

## **Prof. Nicholas F. Chilton FRSC FRACI FHEA**

Professor of Chemistry

Research School of Chemistry, The Australian National University

Professor of Computational and Theoretical Chemistry

Department of Chemistry, The University of Manchester

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### **Summary**

General expertise concerning magnetism, spin dynamics, theoretical and computational chemistry, quantum mechanics and magnetic resonance/optical spectroscopies.

**H-index of 63** and **184 publications** with over **17,800 citations** in journals such as *Science*, *Nature*, *Nature Chem.*, *J. Am. Chem. Soc.*, *Nature Commun.*, *Angew. Chem.*, and *Chem. Sci.* International recognition with numerous invited lectures.

### **Education**

2013 – 2015

**Ph.D.**

School of Chemistry, The University of Manchester, UK

Prof. E. J. L. McInnes and Prof. R. E. P. Winpenny

“Magnetic Anisotropy of Transition Metal Complexes”

2008 – 2011

**B.Sc. Adv. Hons. (1<sup>st</sup> class)**

School of Chemistry, Monash University, Australia

Prof. S. R. Batten and Prof. K. S. Murray

### **Employment**

2023 – current

**Professor of Chemistry**

Research School of Chemistry, The Australian National University, Australia

2022 – current

**Professor of Computational and Theoretical Chemistry**

Department of Chemistry, The University of Manchester, UK

2019 – 2022

**Senior Lecturer**

Department of Chemistry, The University of Manchester, UK

2019 – 2023

**Royal Society University Research Fellow**

Department of Chemistry, The University of Manchester, UK

2018 – 2019

**Presidential Fellow**

School of Chemistry, The University of Manchester, UK

2016 – 2018

**Ramsay Memorial Fellow**

School of Chemistry, The University of Manchester, UK

2016 – 2016

**Research Fellow**

School of Chemistry, The University of Manchester, UK

2015 – 2015

**Post-Doctoral Research Associate**

EPSRC EPR National Facility, The University of Manchester, UK

2012 – 2012,  
2008 – 2010

**Research Assistant**

School of Chemistry, Monash University, Australia

## Awards

2023	Zasshikai Lectureship Prize, The University of Tokyo, Japan
2022	Philip Leverhulme Prize, The Leverhulme Trust
2021	Harrison-Meldola Memorial Prize, Royal Society of Chemistry, UK
2020	Distinguished Achievement Medal: Teacher of the Year, The University of Manchester, UK
2019 – 2023	University Research Fellowship, The Royal Society, UK
2019	Olivier Kahn International Award, European Institute of Molecular Magnetism
2018 – 2022	Presidential Fellowship, The University of Manchester, UK
2018	Wilsmore Fellowship and Honorary Lecturer, University of Melbourne, Australia
2016 – 2018	British Ramsay Memorial Fellowship, Ramsay Memorial Trust, UK
2016	Reaxys Ph.D. Prize Finalist
2015	Dalton Division Delegation to SILQCOM, Royal Society of Chemistry, UK
2015	Dalton Young Researchers Award, Royal Society of Chemistry, UK
2015	Young Scientist, 65 <sup>th</sup> Lindau Nobel Laureates Meeting
2013 – 2015	President's Doctoral Scholar Award, The University of Manchester, UK
2011	Jubilee Honours Scholarship, Monash University, Australia
2008	Summer Research Scholarship, Monash University, Australia

## Grants

2026 – 2030	ARC (DP260102523) "Discovery and optimisation of rare-earth quantum materials", Australia
2023 – 2026	Leverhulme Trust "Defining the Electronic Structures of (Hetero)Metallocene Anions", UK
2023 – 2026	Leverhulme Trust "Next-generation molecule-based magnetic materials", UK
2023 – 2026	Philip Leverhulme Prize, The Leverhulme Trust, UK
2022 – 2023	Royal Society URF Enhancement Funds, UK
2020 – 2025	ERC Starting Grant (ERC-2019-STG-851504) "Chemical Control of Vibronic Coupling for Magnetic Materials", EU
2019 – 2024	EPSRC (EP/S033181/1) "Magnetic Properties Measurement System for Manchester and National EPR Facility", UK
2019 – 2023	Royal Society URF (URF191320) "Chemical Control of Vibronic Coupling", UK
2018 – 2021	EPSRC (EP/R02605X/1) "Targeting Molecular Magnetic Hysteresis at Liquid Nitrogen Temperatures", UK
2016 – 2018	Ramsay Memorial Trust "Wavefunction engineering in lanthanide complexes", UK
2016 – 2019	EPSRC (EP/P002560/1) "Designing Highly Axial Lanthanide Single Molecule Magnets", UK
2016 – 2019	EPSRC (EP/N007034/1) "Non-classical paramagnetic susceptibility and anisotropy in lanthanide coordination complexes: a combined experimental and theoretical study", UK

## Lectures

### Upcoming

Invited:	2026 International Conference on the f-Elements, Manchester, UK
Keynote:	2026 RACI Congress, Perth, Australia

### Past

Contributed	2026 OZRE '26, Canberra, Australia
Keynote:	2025 RACI 2 <sup>nd</sup> Australian Materials Chemistry Conference, Gold Coast, Australia
Invited:	2025 Molecular Modelling Conference, Melbourne, Australia
Invited:	2025 Manipulating Molecular Electronic Properties by Vibrational Excitations: Novel Spectroscopies and Microscopies, 838 <sup>th</sup> Heraeus seminar, Bad Honnef, Germany

Invited: 2025 APS Physics Global Summit, Anaheim, USA  
 Dept.: 2025 University of California, Irvine, USA  
 Dept.: 2025 Donostia International Physics Centre, Spain  
 Dept.: 2025 University of Florence, Florence, Italy  
 Invited: 2025 AIP Condensed Matter and Materials Meeting, Brisbane, Australia  
 Invited: 2024 RACI Inorganic Chemistry Conference, Sydney, Australia  
 Invited: 2024 Rare-Earth Asia Pacific Network  
 Invited: 2024 Advances in Functional Solids, Kharagpur, India  
 Keynote: 2024 Modern Trends in Molecular Magnetism, Bangalore, India  
 Dept.: 2024 The University of Sydney, Australia  
 Contributed: 2024 European Conference on Molecular Magnetism, Krakow, Poland  
 Invited: 2024 Young European Conference on Molecular Magnetism, Krakow, Poland  
 Dept.: 2024 The University of New South Wales, Australia  
 Invited: 2024 From Fundamentals of Molecular Spin Qubit Design to Molecule-Enabled Quantum Information, Telluride, USA  
 Tutorial: 2024 Winter School on Quantum Information Science for Chemistry, Los Angeles, USA  
 Contributed: 2024 OZRE '24, Perth, Australia  
 Prize: 2023 The University of Tokyo, Japan  
 Tutorial: 2023 The University of Tokyo, Japan  
 Dept.: 2023 University of Rennes, Rennes, France  
 Invited: 2023 RSC Joliot-Curie Conference, Southampton, UK  
 Invited: 2023 Copenhagen Molecular Quantum Information Discussions, Denmark  
 Dept.: 2023 The Australian National University, Canberra, Australia  
 RSC Prize: 2023 University of Oxford, Oxford, UK  
 RSC Prize: 2022 University of St Andrews, St Andrews, UK  
 RSC Prize: 2022 Durham University, Durham, UK  
 Contributed: 2022 Actinides Revisited, Dresden, Germany  
 Dept.: 2022 Florida State University, Tallahassee, USA  
 Plenary: 2022 29<sup>th</sup> Rare Earth Research Conference, Philadelphia, USA  
 Tutorial: 2022 Rare Earth Research Conference Summer School, Philadelphia, USA  
 Dept.: 2022 University of California, Santa Barbara, USA  
 Invited: 2022 Molecular Spin Qubit Design and Quantum Information, Telluride, USA  
 Invited: 2022 ACS Spring Meeting, San Diego, USA  
 Dept.: 2021 Ohio State University, Ohio, USA  
 Invited: 2021 CECAM paramagnetic NMR workshop, Toulouse, France  
 Dept.: 2021 Nottingham Trent University, Nottingham, UK  
 Invited: 2021 Rhur EPR colloquium, Germany  
 Invited: 2021 PTC Virtual Seminar, Chemical Institute of Canada  
 Invited: 2021 OpenMolcas Developers Conference, Loughborough, UK  
 Invited: 2021 1<sup>st</sup> Association de Magnétisme Moléculaire meeting, France  
 Invited: 2021 Angular Momentum, USA  
 Invited: 2020 Global Inorganic Discussion Weekdays, Chemical Institute of Canada  
 Invited: 2019 International Conference on Functional Molecular Materials, Krakow, Poland  
 OKIA prize: 2019 European Conference on Molecular Magnetism, Florence, Italy  
 Invited: 2019 52<sup>nd</sup> International meeting of the RSC ESR Group, Glasgow, UK  
 Dept.: 2019 University of California, Irvine, USA  
 Dept.: 2019 University of California, Davis, USA  
 Dept.: 2019 University of California, Berkeley, USA  
 Invited: 2019 APS March Meeting, Boston, USA  
 Tutorial: 2018 University of Melbourne, Melbourne, Australia  
 Plenary: 2018 RACI Inorganic Chemistry Symposium, Melbourne, Australia

Dept.: 2018 University of Melbourne, Melbourne, Australia  
Keynote: 2018 ANSTO Neutron Scattering Symposium, Sydney, Australia  
Plenary: 2018 RACI Inorganic Chemistry Symposium, Sydney, Australia  
Plenary: 2018 International Conference on Bimetallic Complexes, Karlsruhe, Germany  
Keynote: 2018 International Conference on f-Elements, Lausanne, Switzerland  
Keynote: 2018 International Conference on Coordination Chemistry, Sendai, Japan  
Dept.: 2018 University of Oxford, Oxford, UK  
Dept.: 2018 Durham University, Durham, UK  
Dept.: 2018 Xi'an Jiaotong University, Xi'an, China  
Tutorial: 2018 Xi'an Jiaotong University, Xi'an, China  
Dept.: 2018 Guangzhou University, Guangzhou, China  
Dept.: 2018 Sun Yat-Sen University, Guangzhou, China  
Tutorial: 2018 Sun Yat-Sen University, Guangzhou, China  
Dept.: 2018 Cardiff University, Cardiff, UK  
Dept.: 2017 University of Melbourne, Melbourne, Australia  
Dept.: 2017 Monash University, Melbourne, Australia  
Invited: 2017 Driving magnetic molecules, Bielefeld, Germany  
Contributed: 2017 European Conference on Molecular Magnetism, Bucharest, Romania  
Tutorial: 2017 University of Glasgow, Glasgow, UK  
Dept.: 2016 Aarhus University, Aarhus, Denmark  
Tutorial: 2016 Aarhus University, Aarhus, Denmark  
Contributed: 2016 European Conference on Molecular Spintronics, Bologna, Italy  
Invited: 2016 RSC Early Career Symposium, Glasgow, UK  
RSC Prize: 2016 University of Nottingham, Nottingham, UK  
RSC Prize: 2016 University of Glasgow, Glasgow, UK  
RSC Prize: 2016 University of Brighton, Brighton, UK  
RSC Prize: 2016 University of Kent, Canterbury, UK  
Contributed: 2015 5<sup>th</sup> Latin American Symposium on Coordination and Organometallic Chemistry, Rio de Janeiro, Brazil  
Dept.: 2015 Universidade Federal Fluminense, Rio de Janeiro, Brazil  
Dept.: 2015 Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil  
Tutorial: 2015 Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil  
Invited: 2015 ThUL school on f-element chemistry, Karlsruhe, Germany  
Invited: 2015 International Conference on the f-Elements, Oxford, UK  
Invited: 2014 Functionalized molecule-based magnetic materials, Bielefeld, Germany  
Dept.: 2014 CNRS Bordeaux, Bordeaux, France  
Tutorial: 2014 CNRS Bordeaux, Bordeaux, France  
Invited: 2014 International Conference on Molecule-Based Magnets, St. Petersburg, Russia  
Contributed: 2014 f-Element Workshop, Manchester, UK  
Dept.: 2014 Univerisitat de Barcelona, Barcelona, Spain  
Tutorial: 2014 Univerisitat de Barcelona, Barcelona, Spain  
Contributed: 2013 European Conference on Molecular Magnetism, Karlsruhe, Germany  
Tutorial: 2013 University of Manchester, Manchester, UK  
Tutorial: 2012 Monash University, Melbourne, Australia

### Peer-reviewed publications

184. N. Kofod, V. Nielsen, T. Nielsen, T. Sørensen, M. Oakley, K. Jensen and N. F. Chilton, [Mapping Coordination Number and Coordination Geometry of Lanthanide Ions in Aqueous and Non-Aqueous Solution Phase](#), *J. Am. Chem. Soc.*, accepted.

183. H. Kwon, K. R. McClain, J. K. Staab, P. Smith, B. G. Harvey, M. P. Erodici, S. J. Teat, T. D. Harris, S. Minasian, N. F. Chilton and J. R. Long, [Triangular \(C<sub>5</sub>Pr<sub>5</sub>\)<sub>3</sub>Ln<sub>3</sub>H<sub>3</sub>I<sub>2</sub> \(Ln = Tb, Dy, Ho, Er, Tm\) Clusters with Lanthanide-Dependent Bonding, Valence Delocalization, and Magnetic Anisotropy](#), *J. Am. Chem. Soc.*, 2026, 148, 6354.
182. Y. Huang, G. A. Timco, G. F. S. Whitehead, S. J. Lockyer, N. Geue, Z. Qi, A. Brookfield, P. Bencok, P. E. Barran, N. F. Chilton, M. L. Baker, E. J. L. McInnes and R. E. P. Winpenny, [Magnetic and EPR Spectroscopic Studies of Heterometallic Rings Featuring {Cr<sub>6</sub>} Chains and Rare-Earth Metal Centres](#), *Inorg. Chim. Acta*, 2026, 592, 123037.
181. Y. L. Whyatt, J. Emerson-King, G. F. S. Whitehead, D. P. Mills, S. K. Langley, M. Ozerov and N. F. Chilton, [Measurement and Analysis of Vibronic Coupling in Two Dysprosium\(III\) Complexes of Opposite Magnetic Anisotropy](#), *Chem. Eur. J.*, 2026, 32, e03558.
180. W. T. Morrillo, A. Mattioni, W. J. A. Blackmore, D. P. Mills and N. F. Chilton, [Modelling Electric Field Control in a 4f Molecular Qudit with Hyperfine Coupling](#), *Commun. Chem.*, 2026, 9, 45.
179. E. H. Abdelkader, N. F. Chilton, A. Maleckis and G. Otting, [γ-effects identify preferentially populated rotamers of CH<sub>2</sub>F groups: side-chain conformations of fluorinated valine analogues in a protein](#), *Magn. Reson.*, 2025, 6, 257.
178. N. F. Chilton, [Ab initio electronic structure calculations of lanthanide single- molecule magnets; a practical guide](#), *Chem. Soc. Rev.*, 2025, 54, 11468.
177. K. R. McClain, H. Kwon, Y. Whyatt, M. P. Erodici, A. Mattioni, K. R. Meihaus, B. G. Harvey, N. F. Chilton and J. R. Long, [Mixed-Valence Aryloxido-Bridged Dilanthanide Complexes with Lanthanide-Dependent Electron Delocalization](#), *J. Am. Chem. Soc.*, 2025, 147, 37045.
176. J. Emerson-King, J. Baldwin, S. C. Corner, W. J. A. Blackmore, N. F. Chilton and D. P. Mills, [Magnetic hysteresis up to 73 K in a dysprosium cyclopentadienyl-amide single-molecule magnet](#), *J. Am. Chem. Soc.*, 2025, 147, 35555.
175. W. J. A. Blackmore, Y. Chen, S. Klyatskaya, A. Mattioni, O. Fuhr, M. Ruben and N. F. Chilton, [Re-examination of the relaxation dynamics of \[TbPc<sub>2</sub>\]\[NBu<sub>4</sub>\]](#), *Inorg. Chem.*, 2025, 64, 17745.
174. G. Li, O. Stefanczyk, K. Kumar, L. Guérin, K. Nakamura, M. Alashoor, L. Xiong, K. Nakabayashi, K. Imoto, Y. Nakamura, S. R. Maity, G. Chastanet, N. F. Chilton and S.-I. Ohkoshi, [Stimuli-responsive Low-frequency Terahertz Absorption ON-OFF Switchability in Spin-crossover Material](#), *Adv. Mater.*, 2025, 37, 2507457.
173. V. S. Parmar, G. K. Gransbury, S. C. Corner, W.-H. Chou, S. Hill, R. E. P. Winpenny, N. F. Chilton and D. P. Mills, [Direct characterisation of m<sub>J</sub> = ±15/2 ground state in octahedral Dy\(III\) single-molecule magnets](#), *Dalton Trans.*, 2025, 54, 7616.
172. J. Emerson-King, G. K. Gransbury, B. E. Atkinson, W. J. A. Blackmore, G. F. S. Whitehead, N. F. Chilton and D. P. Mills, [Soft magnetic hysteresis in a dysprosium amide-alkene complex up to 100 K](#), *Nature*, 2025, 643, 125.
171. E. Latham, A. M. Bowen, N. Cox and N. F. Chilton, [Inverse Design of Molecular Qudits for Quantum Circuitry](#), *Inorg. Chem.*, 2025, 64, 7490.
170. W. J. A. Blackmore, S. C. Corner, P. Evans, G. K. Gransbury, D. P. Mills and N. F. Chilton, [In-field and zero-field relaxation dynamics of dysprosocenium in solution](#), *J. Phys. Chem. A*, 2025, 129, 2144.

169. J. Baldwin, K. L. Bonham, T. R. C. Thompson, G. K. Gransbury, G. F. S. Whitehead, I. J. Vitorica-Yrezabal, D. Lee, N. F. Chilton and D. P. Mills, [<sup>31</sup>P NMR chemical shift anisotropy in paramagnetic lanthanide phosphide complexes](#), *JACS Au*, 2025, 5, 1196.
168. T. R. C. Thompson, J. K. Staab and N. F. Chilton, [Approximate Hamiltonians from a Linear Vibronic Coupling Model for Solution-Phase Spin Dynamics](#), *J. Chem. Theor. Comput.*, 2025, 21, 1222.
167. S. C. Corner, W. J. A. Blackmore, G. K. Gransbury, A. Mattioni, G. F. S. Whitehead, N. F. Chilton and D. P. Mills, [A fluorobenzene-bound dysprosium half-sandwich dication single-molecule magnet](#), *Chem. Sci.*, 2025, 16, 610.
166. J. Du, B. E. Atkinson, J. A. Seed, R. F. Sheppard, F. Tuna, A. J. Wooles, N. F. Chilton and S. T. Liddle, [Strong uranium-phosphorus antiferromagnetic exchange coupling in a crystalline diphosphorus radical trianion actinide complex](#), *Chem.*, 2025, 11, 102337.
165. G. M. Richardson, T. Rajeshkumar, F. M. Burke, S. A. Cameron, B. D. Nicholls, J. E. Harvey, R. A. Keyzers, T. Butler, S. Granville, L. Liu, J. Langley, L. F. Lim, N. Cox, N. F. Chilton, J. Hicks, N. J. L. K. Davis, L. Maron and M. D. Anker, [Four-Electron Reduction of Benzene by a Simple Samarium\(II\)-Alkyl](#), *Nature Chem.*, 2025, 17, 20.
164. G. K. Gransbury, H. M. Nicholas, S. R. Murphy, J. Emerson-King, M. Vonci, C. A. P. Goodwin, R. E. P. Winpenny, N. F. Chilton, M. J. Giansiracusa and D. P. Mills, [Trigonal planar heteroleptic lanthanide\(III\) bis\(silyl\)amide complexes containing aminoxyl radicals and anions](#), *Inorg. Chem.*, 2024, 63, 22422.
163. R. Nabi, B. E. Atkinson, J. K. Staab, J. M. Skelton and N. F. Chilton, [The impact of low-energy phonon lifetimes on the magnetic relaxation in a dysprosocenium single-molecule magnet](#), *Chem. Commun.*, 2024, 60, 13915.
162. N. M. Saji, M. R. Taylor, D. M. Mazzucato, P. J. Low, L. F. Lim, N. Cox, N. F. Chilton, S. A. Moggach, G. F. Turner, M. J. Giansiracusa, C. Boskovic, C. C. Ho, S. C. Thickett, M. K. Stanfield, A. C. Bissember and R. O. Fuller, [Synthesis, structure and redox properties of non-symmetric 6-oxoverdazyls](#), *Org. Lett.*, 2024, 26, 8696.
161. F. Benner, E. R. Pugliese, R. Q. Marsden, R. J. Staples, N. F. Chilton and S. Demir, [An Organometallic Erbium Bismuth Cluster Complex Comprising a Bi<sub>6</sub><sup>6-</sup> Zintl Ion](#), *Inorg. Chem.*, 2024, 63, 20250.
160. R. L. Frkic, Y. J. Tan, A. Maleckis, N. F. Chilton, G. Otting and C. J. Jackson, [1.3 Å Crystal Structure of \*E. coli\* Peptidyl-Prolyl Isomerase B with Uniform Substitution of Valine by \(2S,3S\)-4-Fluorovaline Reveals Structure Conservation and Multiple Staggered Rotamers of CH<sub>2</sub>F Group](#), *Biochemistry*, 2024, 63, 2602.
159. W. T. Morrillo, H. I. J. Cumming, A. Mattioni, J. K. Staab and N. F. Chilton, [Ab Initio Design of Molecular Qubits with Electric Field Control](#), *J. Am. Chem. Soc.*, 2024, 146, 25841.
158. J. A. Seed, P. A. Cleaves, G. R. Hatton, D. M. King, F. Tuna, A. J. Wooles, N. F. Chilton, S. T. Liddle, [Reactivity of a triamidoamine terminal uranium\(VI\)-nitride with 3d-transition metal metallocenes](#), *Chem. Commun.*, 2024, 60, 9990.
157. R. E. MacKenzie, T. Hajdu, J. A. Seed, G. F. S. Whitehead, R. W. Adams, N. F. Chilton, D. Collison, E. J. L. McInnes and C. A. P. Goodwin, [δ-Bonding Modulates the Electronic Structure of Formally Divalent nd<sup>1</sup> Rare Earth Arene Complexes](#), *Chem. Sci.*, 2024, 15, 15160.
156. B. L. L. Réant, F. J. Mackintosh, G. K. Gransbury, C. Andrea Mattei, B. Alnami, B. Atkinson, D. Bonham, J. Baldwin, A. J. Wooles, I. J. Vitorica-Yrezabal, D. Lee, N. F. Chilton, S. T. Liddle and

- D. P. Mills, [Tris-Silanide f-Block Complexes: Insights into Paramagnetic Influence on NMR Chemical Shifts](#), *JACS Au*, 2024, 4, 2695.
155. H. Kwon, K. R. McClain, J. G. C. Kragoskow, J. K. Staab, M. Ozerov, K. R. Meihaus, B. G. Harvey, E. S. Choi, N. F. Chilton and J. R. Long, [Coercive Fields Exceeding 30 T in the Mixed-Valence Single-Molecule Magnet \(Cp'Pr<sub>5</sub>\)<sub>2</sub>Ho<sub>2</sub>I<sub>3</sub>](#), *J. Am. Chem. Soc.*, 2024, 146, 18714.
154. J. K. Staab, M. K. Rahman and N. F. Chilton, [Intramolecular bridging strategies to suppress two-phonon Raman spin relaxation in dysprosocenium single-molecule magnets](#), *Phys. Chem. Chem. Phys.*, 2024, 26, 17539.
153. G. Li, O. Stefanczyk, K. Kumar, Y. Mineo, L. Wang, K. Nakabayashi, S. Chorazy, N. F. Chilton and S.-I. Ohkoshi, [Modulation on Terahertz Absorption Properties in Ln<sup>III</sup>-\[Ag<sup>I</sup>\(CN\)<sub>2</sub>\] Networks](#), *Inorg. Chem. Front.*, 2024, 11, 3906.
152. L. E. Nodarakı, A.-M. Ariciu, D. N. Huh, J. Liu, D. O. T. A. Martins, F. Ortu, R. E. P. Winpenny, N. F. Chilton, E. J. L. McInnes, D. P. Mills, W. J. Evans and F. Tuna, [Ligand Effects on the Spin Relaxation Dynamics and Coherent Manipulation of Organometallic La\(II\) Potential Qudits](#), *J. Am. Chem. Soc.*, 2024, 146, 15000.
151. L. Birnoschi, M. S. Oakley, E. J. L. McInnes and N. F. Chilton, [Relativistic Quantum Chemical Investigation of Actinide Covalency Measured by EPR Spectroscopy](#), *J. Am. Chem. Soc.*, 2024, 146, 14660.
150. S. C. Corner, G. K. Gransbury, I. J. Vitorica-Yrezabal, G. F. S. Whitehead, N. F. Chilton and D. P. Mills, [Halobenzene adducts of a dysprosocenium single-molecule magnet](#), *Inorg. Chem.*, 2024, 63, 9552.
149. S. C. Corner, G. K. Gransbury, I. J. Vitorica-Yrezabal, G. F. S. Whitehead, N. F. Chilton and D. P. Mills, [Synthesis and Magnetic Properties of Bis-Halobenzene Decamethyldysprosocenium Cations](#), *Inorg. Chem.*, 2024, 63, 9562.
148. L. Nodarakı, J. Liu, A.-M. Ariciu, F. Ortu, M. S. Oakley, L. Birnoschi, G. K. Gransbury, P. Cobb, J. Emerson-King, N. F. Chilton, D. P. Mills, E. J. L. McInnes and F. Tuna, [Metal-carbon bonding in early lanthanide substituted cyclopentadienyl complexes probed by pulsed EPR spectroscopy](#), *Chem. Sci.*, 2024, 15, 3003.
147. J. Emerson-King, G. K. Gransbury, G. F. S. Whitehead, I. J. Vitorica-Yrezabal, M. Rouzières, R. Clérac, N. F. Chilton and D. P. Mills, [Isolation of a bent dysprosium bis\(amide\) single-molecule magnet](#), *J. Am. Chem. Soc.*, 2024, 146, 3331.
146. J. Murillo, J. A. Seed, A. J. Wooles, M. S. Oakley, C. A. P. Goodwin, M. Gregson, D. Dan, N. F. Chilton, A. J. Gaunt, S. A. Kozimor, S. T. Liddle and B. L. Scott, [Carbene Complexes of Plutonium: Structure, Bonding, and Divergent Reactivity to Lanthanide Analogs](#), *J. Am. Chem. Soc.*, 2024, 146, 4098.
145. A. Mattioni, J. K. Staab, W. J. A. Blackmore, D. Reta, J. Iles-Smith, A. Nazir and N. F. Chilton, [Vibronic Effects on the Quantum Tunnelling of Magnetisation in Kramers Single-Molecule Magnets](#), *Nature Commun.*, 2024, 15, 485.
144. P.-B. Jin, Q.-C. Luo, G. K. Gransbury, I. J. Vitorica-Yrezabal, T. Hajdu, I. Strashnov, E. J. L. McInnes, R. E. P. Winpenny, N. F. Chilton, D. P. Mills and Y.-Z. Zheng, [Thermally stable Terbium\(II\) and Dysprosium\(II\) Bis-Amidinate Complexes](#), *J. Am. Chem. Soc.*, 2023, 145, 27993.
143. R. Nabi, J. K. Staab, A. Mattioni, J. G. C. Kragoskow, D. Reta, J. M. Skelton and N. F. Chilton, [Accurate and efficient spin-phonon coupling and spin dynamics calculations for molecular solids](#), *J. Am. Chem. Soc.*, 2023, 145, 24558.

142. G. K. Gransbury, S. C. Corner, J. G. C. Kragoskow, P. Evans, H. M. Yeung, W. J. A. Blackmore, G. F. S. Whitehead, I. J. Vitorica-Yrezabal, M. S. Oakley, N. F. Chilton and D. P. Mills, [AtomAccess: A predictive tool for molecular design and its application to the targeted synthesis of dysprosium single-molecule magnets](#), *J. Am. Chem. Soc.*, 2023, 145, 22814.
141. J. G. C. Kragoskow, A. Mattioni, J. K. Staab, D. Reta, J. M. Skelton and N. F. Chilton, [Spin-phonon coupling and magnetic relaxation in single-molecule magnets](#), *Chem. Soc. Rev.*, 2023, 52, 4567.
140. W. J. A. Blackmore, G. K. Gransbury, P. Evans, J. G. C. Kragoskow, D. P. Mills and N. F. Chilton, [Characterisation of magnetic relaxation on extremely long timescales](#), *Phys. Chem. Chem. Phys.*, 2023, 25, 16735.
139. R. Alotaibi, A. Booth, E. Little, A. Brookfield, A. Achari, S. J. Lockyer, G. A. Timco, G. F. S. Whitehead, I. Vitorica-yrezabal, N. F. Chilton, R. R. Nair, D. Collison and R. E. P. Winpenny, [Synthesis and Characterization of Heterometallic Rings Templated through Alkylammonium or Imidazolium Cations](#), *Dalton Trans.*, 2023, 52, 7473.
138. B. Alnami, J. G. C. Kragoskow, J. K. Staab, J. M. Skelton and N. F. Chilton, [Structural evolution of paramagnetic lanthanide compounds in solution compared to time- and ensemble-average structures](#), *J. Am. Chem. Soc.*, 2023, 145, 13632.
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