synthesis of Interlocked Molecules*. A. Mapp, J. Wilmore, P. D. Beer\*, J. M. Goicoechea\*, *Angew. Chem. Int. Ed.* **2023**, *62*, e202309211.
- 138) *Cyaphide-Azide 1,3-Dipolar Cycloaddition Reactions: Scope and Applicability*. E. S. Yang, A. Mapp, A. Taylor, P. D. Beer\*, J. M. Goicoechea\*, *Chem. Eur. J.* **2023**, *29*, e202301648.
- 137) *Ga–C and Ga–Ga bond formation using a NON-ligated gallyl nucleophile*. M. Edwards, J. Hicks, C. McManus, J. M. Goicoechea\*, S. Aldridge\*, *Polyhedron* **2023**, 116520.
- 136) *Reactivity of a Strictly T-shaped Phosphine Ligated by an Acridane Derived NNN Pincer Ligand*. A. J. King, J. Abbenseth\*, J. M. Goicoechea\*, *Chem. Eur. J.* **2023**, *29*, e202300818.
- 135) *Putting Cyaphide in its Place: Determining the Donor/Acceptor Properties of the  $\kappa$ -Cyaphido Ligand*. E. S. Yang, E. Combey, J. M. Goicoechea\*, *Chem. Sci.* **2023**, *14*, 4627–4632.
- 134) *Metal-Mediated Oligomerization Reactions of the Cyaphide Anion*. E. S. Yang, D. W. N. Wilson, J. M. Goicoechea\*, *Angew. Chem. Int. Ed.* **2023**, *62*, e202218047.
- 133) *The Chemistry of the Cyaphide Ion*. T. Görlich, P. Coburger, E. S. Yang, J. M. Goicoechea\*, H. Grützmacher\*, C. Müller\*, *Angew. Chem. Int. Ed.* **2023**, *62*, e202217749.
- 132) *An Aluminium Imide as a Transfer Agent for the  $[NR]^{2-}$  Function via Metathesis Chemistry*. A. Heilmann, P. Vasko, J. Hicks, J. M. Goicoechea\*, S. Aldridge\*, *Chem. Eur. J.* **2023**, *29*, e202300018.
- 131) *Formation, Reactivity and Decomposition of Aryl Phospha-Enolates*. S. J. Urwin\*, J. M. Goicoechea\* *Chem. Eur. J.* **2023**, *29*, e202203081
- 130) *Dioxygen Splitting by a Tantalum(V) Complex Ligated by a Rigid, Redox Non-innocent Pincer Ligand*. J. Underhill, E. S. Yang, T. Schmidt-Räntsch, W. K. Myers, J. M. Goicoechea\*, J. Abbenseth\* *Chem. Eur. J.* **2023**, *29*, e202203266.

- 129) *Synthesis, Structure and Reactivity of a Cyapho(dicyano)methanide Salt*. C. Hu, J. M. Goicoechea\*, *Angew. Chem. Int. Ed.* **2022**, *61*, e202208921.
- 128) *Coordination and Homologation of CO at Al(I): Mechanism and Chain Growth, Branching, Isomerization, and Reduction*. A. Heilmann, M. M. D. Roy, A. E. Crumpton, L. P. Griffin, J. Hicks, J. M. Goicoechea\*, S. Aldridge\*, *J. Am. Chem. Soc.* **2022**, *144*, 12942–12953.
- 127) *Revealing the Role of the Cyaphide Ion as a Bridging Ligand in Heterometallic Complexes*. E. S. Yang, J. M. Goicoechea\*, *Angew. Chem. Int. Ed.* **2022**, *61*, e202206783.
- 126) *Zintl cluster supported low coordinate Rh(I) centers for catalytic H/D exchange between H<sub>2</sub> and D<sub>2</sub>*. O. P. E. Townrow, S. B. Duckett, A. S. Weller\*, J. M. Goicoechea\*, *Chem. Sci.* **2022**, *13*, 7626–7633.
- 125) *Metal-mediated decarbonylation of phosphanyl-phosphaketenes to afford phosphanyl-phosphinidine complexes*. J. Feld, J. M. Goicoechea\*, *Z. Anorg. Allg. Chem.* **2022**, *649*, e202200134. Invited submission for an issue commemorating Cameron Jones' 60<sup>th</sup> birthday
- 124) *Reduction of tert-butylphosphaalkyne and trimethylsilylnitrile with magnesium(I) dimers*. D. W. N. Wilson, D. D. L. Jones, C. D. Smith, M. Mehta, C. Jones\*, J. M. Goicoechea\*, *Dalton Trans.* **2022**, *51*, 898–903.
- 123) *Pincer-supported gallium complexes for the catalytic hydroboration of aldehydes, ketones and carbon dioxide*. L. Liu, S.-K. Lo, C. D. Smith, J. M. Goicoechea\*, *Chem. Eur. J.* **2021**, *27*, 17379–17385.
- 122) *Synthesis, structure and reactivity of a cyapho-cyanamide salt*. D. Ergöçmen, J. M. Goicoechea\*, *Angew. Chem. Int. Ed.* **2021**, *60*, 25286–25289.
- 121) *Coinage metal alumanyl complexes: probing regiochemistry and mechanism in the insertion and reduction of carbon dioxide*. C. McManus, J. Hicks, X. Cui, L. Zhao\*, G. Frenking\*, J. M. Goicoechea\*, S. Aldridge\*, *Chem. Sci.* **2021**, *12*, 13458–13468.
- 120) *Thermoneutral N–H bond activation of ammonia by a geometrically constrained phosphine*. J. Abbeneth\*, O. P. E. Townrow, J. M. Goicoechea\*, *Angew. Chem. Int. Ed.* **2021**, *60*, 23625–23629.
- 119) *Probing the extremes of covalency in M–Al bonds: Lithium and zinc alumanyl compounds*. M. M. D. Roy, J. Hicks, P. Vasko, A. Heilmann, A.-M. Baston, J. M. Goicoechea\*, S. Aldridge\*, *Angew. Chem. Int. Ed.* **2021**, *60*, 22301–22306.
- 118) *Contrasting E–H bond activation pathways of a phosphanyl-phosphagallene*. J. Feld, D. W. N. Wilson, J. M. Goicoechea\*, *Angew. Chem. Int. Ed.* **2021**, *60*, 22057–22061.
- 117) *A phosphorus analog of a bimetallic dinitrogen complex*. J. Abbeneth\*, and J. M. Goicoechea\*, *Chem* **2021**, *7*, 1698–1700. Preview article for: *Chem* **2021**, *7*, 1952–1962.
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