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 64 and **194 publications** with over **19,000 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 and **AUD$9 million total funding**.

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. (1st 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, 65th 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

2027 – 2031	ARC (FT260100530) "Enhancing spin-electric coupling for quantum technologies", Australia
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

Dept.:	2025 Bielefeld University, Bielefeld, Germany
Invited:	2026 Dysprosium Quantum Magnetism, Bielefeld, Germany

Past

Contributed:	2026 Rare-earth Ions for Quantum Information, Delft, Netherlands
Invited:	2026 International Conference on the f-Elements, Manchester, UK
Keynote:	2026 RACI Congress, Perth, Australia

Contributed	2026 OZRE ’26, Canberra, Australia
Keynote:	2025 RACI 2nd 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, 838th 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 29th 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 1st 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 52nd 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 5th 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

194. Z. Bai, N. B. Beck, B. E. Atkinson, D. Grödler, B. Scheibe, J. P. Brannon, B. M. Rotermund, M. Grasser, J. M. Sperling, N. F. Chilton and Thomas E. Albrecht, Hydration States of Transplutonium (Am, Cm, Bk and Cf) Ions Alter Electronic Structure, *J. Am. Chem. Soc.*, 2026, accepted.

193. X. Zhang, B. E. Atkinson, J. K. Staab and N F. Chilton, Orbital-dependent magnetic exchange in octahedral cobalt(II): an ab initio perspective, *Inorg. Chem.*, 2026, 65, 20369.

192. J. Emerson-King, B. E. Atkinson, W. J. A. Blackmore, J. Rees, S. C. Corner, J. Baldwin, N. F. Chilton and D. P. Mills, Axial dysprosium cyclopentadienyl-amide single-molecule magnets with hysteresis up to 92 kelvin, *Nature Commun.*, 2026, doi: 10.1038/s41467-026-77104-z.

191. B. Atkinson and N. F. Chilton, Tau2: a program for the simulation of magnetic relaxation, *J. Chem. Theor. Comput.*, 2026, 22, 8119.

190. E. Latham, C. A. Kumar, C. Alexander, N. Cox, T. Dubroca, D. Parker and N. F. Chilton, Measurement of linewidth and anisotropy in C_3/C_4-symmetric Gd(III) complexes, *Inorg. Chem.*, 2026, 65, 13807.

189. N. Paul, A. P. Welegedara, R. L. Frkic, L. Macri, T. R. C. Thompson, J. Baber, E. Habel, E. H. Abdelkader, H. Qianzhu, N. F. Chilton, C. J. Jackson, A. Bax, T. Huber and G. Otting, Genetically Encoded Pentafluorophenylalanine Enables Quantitative Probing of Local Protein Malleability by ^{19}F NMR, *J. Am. Chem. Soc.*, 2026, 148, 32644.

188. C. A. P. Goodwin, M. Godsall, S. Zhang, J. Dua, B. E. Atkinson, J. A. Seed, A.-M. Ariciu, A. J. Wooles, F. Tuna, R. W. Adams, N. F. Chilton, S. T. Liddle and D. P. Mills, Reactions of a uranium(III) complex with N-heterocycles to form diuranium(IV) ketimides, *Inorg. Chem.*, 2026, 65, 13591.

187. G. Li, O. Stefanczyk, J. M. Flitcroft, C. S. Sangster, S. Parsons, E. K. Brechin, N. Giordano, T. Otake, K. Nakamura, L. Xiong, K. Nakabayashi, K. Imoto, N. F. Chilton, S.-I. Ohkoshi and J. M. Skelton, Pressure Tuning of the Low-frequency Raman Response in Spin-crossover Networks, *J. Am. Chem. Soc.*, 2026, 148, 21908.

186. M. A. Islam, N. Kaltsoyannis and N. F. Chilton, Magnetic Exchange Coupling in Radical-Bridged Lanthanide Complexes, *J. Chem. Theor. Comput.*, 2026, 22, 4462.

185. T. R. C. Thompson, B. Alnami, J. M. Skelton and N. F. Chilton, Electron and Nuclear Spin Dynamics of Lanthanide Complexes in Solution, *J. Am. Chem. Soc.*, 2026, 148, 19536.

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.*, 2026, 148, 11758.

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 $(C_5{}^{i}Pr_5)_3Ln_3H_3I_2$ (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 $\{Cr_6\}$ 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_2F 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 $[TbPc_2][NBu_4]$, *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 $m_J = \pm 15/2$ 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, ^{31}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_6^{6-} 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 (2*S*,3*S*)-4-Fluorovaline Reveals Structure Conservation and Multiple Staggered Rotamers of CH_2F 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^1 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. Kragskow, 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 $(Cp^{iPr5})_2Ho_2I_3$, *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^{III}-$[Ag^{I}(CN)_2]$ Networks, *Inorg. Chem. Front.*, 2024, 11, 3906.

152. L. E. Nodaraki, 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. Nodaraki, 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.

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