

Curriculum Vitae – Stephen Hill

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Professional Preparation

University of Oxford, England	Physics	B. A. with 1 st class honors, 1991
University of Oxford, England	Physics	D. Phil, Feb. 1995

Postdoctoral

Boston University	High field spectroscopy of materials	02/95–08/95
National High Magnetic Field Laboratory	High field spectroscopy of materials	08/95–08/97

Appointments

05/22–present	Distinguished Research Professor, Dept. of Physics, Florida State University
08/08–present	Director of EMR user program, National High Magnetic Field Laboratory
08/08–04/22	Professor, Department of Physics, Florida State University
08/04–08/08	Associate Professor, Department of Physics, University of Florida
08/01–08/04	Assistant Professor, Department of Physics, University of Florida
08/97–08/01	Assistant Professor, Department of Physics, Montana State University

Honors and Awards

04/2015	FSU Physics Department PAI Award for Excellence in Teaching & Research
12/2014	Elected Fellow of the American Physical Society
10/2014	International EPR Society Silver Medal – Instrumentation
01/2007	University of Florida College of Liberal Arts and Sciences teaching award
12/2005	University of Florida Department of Physics teacher of the year award
05/2003	US National Science Foundation CAREER award recipient.
05/2000	Cottrell Scholars Award, Research Corporation (http://www.rescorp.org/).

Notable Service Activities

12/21–present	Nat'l Acad. of Sciences Engineering and Medicine Committee on Identifying Opportunities at the Interface of Chemistry and Quantum Information Science
10/21–present	Florida State University Provost Selection Advisory Committee
9/21–present	Editorial Board of the journal Applied Magnetic Resonance (Springer Nature)
7/20–present	Advisory Board for DOE Center for Quantum Transduction (Northwestern U.)
05/20–present	Member of American Physical Society (APS) March Meeting Task Force
05/19–present	Deputy Director of DOE Center for Molecular Quantum Materials (U. Florida)
05/19–present	External Advisory Board for SPIN-Lab, London Centre for Nanotechnology, UK
05/17–present	Steering Committee for National EPR Center (U. Manchester, UK)
03/16–03/20	Elected to Chair's line of APS Topical Group on Magnetism (GMAG)
01/15–12/17	Elected Vice President for the Americas of the International EPR Society
03/06–03/09	Elected to Exec. Comm. of APS Topical Group on Magnetism (GMAG)

Short Summary of Research Activities

[Involvement in ~\$27M external grant support since 1998]

Hill has 30 years of experience performing microwave and far-infrared magneto-optical spectroscopy in high magnetic fields, spanning the range from 0.3 to 200 cm⁻¹ (9 GHz to 6 THz), using a wide array of compact radiation sources (gas lasers, vacuum-tube oscillators and solid-state devices) and measurement techniques (cyclotron resonance, optical conductivity and EPR). Through this work, he has gained an international reputation in the spectroscopy of low-

dimensional conducting, superconducting and magnetic systems in high magnetic fields, including significant technique development. The EPR group that he directs also has an extremely strong track record in terms of instrument development, having assembled the world's highest field/frequency instruments for both pulsed and continuous-wave EPR measurements. Hill's research has focused on fundamental studies of quantum phenomena in molecular magnets and correlated electron systems (quantum magnets and superconductors), as well as structure property relationships in a wide variety of polynuclear transition metal complexes.

Papers Presented at National and International Conferences

- 13 Plenary/Keynote/Award lectures and 15 tutorials at schools, workshops and conferences
- 129 Invited talks at national and international conferences and 65 seminars and colloquia
- 46 contributed talks at international conferences and 107 at national conferences
- ~180 papers presented by group members as posters at national and international conferences

Ten Significant Publications

[>270 refereed articles with over 10,750 citations; *h*-index of 55]

<https://scholar.google.com/citations?user=IOrc9v8AAAAJ&hl=en>

- *Electron-nuclear decoupling at a spin clock transition*, Krishnendu Kundu, Jia Chen, Silas Hoffman, Jonathan Marbey, Dorsa Komijani, Yan Duan, Alejandro Gaita-Ariño, John Stanton, Xiao-Guang Zhang, Hai-Ping Cheng and Stephen Hill, *Communications Physics* **6**, 38 (2023). <https://doi.org/10.1038/s42005-023-01152-w>
- *Spin-Lattice Relaxation Decoherence Suppression in Vanishing Orbital Angular Momentum Qubits*, Christian D. Buch, Krishnendu Kundu, Jonathan J. Marbey, Johan van Tol, Høgni Weihe, Stephen Hill, Stergios Piligkos, *J. Am. Chem. Soc.* **144**, 17597 – 17603 (2022). <https://doi.org/10.1021/jacs.2c07057>
- *Analysis of vibronic coupling in a 4f molecular magnet with FIRMS*, Jonathan Marbey, Jon G. C. Kragoskow, Christian D. Buch, Joscha Nehrkorn, Mykhaylo Ozerov, Stergios Piligkos, Stephen Hill and Nicholas F. Chilton, *Nature Communications* **13**, 825 (2022). <https://doi.org/10.1038/s41467-022-28352-2>
- *9.2 GHz clock transition in a Lu(II) molecular spin qubit arising from a 3467 MHz hyperfine interaction*, Krishnendu Kundu, Jessica R. K. White, Samuel A. Moehring, Jason M. Yu, Joseph W. Ziller, Filipp Furche, William J. Evans, Stephen Hill, *Nature Chemistry* **14**, 392 – 397 (2022); <https://doi.org/10.1038/s41557-022-00894-4>.
- *Isolation of a Triplet Benzene Dianion*, Colin A. Gould, Jonathan Marbey, Veaceslav Vieru, David A. Marchiori, R. David Britt, Liviu Chibotaru, Stephen Hill, Jeffrey R. Long, *Nature Chemistry* **13**, 1001 – 1005 (2021); <https://doi.org/10.1038/s41557-021-00737-8>
- *Isolation and electronic structures of derivatized manganocene, ferrocene and cobaltacene anions*, Conrad A. P. Goodwin, Marcus J. Giansiracusa, Hannah M. Nicholas, Peter Evans, Michele Vonci, Samuel M. Greer, Stephen Hill, Nicholas F. Chilton, David P. Mills, *Nature Chemistry* **13**, 243 – 248 (2021); <https://doi.org/10.1038/s41557-020-00595-w>
- *Strong Electronic and Magnetic Coupling in M_4 ($M = Ni, Cu$) Clusters via Direct Orbital Interactions Between Low-Coordinate Metal Centers*, Khetpakorn Chakarawet, Mihail Atanasov, Jonathan Marbey, Philip Bunting, Frank Neese, Stephen Hill, Jeffrey Long, *J. Am. Chem. Soc.* **142**, 19161 – 19169 (2020); <https://doi.org/10.1021/jacs.0c08460>
- *Molecular spins for quantum computation*, Alejandro Gaita-Ariño, Fernando Luis, Stephen Hill, Eugenio Coronado, Invited Perspective in *Nature Chemistry* **11**, 301 – 309 (2019); <https://doi.org/10.1038/s41557-019-0232-y>

- *Enhancing coherence in molecular spin qubits via atomic clock transitions*, Muhandis Shiddiq, Dorsa Komijani, Yan Duan, Alejandro Gaita-Ariño, Eugenio Coronado, Stephen Hill, *Nature* **531**, 348 – 351 (2016); <https://doi.org/10.1038/nature16984>
- *Quantum Coherence in an Exchange-Coupled Dimer of Single-Molecule Magnets*, S. Hill, R. S. Edwards, N. Aliaga-Alcalde, G. Christou, *Science* **302**, 1015 – 1018 (2003); <https://doi.org/10.1126/science.1090082>

Synergistic Professional Activities

- **Broadening Participation:** Co-PI and co-Director of the Masters-to-PhD Bridge Program at Florida State, funded initially by the APS, and now supported by Florida State University. This program helps talented students who lack preparation in some areas of undergraduate physics (including the GRE) to transition into Florida State University's physics PhD program, or similar programs elsewhere in the U.S.
- **Conference Organization:** Frequent organizer/co-organizer of scientific conferences and symposia: Chaired 3 major conferences (150-300 participants) since 2012; organized many smaller Symposia within larger meetings, on average once per year.
- **Technique/Instrument Development:** Development of unique instrumentation for high-field Electron Paramagnetic Resonance and Dynamic Nuclear Polarization for users of the National High Magnetic Field Laboratory.

Graduate and Postdoctoral Mentors

John Singleton (University of Oxford, UK) and James S. Brooks (Florida State University)

Doctoral Students and Postdoctoral Advisees

Current PhD students: Wei-Hao Chou, Manoj Vinayaka Hanabe Subramanya, Robert Stewart, Brittany Grimm, Mengtian Liu (co-Chair). **Former PhD students:** Jeremy Thomas (2021, Postdoc at U. Florida), Jonathan Marbey (2020, Postdoc at U. Maryland); Ghoncheh Amouzandeh (2020, co-Chair, Postdoc at U. Michigan); Zahra Hayati (2019, co-Chair, Intel); Samuel Greer (2018, Directors Postdoctoral Fellow, LANL); Dorsa Komijani (2018, Rigetti Computing); Lakshmi Bhaskaran (2018, Postdoc at Helmholtz Zentrum Dresden-Rossendorf, Germany); Andrew Gallagher (2017, co-Chair, Crystal Photonics); Pavanjeet Kaur (2016, co-Chair, SHD KMV College, India); Muhandis Shiddiq (2015, Indonesian Institute of Science); Laurel Winter (2015, co-Chair, LANL MagLab); Sanhita Ghosh (2012, Intel); Junjie Liu (2012, Research Fellow, University of Oxford); Changhyun Koo (2011, Research Staff, Kirchhoff Institute, Germany); Saiti Datta (2009, Beijing National Day School); Jon Lawrence (2007, Raytheon); Susumu Takahashi (2005, Faculty at University of Southern Cal.); Monty Mola (2001, Faculty at Humboldt State University, CA).

Current postdoctoral advisees: Kavipriya Thangavel, Ferdous Ara, Jakub Hrubý. **Former postdoctoral advisees:** Xiaoling Wang (Faculty, Cal. State East Bay), Elvin Salerno (Scientist, STR), Daphne Lubert-Perquel (Postdoc, NREL), Krishnendu Kundu (Faculty, TIFR India), Livia Batista Lopes (Faculty, Pontificia Universidade Católica do Rio, Brazil), Joscha Nehrkorn (Postdoc, Max Planck Institute for Chemical Energy Conversion, Germany); Thierry Dubroca (Visiting Scientist, MagLab); Johannes McKay (RF Engineer, SpaceX); Sebastian Stoiian (Faculty, Idaho State University); Komalavalli Thirunavukkuarasu (Faculty, Florida A&M University); Christopher Beedle (Staff Scientist, LANL); Alexey Kovalev (Research Associate, MagLab); Kyuil Cho (Assistant Scientist, Iowa State University); Sheng-Chiang Lee (Faculty, Mercer University); Konstantin Petukhov (RAOS Project, Finland); Rachel Edwards (Faculty, Warwick University, UK); Gordon Machel (Freelance Programmer, Germany).

Full List of Publications and Presentations

(in reverse chronological order)

- A. [Refereed Journal Articles](#)
- B. [Books and Book Chapters](#)
- C. [Conference Proceedings](#)
- D. [Online Articles](#)
- E. [News, Views and Reports](#)
- F. [Submitted Articles](#)
- G. [Invited Talks \(including Keynote and Plenary Lectures\)](#)
- H. [Invited Tutorials](#)
- I. [Presentations, Briefings, etc., to Government Agencies](#)
- J. [Departmental Seminars and Colloquia](#)
- K. [Contributed Talks](#)
- L. [Poster Presentations](#)
- M. [Data](#)

A. Refereed Journal Articles (published or accepted for publication)

- 251. *On-surface magnetocaloric effect for a Van der Waals Gd(III) 2D MOF grown on Si*, Subodh Kumar, Guillem Gabarró Riera, Jakub Hruby, Stephen Hill, Lapo Bogani, Juan Rubio-Zuazo, Jesús Jover, Ana Arauzo, Elena Bartolomé, E. Carolina Sañudo, J. Mater. Chem. A **12**, 6269 – 6279 (2024). <https://doi.org/10.1039/D3TA06648G>
- 250. *Identification of an X-band Clock Transition in Cp₃Pr Enabled by a 4f²5d¹ Configuration*, Patrick W. Smith, Jakub Hrubý, William Evans, Stephen Hill, Stefan G. Minasian, J. Am. Chem. Soc. **146**, 5781 – 5785 (2024). <https://doi.org/10.1021/jacs.3c12725>
- 249. *Ligand Field Design Enables Quantum Manipulation of Spins in Ni²⁺ Complexes*, M. Wojnar, K. Kundu, A. Kairalapova, X. Wang, A. Ozarowski, T. Berkelbach, S. Hill, D. E. Freedman, Chem. Sci. **15**, 1374 – 1383 (2024). <https://doi.org/10.1039/D3SC04919A>
- 248. *Slow Magnetic Relaxation in a Europium(II) Complex*, Dylan Errulat, Katie L. M. Harriman, Diogo A. Gálico, Elvin V. Salerno, Johan van Tol, Akseli Mansikkamäki, Mathieu Rouzières, Stephen Hill, Rodolphe Clérac, Muralee Murugesu, Nat. Comms. (accepted, Feb. 2024). <https://doi.org/10.1038/s41467-024-46196-w>
- 247. *Coupling spin 'clock states' to superconducting circuits*, Ignacio Gimeno, David Zueco, Yan Duan, Carlos Sanchez-Azqueta, Thomas Astner, Alejandro Gaita-Arino, Stephen Hill, Johannes Majer, Eugenio Coronado, and Fernando Luis, Phys. Rev. Applied **20**, 044070 (2022). <https://doi.org/10.1103/PhysRevApplied.20.044070>
- 246. *Strong magnetic exchange coupling in Ln₂ metallocenes attained by the trans-coordination of a tetrazinyl radical ligand*, Niki Mavragani, Alexandros Kitos, Jakub Hruby, Stephen Hill, Akseli Mansikkamäki, Jani Moilanen, Muralee Murugesu, Inorg. Chem. Front. **10**, 4197 – 4208 (2023). <https://doi.org/10.1039/d3qi00290j>
- 245. *Terahertz EPR spectroscopy using a 36-tesla high-homogeneity series-connected hybrid magnet*, Thierry Dubroca, Xiaoling Wang, Frédéric Mentink-Vigier, Bianca Trociewitz, Matthieu Starck, David Parker, Mark S. Sherwin, Stephen Hill, J. Krzystek, J. Magn. Reson. (accepted, May 2023).
- 244. *Coherent DNP using Chirped Pulses*, Yifan Quan, Manoj Subramanya, Yifu Ouyang, Michael Mardini, Thierry Dubroca, Stephen Hill, Robert G. Griffin, J. Phys. Chem. Lett. (accepted, May 2023). <https://doi.org/10.1021/acs.jpcllett.3c00726>
- 243. *Preface to: A Special Issue of Applied Magnetic Resonance in Honor of Professor Takeji Takui on the Occasion of his 80th Birthday*, Kazunobu Sato, Elena Bagryanskaya, Marco Affronte, Stephen

- Hill, *Appl. Mag. Reson.* **54**, 1 – 6 (2023). <https://doi.org/10.1007/s00723-022-01520-9>
242. *High-Field EPR Investigation and Detailed Modeling of the Magnetoanisotropy Tensor of an Unusual Mixed-Valent $Mn_2^{IV}Mn_2^{III}Mn^{II}$ Cluster*, Xiaoling Wang, Ashlyn R. Hale, Stephen Hill, George Christou, *Appl. Mag. Reson.* **54**, 77 – 91 (2023). <https://doi.org/10.1007/s00723-022-01517-4>
241. *Electron-nuclear decoupling at a spin clock transition*, Krishnendu Kundu, Jia Chen, Silas Hoffman, Jonathan Marbey, Dorsa Komijani, Yan Duan, Alejandro Gaita-Ariño, John Stanton, Xiao-Guang Zhang, Hai-Ping Cheng and Stephen Hill, *Communications Physics* **6**, 38 (2023). <https://doi.org/10.1038/s42005-023-01152-w>
240. *Structurally Defined Water-Soluble Metallofullerene Derivatives towards Biomedical Applications*, Yanbang Li, Rohin Biswas, William P. Kopcha, Thierry Dubroca, Laura Abella, Yue Sun, Ryan A. Crichton, Christopher Rathnam, Letao Yang, Yao-Wen Yeh, Krishnendu Kundu, Antonio Rodríguez-Forteza, Josep M. Poblet, Ki-Bum Lee, Stephen Hill, Jianyuan Zhang, *Angew. Chem.* **62**, e202211704 (2023). <https://doi.org/10.1002/anie.202211704>
239. *Comprehensive Studies of Magnetic Transitions and Spin-Phonon Couplings in a Tetrahedral Cobalt Complex*, Duncan Moseley, Zhi-Ming Liu, Alexandria Bone, Shelby Stavretis, Saurabh Singh, Mihail Atanasov, Zhenguang Lu, Mykhaylo Ozerov, Komalavalli Thirunavukkuarasu, Yongqiang Cheng, Luke Daemen, Daphne Lubert-Perquel, Dmitry Smirnov, Frank Neese, Anibal Ramirez-Cuesta, Stephen Hill, Kim R. Dunbar, Zi-Ling Xue, *Inorg. Chem.* **61**, 17123 – 17136, (2022). <https://doi.org/10.1021/acs.inorgchem.2c02604>
238. *Proton-detected solution-state NMR at 14.1 T based on scalar-driven ^{13}C Overhauser dynamic nuclear polarization*, Murari Soundararajan, Thierry Dubroca, Johan van Tol, Stephen Hill, Lucio Frydman, and Sungsool Wi, *J. Magn. Reson.* **343**, 107304 (2022). <https://doi.org/10.1016/j.jmr.2022.107304>
237. *Broadband Fourier-Transform Detected EPR at W-band*, Manoj Vinayaka Hanabe Subramanya, Jonathan Marbey, Krishnendu Kundu, Johannes E. McKay, Stephen Hill, *Appl. Magn. Reson.* **54**, 165 – 181 (2023). <https://doi.org/10.1007/s00723-022-01499-3>
236. *Spin-Lattice Relaxation Decoherence Suppression in Vanishing Orbital Angular Momentum Qubits*, Christian D. Buch, Krishnendu Kundu, Jonathan J. Marbey, Johan van Tol, Høgni Weihe, Stephen Hill, Stergios Piligkos, *J. Am. Chem. Soc.* **144**, 17597 – 17603 (2022). <https://doi.org/10.1021/jacs.2c07057>
235. *High frequency EPR studies of new 2p-3d complexes based on a triazolyl substituted nitronyl nitroxide radical: the role of exchange anisotropy in a Cu-radical system*, Mateus de Souza, Samira Reis, Danilo Stingen, Livia Escobar, Rafael Allao Cassaro, Giordano Poneti, Carolina Bortolot, Jonathan Marbey, Stephen Hill, Maria Vaz, *Inorg. Chem.* **61**, 12118 – 12128 (2022). <https://doi.org/10.1021/acs.inorgchem.2c00679>
234. *Homochiral Mn^{3+} Spin Crossover Complexes – A Structural and Spectroscopic Study*, Irina A. Kühne, Andrew Ozarowski, Aizuddin Sultan, Kane Esien, Anthony B. Carter, Paul Wix, Aoife Casey, Mooneerah Heerah-Booluck, Tony D. Keene, Helge Müller-Bunz, Solveig Felton, Stephen Hill, and Grace G. Morgan, *Inorg. Chem.* **61**, 3458 – 3471 (2022). <https://doi.org/10.1021/acs.inorgchem.1c03379>
233. *Analysis of vibronic coupling in a 4f molecular magnet with FIRMS*, Jon G. C. Kragoskow, Jonathan Marbey, Christian D. Buch, Joscha Nehr Korn, Mykhaylo Ozerov, Stergios Piligkos, Stephen Hill and Nicholas F. Chilton, *Nature Communications* **13**, 825 (2022). <https://doi.org/10.1038/s41467-022-28352-2>
232. *Extreme g-Tensor Anisotropy and Its Insensitivity to Structural Distortions in a Family of Linear Two-Coordinate Ni(I) Bis-N-heterocyclic Carbene Complexes*, William J. M. Blackaby, Katie L. M. Harriman, Samuel M. Greer, Andrea Folli, Stephen Hill, Vera Krewald, Mary F. Mahon, Damien M. Murphy, Muralee Murugesu, Emma Richards, Elizaveta Suturina, Michael K. Whittlesey, *Inorg. Chem.* **61**, 1308 – 1315 (2022). <https://doi.org/10.1021/acs.inorgchem.1c02413>

231. 9.2 GHz clock transition in a Lu(II) molecular spin qubit arising from a 3467 MHz hyperfine interaction, Krishnendu Kundu, Jessica R. K. White, Samuel A. Moehring, Jason M. Yu, Joseph W. Ziller, Philipp Furche, William J. Evans, Stephen Hill, Nature Chemistry **14**, 392 – 397 (2022); <https://doi.org/10.1038/s41557-022-00894-4>. See also *Molecular spins clock in*, E. J. L. McInnes, Nat. Chem. **14**, 361 – 362 (2022); <https://doi.org/10.1038/s41557-022-00919-y>
230. *Applying Unconventional Spectroscopies to the Single-Molecule Magnets, Co(PPh₃)₂X₂ (X = Cl, Br, I): Unveiling Magnetic Transitions and Spin-Phonon Coupling*, Alexandria N. Bone, Chelsea N. Widener, Duncan H. Moseley, Zhiming Liu, Zhengguang Lu, Yongqiang Cheng, Luke L. Daemen, Mykhaylo Ozerov, Joshua Telser, Komalavalli Thirunavukkuarasu, Dmitry Smirnov, Samuel M. Greer, Stephen Hill, J. Krzystek, Karsten Holldack, Azar Aliabadi, Alexander Schnegg, Kim R. Dunbar, and Zi-Ling Xue, Chemistry - A European Journal **27**, 11110 – 11125 (2021). <https://doi.org/10.1002/chem.202100705>
229. *Long-Range Magnetic Exchange Pathways in Complex Clusters from First-Principles*, Dianteng Chen, Jia Chen, Xiang-Guo Li, George Christou, Stephen Hill, Xiao-Guang Zhang, Hai-Ping Cheng, J. Phys. Chem. C **125**, 11124 – 11131 (2021). <https://doi.org/10.1021/acs.jpcc.1c00706>
228. *Exchange-biased Quantum Tunnelling of Magnetization in a [Mn₃]₂ Dimer of Single-Molecule Magnets with Rare Ferromagnetic Inter-Mn₃ Coupling*, Tuhin Ghosh, Jonathan Marbey, Wolfgang Wernsdorfer, Stephen Hill, Khalil A. Abboud, George Christou, Phys. Chem. Chem. Phys. **23**, 8854 – 8867 (2021). <https://doi.org/10.1039/d0cp06611g>
227. *Isolation of a Triplet Benzene Dianion*, Colin A. Gould, Jonathan Marbey, Veaceslav Vieru, David A. Marchiori, R. David Britt, Liviu Chibotaru, Stephen Hill and Jeffrey R. Long, Nature Chemistry **13**, 1001 – 1005 (2021). <https://doi.org/10.1038/s41557-021-00737-8>
226. *Spectroscopic Investigation of a Metal-Metal Bonded Fe₆ Single-Molecule Magnet with an Isolated S = 19/2 Giant-Spin Ground State*, Joscha Nehrkorn, Samuel M. Greer, Brian Malbrecht, Kevin Anderton, Azar Aliabadi, J. Krzystek, Alexander Schnegg, Karsten Holldack, Carmen Herrmann, Theodore A. Betley, Stefan Stoll and Stephen Hill, Inorg. Chem. **60**, 4610 – 4622 (2021). <https://doi.org/10.1021/acs.inorgchem.0c03595>
225. *Extending the family of reduced [Mn₁₂O₁₂(O₂CR)₁₆(H₂O)_x]ⁿ⁻ complexes, and their sensitivity to environmental factors*, Monica Soler, Preet Mahalay, Wolfgang Wernsdorfer, Daphné Lubert-Perquel, John C. Huffman, Khalil A. Abboud, Stephen Hill and George Christou, Polyhedron **195**, 114968 (2020). <https://doi.org/10.1016/j.poly.2020.114968>
224. *Insights into Molecular Magnetism in Metal-Metal Bonded Systems as Revealed by a Spectroscopic and Computational Analysis of Diiron Complexes*, Samuel Greer, Kathryn Gramigna, Christine Thomas, Sebastian Stoian, Stephen Hill, Inorg. Chem. **59**, 18141 – 18155 (2020). <https://doi.org/10.1021/acs.inorgchem.0c02605>
223. *Strong Electronic and Magnetic Coupling in M₄ (M = Ni, Cu) Clusters via Direct Orbital Interactions Between Low-Coordinate Metal Centers*, Khetpakorn Chakarawet, Mihail Atanasov, Jonathan Marbey, Philip Bunting, Frank Neese, Stephen Hill, Jeffrey Long, J. Am. Chem. Soc. **142**, 19161 – 19169 (2020). <https://doi.org/10.1021/jacs.0c08460>
222. *Unravelling competing microscopic interactions at a phase boundary: a single crystal study of the metastable antiferromagnetic pyrochlore Yb₂Ge₂O₇*, C. L. Sarkis, J. G. Rau, L. D. Sanjeeva, M. Powell, J. Kolis, J. Marbey, S. Hill, J. A. Rodriguez-Rivera, H. S. Nair, D. R. Yahne, S. Säubert, M. J. P. Gingras, and K. A. Ross, Phys. Rev. B **102**, 134418 (2020). <https://doi.org/10.1103/PhysRevB.102.134418>
221. *Isolation and electronic structures of derivatized manganocene, ferrocene and cobaltacene anions*, Conrad A. P. Goodwin, Marcus J. Giansiracusa, Hannah M. Nicholas, Peter Evans, Michele Vonci, Samuel M. Greer, Stephen Hill, Nicholas F. Chilton, David P. Mills, Nature Chemistry **13**, 243 – 248 (2021). <https://doi.org/10.1038/s41557-020-00595-w>
220. *Magneto-Structural and EPR Studies of Anisotropic Vanadium trans-Dicyanide Molecules*, Mohamed R. Saber, Komalavalli Thirunavukkuarasu, Samuel M. Greer, Stephen Hill and Kim R.

- Dunbar, *Inorg. Chem.* **59**, 13262 – 13269 (2020). <https://doi.org/10.1021/acs.inorgchem.0c01595>
219. *Long-Range Ferromagnetic Exchange Interactions Mediated by Mn-Ce^{IV}-Mn Superexchange Involving Empty 4f Orbitals*, Sayak Das Gupta, Robert Stewart, Dian-Teng Chen, Khalil A. Abboud, Hai-Ping Cheng, Stephen Hill, and George Christou, *Inorg. Chem.* **59**, 8716 – 8726 (2020). <https://doi.org/10.1021/acs.inorgchem.0c00332>
218. *A 3D interpenetrated Co(II)-glutarate coordination polymer: synthesis, crystal structure, magnetic and adsorption properties*, Filipe J. Teixeira, Leonã S. Flores, Lívia B. L. Escobar, Thiago C. dos Santos, Maria I. Yoshida, Mario S. Reis, Stephen Hill, Célia M. Ronconi, Charlane C. Corrêa, *Inorganica Chimica Acta* **511**, 119791 (2020). <https://doi.org/10.1016/j.ica.2020.119791>
217. *Decoherence in Molecular Electron Spin Qubits: Insights from Quantum Many-Body Simulations*, Jia Chen, Cong Hu, John F. Stanton, Stephen Hill, Hai-Ping Cheng and Xiao-Guang Zhang, *J. Phys. Chem. Lett.* **11**, 2074 – 2078 (2020). <https://doi.org/10.1021/acs.jpcclett.0c00193>. See also: <https://doi.org/10.1038/s41570-020-0178-z>
216. *Access to Heteroleptic Fluorido-Cyanido Complexes with a Large Magnetic Anisotropy via Fluoride Abstraction*, Jun-Liang Liu, Kasper S. Pedersen, Samuel M. Greer, Abhishake Mondal, Stephen Hill, Fabrice Wilhelm, Andrei Rogalev, Alain Tressaud, Etienne Durand, Jeffrey R. Long, and Rodolphe Clérac, *Angew. Chem.* **59**, 10306 – 10310 (2020). <https://doi.org/10.1002/anie.201914934>
215. *Correction to Synthesis, Magnetic and High-Field EPR Investigation of Two Tetranuclear Ni^{II}-Based Complexes*, Lívia BL Escobar, Guilherme P Guedes, Stéphane Soriano, Jonathan Marbey, Stephen Hill, Miguel A Novak, Maria GF Vaz, *Inorg. Chem.* **59**, 5240 – 5240 (2020). <https://doi.org/10.1021/acs.inorgchem.0c00562>
214. *Radical Dimerization in Plastic Organic Crystal Leads to Structural and Magnetic Bistability with Wide Thermal Hysteresis*, Alina Dragulescu-Andrasi, Alexander Filatov, Richard Oakley, Xiang Li, Kristina Legin, Ashfia Huq, Chongin Pak, Samuel Greer, Johannes McKay, Minyoung Jo, Jeff Lengyel, Ivan Hung, Elvis Maradzike, A. Eugene DePrince, Sebastian Stoian, Stephen Hill, Yan-Yan Hu, Michael Shatruk, *J. Am. Chem. Soc.* **141**, 17989 – 17994 (2019). <https://doi.org/10.1021/jacs.9b09533>
213. *Synthesis, Magnetic and High-Field EPR Investigation of Two Tetranuclear Ni^{II}-Based Complexes*, Lívia B. L. Escobar, Guilherme P. Guedes, Stéphane Soriano, Jonathan Marbey, Stephen Hill, Miguel A. Novak, and Maria G. F. Vaz, *Inorg. Chem.* **58**, 14420 – 14428 (2019). <https://doi.org/10.1021/acs.inorgchem.9b01816>
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41. *A Microscopic and Spectroscopic View of Quantum Tunneling of Magnetization*, Junjie Liu, Enrique del Barco, Stephen Hill. <https://arxiv.org/abs/1302.7305>
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9. *Effects of D-strain, g-strain, and dipolar interactions on EPR Linewidths of the Molecular Magnets Fe_8 and Mn_{12}* , Kyungwha Park, M.A. Novotny, N.S. Dalal, S. Hill, P.A. Rikvold, <http://xxx.lanl.gov/abs/cond-mat/0106276> (14 Jun2001).
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3. *Instrumentation for Millimeter-wave Magneto-electrodynamic Investigations of Low-Dimensional Conductors and Superconductors*, Monty Mola, Stephen Hill, Philippe Goy and Michel Gross, <http://xxx.lanl.gov/abs/cond-mat/9907310> (20th July 1999).

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E. News, Views and Reports (Back to Top)

22. *Analysis of vibronic coupling in a 4f molecular magnet with FIRMS*, Jonathan Marbey, Jon G. C. Kragoskow, Christian D. Buch, Joscha Nehrkorn, Mykhaylo Ozerov, Stergios Piligkos, Stephen Hill and Nicholas F. Chilton, *Nature Communications* **13**, 825 (2022). Highlighted in Collection on f-block elements: <https://www.nature.com/collections/highbeiiiaj>.
21. *Molecular spins clock in*, News and Views story by Eric J. L. McInnes, *Nat. Chem.* **14**, 361 – 362 (2022); <https://doi.org/10.1038/s41557-022-00919-y>. Highlights our article: *9.2 GHz clock transition in a Lu(II) molecular spin qubit arising from a 3467 MHz hyperfine interaction*, Krishnendu Kundu, Jessica R. K. White, Samuel A. Moehring, Jason M. Yu, Joseph W. Ziller, Philipp Furche, William J. Evans, Stephen Hill, *Nature Chemistry* **14**, 392 – 397 (2022); <https://doi.org/10.1038/s41557-022-00894-4>.
20. *Decoherence in Molecular Electron Spin Qubits: Insights from Quantum Many-Body Simulations*, Jia Chen, Cong Hu, John F. Stanton, Stephen Hill, Hai-Ping Cheng and Xiao-Guang Zhang, *J. Phys. Chem. Lett.* **11**, 2074 – 2078 (2020). Highlighted in ACS VIRTUAL ISSUE entitled “Recent Innovations in Solid-State and Molecular Qubits for Quantum Information Applications”. <https://pubs.acs.org/page/vi/qubits>
19. *Molecular spins show promise as quantum bits*, Tim Wogan, in *Physics World*, Institute of Physics (November, 2020). <https://physicsworld.com/a/molecular-spins-show-promise-as-quantum-bits/>
18. *Quantum Information Leakage*, Gabriella Graziano, in *Nature Reviews Chemistry* (March 2020). <https://doi.org/10.1038/s41570-020-0178-z>
17. *Probing Fe-V Bonding in a C_3 -Symmetric Heterobimetallic Complex*, Samuel M. Greer, Johannes McKay, Kathryn M. Gramigna, Christine M. Thomas, Sebastian A. Stoian, Stephen Hill, in ACS VIRTUAL ISSUE entitled “The Impact of Modern Spectroscopy in Inorganic Chemistry”. <https://pubs.acs.org/page/inocaj/vi/modern-spectroscopy>
16. *DNP is having a moment*, Kristen Coyne, in *Fields Magazine* (Fall 2018). <https://nationalmaglab.org/fieldsmagazine/archives/dnp-is-having-a-moment>
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14. *Making molecular-spin qubits more robust*, Barbara Gross Levi, *Physics Today* **65**(5), 17 (2016). <https://doi.org/10.1063/PT.3.3157>
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11. *This discovery could put quantum computers within closer reach*, Katherine Noyes, *PC World*, March 16, 2016. <http://www.pcworld.com/article/3044988/>
10. *High-Field EPR, or far-infrared spectroscopy at high magnetic fields*, S. Hill, *EPR Newsletter* (International EPR Society), **vol. 24**, No. 4, pages 9-10 (2015); **artwork featured on cover of edition.**
9. *High-Frequency and High-Field EPR/ESR in Tallahassee, FL; Tips and advice on sample preparation*, J. Krzystek, A. Ozarowski, J. Liu, S. Hill, *EPR Newsletter* (International EPR Society), **vol. 22**, No. 2, pages 12-14 (2012).

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6. *Quantum Leap*, by Aaron Hoover, an article about research on single-molecule magnets at the University of Florida, in *Explore*, Fall 2004, Vol. 9, No. 3.
5. *Mapping the Fermi Velocity in the Quasi-2D Organic Conductor κ -(BEDT-TTF)₂I₃*, A. E. Kovalev, S. Hill, K. Kawano, M. Tamura, T. Naito, and H. Kobayashi, NHMFL Reports, **vol. 11**, No. 1, pages 18-19 (January 2004).
4. *Probing the Fermi Surfaces of Quasi-Two-Dimensional Organic Superconductors by High Field Resonant Microwave Conductivity Techniques*, S. Takahashi, K. Petukhov, A. E. Kovalev, D. Benjamin, S. Hill, J. S. Qualls, K. Kawano, M. Tamura, T. Naito, and H. Kobayashi, NHMFL Reports, **vol. 11**, No. 1, pages 17-18 (January 2004).
3. *A Method to Study Angle-Dependent High Field Microwave Magneto-Conductivity Using a Cavity Perturbation Technique*, S. Takahashi and S. Hill, NHMFL Reports, **vol. 11**, No. 1, 11 (January 2004).
2. *Angle-resolved mapping of the Fermi velocity in a quasi-two-dimensional conductor*, Alexey Kovalev and Stephen Hill, invited article in NHMFL Reports, **vol. 10**, No. 5, pages 9-10 (Winter 2003).
1. *Quantum and environmental effects in single molecule nanomagnets*, Stephen Hill, invited article in NHMFL reports, **vol. 9**, No. 4, pages 5-7 (Fall 2002).

F. Submitted Articles ([Back to Top](#))

Substituent Effects on Exchange Anisotropy in Single- and Multi-Orbital Organic Radical Magnets, Jonathan Marbey, Aaron Mailman, Richard T. Oakley, Stephen Hill, Stephen M. Winter, submitted to Phys. Rev. Materials (Sept. 2023).

Engineering clock transitions in molecular lanthanide complexes, Robert Stewart, Angelos B. Canaj, Emma Regincós Martí, Anna Celmina, Claire Wilson, Mark Murrie and Stephen Hill, submitted to J. Am. Chem. Soc. (August 2023).

Quasi-Optical Method for Measuring Dielectric Properties of Solids and Liquids from 70 to 970 GHz, Thierry Dubroca, Faith J. Scott, Jonathan Marbey, Frederic Mentink-Vigier, Joanna R. Long, and Stephen Hill, submitted to Transactions on Microwave Theory and Techniques (Dec. 2021).

Conferring Magnetic Anisotropy to High Spin Clusters, Justin J. Teesdale, Samuel M. Greer, Stephen Hill, and Theodore A. Betley, submitted to Inorg. Chem. (June, 2019).

G. Invited Talks, Including Keynote and Plenary Lectures ([Back to Top](#))

142. **Keynote Lecture (in person):** *Molecular Spin Qubits*, at Molecular Magnetism in North America (MAGNA-2022) Workshop, Tahoe City, CA, Dec. 10 – 15, 2023.
141. **Invited talk (in person):** *Mn^{III} Spin Crossover: Insights from High Field EPR*, at Phase Transitions and Dynamical Properties of Spin Transition Materials (PDSTM 2023), University of Tokyo, Japan, November 26-30, 2023.
140. **Invited talk (in person):** *NAS Report on Advancing Chemistry & Quantum Information Science*, at the MagLab "New Frontiers" User workshop, Residence Inn, Tallahassee, FL, September 18, 2023.
139. **Invited talk (in person):** *Molecular Spin Clock Transitions*, Copenhagen Molecular Quantum Information Discussions, University of Copenhagen, Denmark, June 28 – 30, 2023.
138. **Invited talk (in person):** *Application of wideband pulsed high-frequency EPR to molecular quantum spin science*, 2023 Joint Current Trends in Molecular Nanomagnetism and North-America-Greece-Cyprus Conference, Spetses, Greece, May 8 – 13, 2023.
137. **Invited talk (virtual):** *Electron Magnetic Resonance @ MagLab*, MagX Presentation at National High Magnetic Field Laboratory, April 25, 2023.
136. **Keynote Lecture (in person):** *Molecular Spins for Next Generation Quantum Technologies*, National Quantum Technology Forum (NQTF), Clemson University, SC, April 14 – 15, 2023.
135. **Invited talk (in person):** *Molecular Rare Earth Clock Qubits*, 5th International Conference on Functional Molecular Materials (FUNMAT2023), Krakow, Poland, March 29 – 31, 2023.
134. **Invited talk (in person):** *Molecular Clock Qubits*, American Physical Society March Meeting, Las Vegas, March 5 – 10, 2023.
133. **Invited talk (in person):** *Molecular Spin Clock Transitions*, 2nd Workshop on Molecular Quantum Technology (MQT 2022), Puerto Natales, Chile, December 12 – 16, 2022.
132. **Invited talk (in person):** *Application of wideband pulsed high-field EPR to molecular quantum spin science*, International Conference on Molecular spintronics Based on Coordination Compounds: Toward Quantum Computer and Quantum Memory Device – 73rd Yamada Conference, Sendai, Japan, October 9 – 11, 2022.
131. **Invited talk (in person):** *Enhancing Coherence of Rare Earth Molecular Spin Qubits*, 44th International Conference on Coordination Chemistry (ICCC), Rimini, Italy, August 28 – September 2, 2022.
130. **Invited talk (in person):** *Rare Earth Molecular Clock Qubits*, Workshop at the 29th Rare Earth Research Conference (RERC29), Philadelphia, PA, June 26 – 30, 2022.
129. **Invited talk (in person):** *Molecular Clock Qubits*, Workshop at Telluride Science Research Center entitled "From Fundamentals of Molecular Spin Qubit Design to Molecule-Enabled Quantum Information", Telluride, Colorado, June 6 – 10, 2022.
128. **Invited talk (in person):** *Molecular Clock Qubits*, 9th North America Greece Cyprus Conference on Paramagnetic Materials, Ayia Napa, Cyprus, May 9 – 13, 2022.
127. **Invited talk (in person):** *Spectroscopic Investigation of a Metal-Metal Bonded Fe₆ Single-Molecule Magnet with an S = 19/2 Ground State*, at First Panhellenic Workshop on Inorganic Chemistry, University of Patras, Greece, November 19 – 21, 2021.
126. **Invited talk (virtual):** *9.2 GHz Clock Transition in a Lu(II) Molecular Spin Qubit Arising from a 3467 MHz Hyperfine Interaction*, at 49th Southeastern Magnetic Resonance Conference, Louisiana State University, October 22 – 24, 2021.
125. **Invited talk (virtual):** *Clock transition due to a record 1240 G hyperfine interaction in a Lu(II) molecular spin qubit*, virtual seminar at the 2nd joint webinar of the Association Française de Magnétisme Moléculaire and the Magnetism and Magnetic Resonance group of the French Society

of Chemistry, June 24, 2021.

124. **Invited talk (virtual):** *Molecular Lanthanide Spins for Next Generation Quantum Technologies*, virtual talk at the Center for Molecular Quantum Transduction (CMQT) Annual Symposium, Northwestern University, May 6 – 7, 2021.
123. **Plenary Talk (virtual):** *Controlling Electron-Nuclear Spin Couplings in Molecular Magnets*, virtual talk at the 54th Annual International Meeting of the ESR Spectroscopy Group of the Royal Society of Chemistry, hosted by the University of Cardiff, UK, Apr. 12 – 16, 2021.
122. **Invited talk (virtual):** *Probing Electron-Nuclear Spin Interactions via Broadband Pulsed EPR*, virtual presentation at the Intercontinental NMR Conference on Methods and Applications (ICONS2021), Feb. 10 – 12, 2021.
121. **Invited talk (virtual):** *Molecular Spins for Next Generation Quantum Technologies*, virtual presentation at the Workshop on Quantum Materials, University of South Florida, Jan. 29, 2021.
120. **Invited talk:** *Magnetic Quantum Materials and High Field Electron Spin Resonance*, at the Workshop on Quantum Science, Eddleman Quantum Institute (EQI), UCLA Luskin Conference Center, CA, Mar. 6 – 8, 2020.
119. **Invited talk:** *Molecular Spins for Next Generation Quantum Technologies*, at the Magnetism in North America (MAGNA) Conference, St. Simons Island, GA, Feb. 21 – 24, 2020.
118. **Invited talk:** *High-Frequency EPR Investigations of Spins in Molecular Systems: Recent Advances at the National High Magnetic Field Laboratory*, at the International Workshop in Spin in Molecular Systems: Theory and Application (SiMS2019), IISc Bangalore, India, Dec. 2 – 4, 2019.
117. **Invited talk:** *Molecular Lanthanide Spins for Quantum Technologies*, at the 2nd Conference on Modern Trends in Molecular Magnetism (MTMM 2019), IISER Bhopal, India, Nov. 27 – 30, 2019.
116. **Invited talk:** *EPR Studies of Metal-Metal Bonded Systems: New Routes to Single-Molecule Magnets*, at Workshop on Recent Advances in Molecular Magnetism, IIT Kharagpur, India, Nov. 26, 2019.
115. **Invited talk:** *Addressing Nuclear Spins Using Pulsed Broadband 94 GHz EPR*, at the 48th Southeastern Magnetic Resonance Conference (SEMRC 2019), Gainesville, Florida, Oct. 25 – 27, 2019.
114. **Invited talk:** *Molecular lanthanide spins for quantum technologies*, at the 62nd Convention of the Polish Chemical Society – Celebrating the 100 Year Anniversary of the Society, Warsaw, Poland, Sept. 2 – 6, 2019.
113. **Invited talk:** *Spectroscopic Studies of Molecular Magnetic Quantum Materials*, at DOE Energy Frontier Research Center PI Meeting, Washington DC, July 29 – 30, 2019.
112. **Invited talk:** *High-Frequency EPR Investigations of Coordination Complexes: Recent Advances at the NHMFL*, at the 6th Awaji International Workshop on “Electron Spin Science & Technology: Biological and Materials Science Oriented Applications” (6th AWEST 2019), Awaji Island, Japan, June 16 – 19, 2019.
111. **Invited talk:** *High-Field EPR Studies of Spin Transition Materials*, at the 2019 Conference on Phase Transitions and Dynamical Properties of Spin Transition Materials, Gainesville, FL, May 6 – 10, 2019.
110. **Invited talk:** *High-frequency EPR studies of exchange-coupled single-molecule magnets: possible routes to molecule-based quantum technologies*, at the ACS National Meeting and Exposition, Orlando, FL, March 31 – April 4, 2019.
109. **Invited talk:** *Molecular Lanthanide Spins for Quantum Technologies*, Rare Earth Institute of Quantum Science (REIQS) Workshop on Transformative Applications of Rare-Earth Elements and Quantum Phenomenon, UCLA Luskin Conference Center, Mar. 15 to 17, 2019.
108. **Invited talk:** *EPR Studies of Metalorganic Lanthanide Sandwich Complexes: New Routes to*

- Molecular Spin Qubits*, 5th International Workshop on Novel Magnetic and Multifunctional Materials (5IWNMMM), Institute of Materials Science, Vietnam Academy of Science, Hanoi, Vietnam, Jan. 9 to 12, 2019.
107. **Keynote Lecture:** *An Integrated Magnetic Resonance Investigation of Metal-Metal Bonded Systems: Potential New Routes to Single-Molecule Magnets*, 3rd Joint Asia Pacific EPR/ESR Society (APES) and International EPR Society Conference, University of Queensland, Brisbane, Australia, Sept. 23 to 27, 2018.
 106. **Invited talk:** *Development of DNP-Enhanced NMR at High Magnetic Fields*, 3rd International Conference on Spin Physics, Spin Chemistry and Spin Technology (SPCT-2018), Novosibirsk, Russia, Sept. 10 to 15, 2018.
 105. **Invited talk:** *Advanced Magnetic Resonance Investigations of Metal-Metal Bonded Systems: Potential New Routes to Single-Molecule Magnets*, 16th International Conference on Molecule-Based Magnets (ICMM), Rio de Janeiro, Brazil, Sept. 1 to 5, 2018.
 104. **Invited talk:** *Molecular Nanomagnetism Studies Using High-Field Electron Paramagnetic Resonance*, Workshop on advanced nanomagnetism characterization, University of Campinas, Campinas, Brazil, Aug. 30-31, 2018.
 103. **Invited talk:** *Molecular Lanthanide Spins for Quantum Technologies*, at 2018 Gordon Research Conference on Conductivity and Magnetism in Molecular Materials, August 12 to 17, 2018, Bryant College, RI.
 102. **Keynote Lecture:** *Molecular Lanthanide Spins for Quantum Technologies*, at International Conference on Coordination Chemistry (ICCC), July 30 to August 4, 2018, Sendai, Japan.
 101. **Invited talk:** *Molecular Lanthanide Spins for Quantum Technologies*, at International Conference on Magnetism, July 15 to 20, 2018, San Francisco, CA.
 100. **Invited talk:** *Advanced EPR Studies of Metal-Metal Bonded Systems: New Routes to Single-Molecule Magnets*, at North America-Greece-Cyprus Workshop on Paramagnetic Materials, June 18 to 22, 2018, Sparta, Greece.
 99. **Invited talk:** *The National High Magnetic Field Laboratory Vision for Electron Magnetic Resonance*, at BigMag@UCSB Workshop, May 17 to 19, 2018, University of California at Santa Barbara.
 98. **Invited talk:** *Electron Magnetic Resonance at the MagLab and in the Hill Group*, at the Society of Physics Students (SPS) Zone 6 Meeting, March 18 to 20, 2018, Florida State University, Tallahassee, FL.
 97. **Invited talk:** *Single-Molecule Magnets: New Strategies Demand New Spectroscopic Tools*, at the National Science Foundation Molecular Magnets Workshop (MMW), Saint Simons Island, GA, Feb. 23 to 24, 2018.
 96. **Invited talk:** *The High Field EPR Program at the NHMFL: Current and Future Developments*, at the EPR Present and Future: Joint SPP1601/SharedEPR Conference, Mohonk Mountain House, New Paltz, NY, Oct. 9 to 12, 2017.
 95. **Invited talk:** *Spin Orbit Coupling and Exchange Anisotropy in Heavy Atom Organic Magnets*, at the 12th International Symposium on Crystalline Organic Metals, Superconductors and Magnets, Miyagi Zao Royal Hotel, Miyagi, Japan, Sept. 24 to 29, 2017.
 94. **Invited talk:** *Multi-Frequency EPR Studies of Molecular Lanthanide Spin Qubits*, at Symposium on Modern Applications of EPR Spectroscopy, School of Chemistry, University of Manchester, United Kingdom, Sept. 7, 2017.
 93. **Invited talk:** *395 GHz Gyrotron-Based Dynamic Nuclear Polarization Enhancement of High-Field NMR Sensitivity at 14.1 T/600 MHz*, at the Joint North America-Greece-Cyprus Workshop on Paramagnetic Materials (NAGC 2017) and Current Trends in Molecular and Nanoscale Magnetism (CTMNM 2017) Workshop, Paphos, Cyprus, May 8 to 12, 2017.
 92. **Invited talk:** *EPR Studies of Molecular Lanthanide Spin Qubits*, European Conference on

Molecular Spintronics (ECMolS), Bologna, Italy, November 15 to 18, 2016.

91. **Invited talk:** *Probing Giant Magnetic Anisotropies in Molecular Nanomagnets Using Very High-Field EPR*, presented at Symposium on Condensed Matter Physics at ORNL and the National Magnetic Field Laboratory, at the 2016 Southeastern Section of the APS Conference (2016 SESAPS), Charlottesville, VA, November 9 to 12, 2016.
90. **Invited talk:** *Probing Giant Magnetic Anisotropies in Molecular Nanomagnets Using Very High-Field EPR*, 2016 Conference on Novel Phenomena in High Magnetic Fields (NPHMF), Hefei, China, October 29 to 31, 2016.
89. **Invited talk:** *EPR Studies of Molecular Lanthanide Spin Qubits*, 6th Workshop on Current Trends in Molecular and Nanoscale Magnetism (CTMNM), Pylos, Greece, October 10 to 13, 2016.
88. **Keynote Lecture:** *Probing Giant Anisotropies in Mononuclear Single-Molecule Magnets Using Very High-Field EPR*, 15th International Conference on Molecule-Based Magnets (ICMM), Sendai, Japan, September 4 to 8, 2016.
87. **Keynote Lecture:** *Electro-Nuclear Clock Transitions in Molecular Lanthanide Spin Qubits*, 20th Osaka City University (OCU) International Conference on Molecular Spins and Quantum Technology, Osaka, Japan, August 31 to September 4, 2016.
86. **Invited talk:** *Molecular Lanthanide Spin Qubits*, Amherst Workshop on Molecular Magnets, Amherst College, MA, August 19, 2016.
85. **Invited talk:** *Molecular Lanthanide Spin Qubits*, 4th International Workshop on Novel Magnetic and Multifunctional Materials, organized jointly with the French-Korean Meeting on Functional Materials for Organic Optics, Electronics and Devices, Université Pierre et Marie Curie, Paris, France, July 4-8, 2016.
84. **Invited talk:** *Probing Giant Magnetic Anisotropies in Mononuclear Single-Molecule Magnets Using Very High-Field EPR*, PPHMF-8, Physical Phenomena at High Magnetic Fields, Tallahassee, FL, January 6-9, 2016.
83. **Invited talk:** *Controlled Under Pressure: Magnetic Resonance Studies of Molecular Materials*, Pacificchem 2015 – The International Chemical Congress of Pacific Basin Societies, Honolulu, HI, December 15-20, 2015.
82. **Invited talk:** *Protecting Molecular Spin Qubits Against Dipolar Decoherence*, Pacificchem 2015 – The International Chemical Congress of Pacific Basin Societies, Honolulu, HI, December 15-20, 2015.
81. **Invited talk:** *Terahertz-to-Infrared Spectroscopy in High Magnetic Fields: Application to Molecular Magnetic Materials*, THz to soft X-ray Workshop, BESSY-II, December 7 and 8, 2015, Berlin, Germany.
80. **Invited talk:** *Atomic Clock Transitions in Lanthanide Molecular Qubits*, European Materials Research Symposium on Molecular Materials for Quantum Computing, September 16 and 17, 2015, Warsaw, Poland.
79. **Invited talk:** *Controlled Under Pressure: Understanding Magnetic Anisotropy in Heavy Atom Organic Radicals*, American Chemical Society Fall Meeting Symposium on

Synthetic Chemistry Approaches to Magnetic Materials, August 16 to 20, 2015, Boston, Massachusetts.

78. **Invited talk:** *Spin-orbit mediated anisotropic exchange in organic magnets containing heavy heteroatoms*, Telluride science workshop: Enhanced functionalities in 4 and 5d transition metal compounds from large spin-orbit coupling, June 14-18, 2015, Telluride, CO.
77. **Invited talk:** *Probing Giant Magnetic Anisotropies in Mononuclear Transition Metal Complexes Using Very High-field EPR*, 98th Canadian Society of Chemistry Annual Meeting, Ottawa, Ontario, June 13-17, 2015.
76. **Invited talk:** *Ligand-field engineering of atomic clock transitions in molecular spin qubits*, American Chemical Society Spring Meeting Symposium on Chemical Approaches to Spintronics Research, March 22 to 26, 2015, Denver, Colorado.
75. **Invited talk:** *High-field electron paramagnetic resonance determination of the magnetic anisotropy in pseudo-octahedral mononuclear VIII complexes*, American Chemical Society Spring Meeting Symposium in Honor of Kim R. Dunbar, who received the ACS Award for Distinguished Service in the Advancement of Inorganic Chemistry, March 22 to 26, 2015, Denver, Colorado.
74. **Invited talk:** *Controlled Under Pressure: Understanding Spin Orbit Coupling and Exchange Anisotropy in Organic Magnets*, American Physical Society March Meeting, San Antonio, TX, March 2 to 6, 2015.
73. **Invited talk:** *Atomic Clock Transitions in Molecular Spin Qubits*, Workshop on Molecular Electron Spin Qubits, University of Manchester, January 12 to 15, 2015, Manchester, United Kingdom.
72. **Award Lecture:** *Ferromagnetic Resonance Studies of Spin-Orbit Effects in Heavy Atom Organic Radical Ferromagnets*, International EPR Society Silver Medal Award Lecture at the joint Conference of the 9th Asia-Pacific EPR/ESR Society Symposium, 1st International EPR (ESR) Society Symposium, and 53rd SEST Annual Meeting, 12 – 16 November, 2014, Nara, Japan.
71. **Invited talk:** *Recent Developments in the Application of High-Field Electron Paramagnetic Resonance to the Study of Molecular Nanomagnetism*, EPR Symposium at the Rocky Mountain Conference on Magnetic Resonance, July 13 to 17, 2014, Copper Mountain, CO.
70. **Invited talk:** *Studies of Coherent Quantum Spin Dynamics on Mononuclear Molecular Nanomagnets*, Technical Meeting on Novel Nanomagnetic and Multifunctional Materials, June 16 to 17, 2014, University of Maryland.
69. **Invited talk:** *FMR Studies of Spin-Orbit Effects in Organic Radical Ferromagnets*, Fifth Workshop on Current Trends in Molecular and Nanoscale Magnetism, Larnaka, Cyprus, May 25-29, 2014.
68. **Invited talk:** *EPR Studies of Rare-Earth Molecular Nanomagnets*, German Physical Society (DPG) Spring meeting, March 30 to April 4, 2014, Dresden, Germany.
67. **Invited talk:** *Materials for Spin-Based Information Technologies*, Research in Materials Science at FSU Retreat, January 11, 2014, Tallahassee, FL.

66. **Plenary Lecture:** *EPR studies of highly anisotropic mononuclear nanomagnets*, Symposium on the Frontiers of Molecular Magnetism, Sept. 17 to 19, 2013, Nanjing, China.
65. **Invited talk:** *EPR studies of highly anisotropic mononuclear nanomagnets*, 246th ACS National Meeting and Exposition, Sept. 8 to 12, 2013, Indianapolis, IN.
64. **Invited talk:** *High-Field EPR Studies of an Organic Radical Ferromagnet Under Pressure*, 55th Annual Rocky Mountain Conference on Magnetic Resonance, July 28 to August 1, 2013, Denver, CO.
63. **Plenary Lecture:** *Controlled under pressure: high-field EPR studies of magnetostructural correlations in molecule-based magnetic materials*, annual meeting of the European magnetic resonance community, EUROMAR 2013, Hersonissos, Crete, Greece, June 30 to July 5, 2013.
62. **Showcase Lecture:** *High-Field EPR and Molecular Magnetism at the Tallahassee Magnet Lab*, evening Showcase Symposium at the Florida Annual Meeting and Exposition (FAME) of the Florida Section of the American Chemical Society, Innisbrook Resort and Golf Club, May 9-11, 2013.
61. **Invited talk:** *EPR and X-ray studies of pressure effects in molecule-based magnets*, 12th Joint MMM/Intermag Conference, Chicago, IL (January 14-18, 2013).
60. **Invited talk:** *High-field EPR studies of molecular magneto-structural correlations under pressure*, International Symposium and School on Multifunctional Molecular Materials and Devices (ISSMMD), Durham, UK (September 23-29, 2012).
59. **Invited talk:** *EPR of Molecule-Based Magnets with Strong Spin-Orbit Coupling*, Fourth Workshop on Current Trends in Molecular and Nanoscale Magnetism, Chalkidiki, Greece (June 11-14, 2012).
58. **Invited talk:** *Molecule-Based Magnets: The View from EPR*, 62nd Fujihara Seminar, Sendai, Japan (May 7-10, 2012).
57. **Keynote Lecture:** *Molecular Magnetism and High-Field EPR at the National High Magnetic Field Laboratory*, Royal Society of Chemistry Conference on EPR, York, England, April 3-7, 2011.
56. **Invited Lecture:** *Single-Molecule Magnets*, 22nd Annual Harry C. Allen Jr. Symposium: Magnetism Through Molecular Materials, Clark University, Worcester, MA, March 18, 2011.
55. **Invited Talk:** *Single-Molecule Magnets*, International Symposium and School on Multifunctional Molecule-based Materials (ISSMMM), Argonne National Lab, Chicago, IL, March 13-18, 2011.
54. **Invited Talk:** *EPR Studies of Heavy Atom Molecule-Based Magnets*, 3rd Workshop on Quantum Coherent Properties of Spins (QCPS-III), Orlando, Florida, December 20-22, 2010.
53. **Invited Talk:** *Very High-Field Wideband EPR Studies of Quantum Magnets*, 7th International Conference on Physical Phenomena at High Magnetic Fields (PPHMF-VII), Tallahassee, Florida, December 3-8, 2010.
52. **Invited Talk:** *Molecular Nanomagnets: the View from EPR*, Southeastern Magnetic Resonance Conference (SEMRC), Department of Chemistry, University of Florida, Gainesville, October 22-24, 2010.

51. **Keynote Lecture:** *Molecule-Based Magnets with Strong Spin-Orbit Coupling*, International Conference on Molecule-Based Magnetism (ICMM XII), Beijing, China, October 8-12, 2010.
50. **Invited Talk:** *EPR at the National High Magnetic Field Laboratory and Studies Under Pressure*, UK/USA Meeting on Coordination Chemistry, Molecular Magnetism and High Pressure, Department of Chemistry, University of Edinburgh, Scotland, August 5/6th 2010.
49. **Invited talk:** *The Effective Barrier to Magnetization Reversal in Mn₁₂ Single-Molecule Magnets*, 3rd Workshop on Current Trends in Nanoscale and Molecular Magnetism, Orlando, FL, June 20-25, 2010.
48. **Invited talk:** *EPR Studies of Quantum Coherent Properties of Rare-Earth Spins*, at the 2nd Workshop on Quantum Coherent Properties of Spins, Vancouver, Canada, Dec. 4-6, 2009.
47. **Invited talk:** *EPR at the National High Magnetic Field Laboratory: Shameless Advertising*, at the 3rd North America-Greece-Cyprus Workshop in Paramagnetic Materials, Protaras, Cyprus, June 15-19, 2009.
46. **Invited talk:** *Microwave Spectroscopy of Organic Superconductors and Conductors*, 429 WE-Heraeus Seminar, *Microwaves for Condensed Matter Physics*, Physikzentrum Bad Honnef (Germany), April 5-8, 2009.
45. **Invited talk:** *Beyond the giant spin approximation: the view from EPR*, Symposium on Spin Physics and Nanomagnetism, March 13-14, 2009, Lehman College, New York.
44. **Invited talk:** *Intermolecular correlations in SMMs*, Workshop on Quantum Properties of Magnetic Molecules, November 14-16, 2008, Tulane University, New Orleans, LA.
43. **Invited talk:** *Single-Molecule Magnets*, 31st International EPR Symposium at the 50th Rocky Mountain Conference on Analytical Chemistry, July 27-31, 2008, Breckenridge, Colorado.
42. **Invited talk:** *Quantum dynamics of molecular nanomagnets*, 2nd workshop on novel electronic materials, May 15-17, 2008, University of Kentucky, Lexington, KY.
41. **Invited talk:** *Quantum spin dynamics in single-molecule magnets: the view from EPR*, Florida Award Symposium at the 84th Annual American Chemical Society Meeting—Florida section, May 8-10, 2008, Kissimmee, FL.
40. **Invited talk:** *Recent Developments in High-Frequency EPR at the University of Florida*, Southeastern Magnetic Resonance Conference, November 9-11, 2007, Tuscaloosa, AL.
39. **Invited talk:** *Quantum spin dynamics in molecular nanomagnets: the view from EPR*, International Workshop on Nanomagnetism, July 1-4, 2007, Coma-Ruga (Costa Daurada), Spain.
38. **Invited talk:** *Single-molecule magnets and the validity of the giant spin approximation*, Southeastern Magnetic Resonance Conference, November 3-5, 2006, Gainesville, FL.
37. **Invited talk:** *The effect of anisotropy on the Bose-Einstein condensation of magnons in BaCuSi₂O₆*, International Workshop on Current Trends in Nanoscopic and Mesoscopic Magnetism, September 6-9, 2006, Santorini, Greece.
36. **Invited talk:** *Beyond the giant spin approximation: the view from EPR*, International Conference on Molecule-based Magnets (ICMM 2006), August 13-17, 2006, Victoria, Canada.
35. **Invited talk:** *Fermi Surfing: Magneto-Optical Studies of Organic Superconductors*, International Workshop on Nanomagnetism, July 2-6, 2006, Coma-Ruga (Costa Daurada), Spain.
34. **Invited talk:** *Cyclotron Resonance Studies of Organic Superconductors*, International Conference on Low Energy Electrodynamics in Solids (LEES '06), July 2-6, 2006, Tallin, Estonia.
33. **Invited talk:** *Magnetic Quantum Tunneling: New Insights from EPR*, International Conference on Single-Molecule Quantum Magnets and Single-Chain Quantum Magnets, March 11-13, 2006, Okazaki, Japan.
32. **Invited talk:** *Quantum effects in single-molecule magnets*, Southeastern Section of the American

- Physical Society meeting (SESAPS2005), November 10-12, 2005, Gainesville, FL.
31. **Invited talk:** *High-field/frequency EMR: application to molecular conductors, superconductors and magnets*, Free electron laser workshop, October 27, 2005, Gainesville, FL.
 30. **Invited talk:** *Molecular control of the quantum dynamics of single-molecule magnets*, 6th International Conference on Crystalline Organic Metals, Superconductors and Ferromagnets (ISCOM 2005), September 11-16, 2005, Key West, FL.
 29. **Invited talk:** *Application of High-Frequency EPR to Studies of Single-Molecule Magnets*, International Workshop on Nanomagnetism, July 3rd to 7th 2005, Coma-Ruga, Costa-Daurada, Spain.
 28. **Invited talk:** *Multi-High-Frequency EPR Spectroscopy of Single-Molecule Magnets*, Conference on Single Molecule Magnets and Hybrid Magnetic Nanostructures, June 27th to July 1st, 2005, International Center for Theoretical Physics, Trieste, Italy.
 27. **Invited talk:** *Application of high-frequency electron paramagnetic resonance to studies of single-molecule magnets*, at the First NorthAmerica-Greece-Cyprus Workshop on Paramagnetic Materials, May 4th to 7th 2005, University of Cyprus, Nicosia, Cyprus.
 26. **Invited talk:** *Quantum Entanglement in exchange-coupled dimers of SMM's*, Workshop on Frontiers in Molecular Magnetism, Feb 11-12, 2005, at Pacific Institute for Theoretical Physics (PITP), University of British Columbia, Vancouver, Canada.
 25. **Invited talk:** *Quantum coherence in an exchange coupled dimer of single molecule magnets*, Symposium on Quantum Computing at the NHMFL, Oct. 20th, 2004.
 24. **Plenary talk:** *Exchange-Coupled Dimers of Molecular Magnets*, Low Energy Electrodynamics in Solids (LEES '04), Kloster Banz, Germany, July 18th - 23rd, 2004.
 23. **Invited talk:** *Just-In-Time-Teaching*, Cottrell Scholars conference organized by Research Corporation, Tucson, AZ, July 9-11, 2004.
 22. **Invited talk:** *Coherent quantum spin dynamics: the need for powerful microwave sources*, "Big Light" Workshop, NHMFL, Tallahassee, FL (May. 6-7, 2004).
 21. **Invited talk:** *Magnetic quantum tunneling and quantum coherence in manganese-based single-molecule magnets*, March meeting of the American Physical Society, Montreal, Canada (Mar. 22-26, 2004).
 20. **Invited talk:** *Angle-resolved microwave spectroscopy of the normal and superconducting states of low-dimensional molecular superconductors*, annual meeting of the Southeastern section of the American Physical Society (SESAPS), Wrightsville Beach, NC (Nov. 6-8, 2003).
 19. **Invited talk:** *Broadband single crystal EPR spectroscopy from 8 to 715 GHz in magnetic fields to 33 tesla*, 33rd Southeastern Magnetic Resonance Conference (SEMRC), Tallahassee, FL (Oct. 17-19, 2003).
 18. **Invited talk:** *Interlayer electrodynamics in the organic superconductor κ -(BEDT-TTF)₂Cu(NCS)₂*, Fourth International Conference on New Theories, Discoveries, and Applications of Superconductors and Related Materials (New³SC-4), San Diego (January 2003).
 17. **Invited talk:** *Single Crystal High Frequency Cavity-based EPR Spectroscopy of Single Molecule Magnets*, Invited talk at Fall 2002 MRS meeting, Boston, MA, Dec. 2-6.
 16. **Invited talk:** *High field EPR investigations of quantum and environmental effects in single molecule nanomagnets*, Low Energy Electrodynamics in Solids (LEES '02), Montauk, Long Island, NY, October 13 to 18, 2002.
 15. **Invited talk:** *Developing effective scientific communicative skills*, Cottrell Scholars conference organized by Research Corporation, Tucson, AZ, July 12-13, 2002.
 14. **Invited talk:** *Single crystal high-frequency EPR spectroscopy on Fe- and Mn-based single*

- molecule magnets*, Mini Symposium on Single Molecule Magnets, Royal Institution of Great Britain, May 28 (2002)
13. **Invited talk:** *Cyclotron resonance in Sr_2RuO_4* , Third International Conference on New Theories, Discoveries, and Applications of Superconductors and Related Materials (New³SC-3), Honolulu (January 2001).
 12. **Invited talk:** *Millimeter and submillimeter wave spectroscopy: opportunities for high magnetic field users*, Topical Meeting on High Field Spectroscopy, National High Magnetic Field Laboratory, Los Alamos National Labs (NM), November 2000.
 11. **Invited talk:** *Cyclotron resonance in the layered perovskite superconductor Sr_2RuO_4* , March 2000 Meeting of the American Physical Society, in Minneapolis, MN (March 2000).
 10. **Invited talk:** *Millimeter-wave magneto-electrodynamics of organic conductors and superconductors*, International Symposium on Crystalline Organic Metals and Ferromagnets (ISCOM), Oxford, England (September 1999).
 9. **Invited talk:** *Cyclotron resonance and effective mass renormalizations in Sr_2RuO_4* , 22nd Low Temperature Conference (LT22), Helsinki, Finland (August 1999).
 8. **Invited talk,** *Fermi surfing: the Physics of Novel Metals in High Magnetic Fields*, Annual meeting of the Pacific Northwest Association of College Physics (PNACP), April 10th, 1999.
 7. **Invited talk,** *Millimeter-wave spectroscopy in high magnetic fields*, at Physical Phenomena in High Magnetic Fields (PPHMF-III), Tallahassee, FL, October 24-27, 1998.
 6. **Invited talk,** *Bulk quantum Hall effect in η - Mo_4O_{11}* , International Conference on the Science and Technology of Synthetic Metals (ICSM '98), Montpellier, France, July 12-18, 1998.
 5. **Invited talk,** *Millimeter-wave spectroscopy of low-dimensional molecular metals in high magnetic fields*, 5th International Symposium on Research in High Magnetic Fields (RHMF '97), Sydney, 4-6 August 1997.
 4. **Invited talk,** *Probing the microwave conductivity of low dimensional organic conductors and superconductors in high magnetic fields*, SPIE's international symposium on optical science, engineering and instrumentation, Denver, Co (August 1996)
 3. **Invited talk,** *Probing the microwave response of low dimensional organic conductors in high magnetic fields*, Workshop on millimeter wave spectroscopy of solids, University of California, Los Angeles (March 1996).
 2. **Invited talk,** *Magneto-optical studies of the heavy-fermion compound $CeNiSn$* , 4th International Symposium on Research in High Magnetic Fields, Nijmegen, The Netherlands (August 1994).
 1. **Invited talk,** *The influence of magnetic order in quasi-2D organic conductors*, International Conference on the Electronic Properties of Two-Dimensional Systems, Newport RI (May 1993).

H. Invited Tutorials ([Back to Top](#))

15. **(Virtual)** *Directly observing quantum spin dynamics and relaxation via electron magnetic resonance*, 10th Annual Theory Winter School, National High Magnetic Field Laboratory, January 10 – 14, 2022.
14. *Electron Paramagnetic Resonance Spectroscopy and Quantum Spin Science*, Undergraduate School on Magnetism and Magnetic Materials, Florida State University, Tallahassee, FL, August 9 – 13, 2021.
13. *Electron Magnetic Resonance at the NHMFL*, International EPR Society & SharedEPR Summer School 2019, University of Denver, Denver, CO, July 17-21, 2019.
12. *EPR Studies of Molecular Spin Qubits*, at the 12th European School on Molecular Nanoscience, Elche (Alicante), Spain, May 19 – 24, 2019.

11. *Electron Magnetic Resonance at the MagLab*, NHMFL User Summer School, Tallahassee, FL, May 13-17, 2019.
10. *Electron Magnetic Resonance at the MagLab*, NHMFL User Summer School, Tallahassee, FL, May 14-18, 2018.
9. *Deconstructing Molecular Nanomagnets via Single-Crystal High-Field EPR*, Advanced EPR School: Theory and Applications, Tallahassee, FL, October 26-27, 2017.
8. *Electron Magnetic Resonance at the MagLab*, HMFL User Summer School, Tallahassee, FL, May 15-19, 2017.
7. *Electron Magnetic Resonance at the MagLab*, NHMFL User Summer School, Tallahassee, FL, May 16-20, 2016.
6. *Electron Magnetic Resonance at the MagLab*, NHMFL User Summer School, Tallahassee, FL, May 18-22, 2015.
5. *Single-Molecule Magnets and EPR Spectroscopy*, 2nd Undergraduate School on Magnetism and Magnetic Materials, Florida State University, Tallahassee, FL, July 13 – 24, 2014.
4. *Single-Molecule Magnets and EPR Spectroscopy*, First Undergraduate School on Magnetism and Magnetic Materials, Florida State University, Tallahassee, FL, July 30 – August 8, 2012.
3. *Electron Magnetic Resonance at the Magnet Lab*, NHMFL User Summer School, NHMFL, Tallahassee, May 14-18, 2012.
2. *High-Field Electron Paramagnetic Resonance at the Florida Magnet Lab*, First Magnetostructural Correlations Workshop, NHMFL, Tallahassee, April 23-26, 2012.
1. *Applications of Electron Magnetic Resonance at the NHMFL*, at the 1st MagLab Summer School, Tallahassee, June 21-28, 2009.

I. Presentations, Briefings, etc., to Government Agencies (Back to Top)

4. **(In person):** *Electron Magnetic Resonance*, presented at National Academies of Sciences, Engineering and Medicine Committee on *The Current Status and Future Direction of High Magnetic Field Science in the United States, Phase II*, Information Gathering Meeting on September 29, 2023, at the National High Magnetic Field Laboratory, Session 3: *Spectroscopic and Imaging*. https://www.nationalacademies.org/event/40802_09-2023_the-current-status-and-future-direction-of-high-magnetic-field-science-in-the-united-states-phase-ii-meeting-on-9-29-2023
3. **(Virtual):** *Advancing Chemistry and Quantum Information Science – An Assessment of Research Opportunities at the Interface of Chemistry and Quantum Information Science in the United States*, Presented at Virtual Congressional Briefing on behalf of National Academies of Sciences, Engineering and Medicine, Theodore Goodson III, Stephen Hill, Marilu Perez-Garcia, Brenda Rubenstein, Michael Wasielewski and Linda Nhon, May 31, 2023.
2. **(Virtual):** *Advancing Chemistry and Quantum Information Science – An Assessment of Research Opportunities at the Interface of Chemistry and Quantum Information Science in the United States*, Presentation to the National Science Foundation and Department of Energy Chemistry Divisions, on behalf of National Academies of Sciences, Engineering and Medicine, Theodore Goodson III, Stephen Hill, Marilu Perez-Garcia, Brenda Rubenstein, Michael Wasielewski and Linda Nhon, May 25, 2023.
1. **(Virtual):** *Spectroscopy Methods for Molecular Quantum Spin Science*, presented at National Academies of Sciences, Engineering and Medicine Committee on Identifying Opportunities at the Interface of Chemistry and Quantum Information Science, Information Gathering Meeting #2, Session 1: *Spectroscopic Tools and Instrumentations to Study Chemical Approaches*, June 10, 2022. <https://www.nationalacademies.org/event/06-10-2022/identifying-opportunities-at-the-interface-of-chemistry-and-quantum-information-science-information-gathering-meeting-2>

J. Departmental Seminars and Colloquia ([Back to Top](#))

Seminar (in person): *Molecular Spins for Next Generation Quantum Technologies*, joint Department of Physics and Chemistry seminar at University College Dublin, Ireland, May 18, 2022.

Seminar (virtual): *Molecular Spins for Next Generation Quantum Technologies*, remote seminar via Zoom, College of Chemistry, University of California Berkeley, Berkeley, CA, November 6, 2020.

Seminar (virtual): *Molecular Lanthanide Spins for Next Generation Quantum Technologies*, remote seminar via Zoom, Department of Chemical and Biological Physics, Weizmann Institute of Science, Rehovot, Israel, May 7, 2020.

Colloquium: *Molecular Spins for Next Generation Quantum Technologies*, Department of Physics, University of California at Riverside, Riverside, CA, January 23, 2020.

Seminar: *Molecular Spins for Quantum Computation*, Quantum Matter Working Group – Investigating Problems in Quantum Materials, Institute for Materials Science, Los Alamos National Lab, July 18, 2019.

Seminar: *Very High-Field/Frequency EPR Studies of Orbitally Degenerate Transition Metal Ions*, Department of Chemistry, Danish Technical University, Copenhagen, Denmark, October 25, 2018.

Seminar: *Very High-Field/Frequency EPR Studies of Orbitally Degenerate Transition Metal Ions*, Department of Chemistry, University of Copenhagen, Denmark, October 24, 2018.

Seminar: *Lanthanide Molecular Spins for Quantum Technologies*, Physical, Theoretical & Inorganic Chemistry seminar, School of Chemistry, University of Melbourne, Australia, October 3, 2018.

Seminar: *Lanthanide Molecular Spins for Quantum Technologies*, Department of Physics, University of New South Wales, Sydney, Australia, October 2, 2018.

Seminar: *Understanding Spin Orbit Coupling and Exchange Anisotropy in Organic Magnets*, Department of Physics, University of Queensland, Brisbane, Australia, September 28, 2018.

Seminar: *Lanthanide Molecular Spins for Quantum Technologies*, Department of Chemistry, University of Tennessee, Knoxville, TN, February 22, 2018.

Seminar: *Electro-Nuclear Clock Transitions In Lanthanide Molecular Spin Qubits*, Department of Physics, Colorado State University, Fort Collins, CO, January 26, 2018.

Seminar: *High-Field EPR Studies of Orbitally Degenerate Ni^{II} and Ni^{III} Complexes*, Department of Chemistry, University of Ottawa, July 28, 2017.

Colloquium: *EPR Studies of Molecular Lanthanide Spin Qubits*, Institut für Theoretische Physik, Johann Wolfgang Goethe Universität, Frankfurt, May 29, 2017.

Colloquium: *EPR Studies of Molecular Lanthanide Spin Qubits*, Kirchoff Institute of Physics, University of Heidelberg, May 26, 2017.

Colloquium: *EPR Studies of Molecular Lanthanide Spin Qubits*, Leibniz Institute for Solid State and Materials Research IFW Dresden, May 24, 2017.

Seminar: *EPR Studies of Molecular Lanthanide Spin Qubits*, Department of Physics, Clarendon Laboratory, University of Oxford, April 6, 2017.

Seminar: *Controlled Under Pressure: Understanding Spin Orbit Coupling and Exchange Anisotropy in Organic Magnets*, Department of Physics, Ohio State University, Columbus, Ohio, March 23rd, 2017.

Seminar: *High Field Electron Paramagnetic Resonance Studies of Molecular Nanomagnets*, Centre to Recherche Paul Pascal, Bordeaux, July 1, 2016.

Seminar: *Controlled Under Pressure: Understanding Spin Orbit Coupling and Exchange Anisotropy in Organic Magnets*, Department of Physics, University of Utah, Salt Lake City, Utah, April. 6th, 2016.

Colloquium: *High Field Electron Paramagnetic Resonance Studies of Molecular Nanomagnets*, Department of Physics, Montana State University, Bozeman, Montana, Feb. 26th, 2016.

Seminar: *High Field Electron Paramagnetic Resonance Studies of Molecular Nanomagnets*, Department of Physics, Central Michigan University, Mount Pleasant, Michigan, Feb. 18th, 2016.

Colloquium: *High-Field Electron Paramagnetic Resonance Studies of Molecular Nanomagnets*, Department of Chemistry, Northwestern University, May 22, 2015.

Seminar: *International Collaborative Research in Molecular Nanomagnetism at the NHMFL*, Department of Chemistry, Osaka City University, Osaka, Japan, Nov. 17th, 2014.

Seminar: *Multi-Frequency EPR Studies of Mononuclear Lanthanide Molecular Nanomagnets*, Department of Chemistry, Texas A&M University, College Station, Nov. 8th, 2014.

Colloquium: *Electron Magnetic Resonance Under Extreme Conditions*, Dept. of Physics, University of Southern California, September 29th, 2014.

Seminar: *High-Field Electron Paramagnetic Resonance and Molecular Nanomagnetism Research at the National High Magnetic Field Laboratory*, Department of Chemistry, University of Guelph, Ontario, Canada, May 9th, 2014.

Seminar: *High-Field Electron Paramagnetic Resonance and Molecular Nanomagnetism Research at the National High Magnetic Field Laboratory*, Department of Chemistry, University of Waterloo, Ontario, Canada, May 7th, 2014.

Seminar: *Electron Paramagnetic Resonance Under Extreme Conditions: Application to Molecule-Based Magnets*, Brockhouse Institute for Materials Research, McMaster University, May 5th, 2014.

Seminar: *Molecular Magnetism and Electron Paramagnetic Resonance at the NHMFL*, Department of Physics, Miami University, Oxford, Ohio, April 30th, 2014.

Seminar: *Controlled Under Pressure: Ferromagnetic Resonance Studies of Spin-Orbit Effects in Molecule-Based Magnets*, Helmholtz-Zentrum Dresden-Rossendorf (HZDR), Dresden High Magnetic Field Laboratory, March 28th 2014.

Seminar: *High-Field EPR at the MagLab*, Argonne National Laboratory, April 8th, 2013.

Colloquium: *Molecular Nanomagnets: Insights from High-Magnetic-Field Electron Paramagnetic Resonance Spectroscopy*, Dept. of Physics, University of Alabama at Birmingham, April 5th, 2013.

Departmental seminar: *Molecular Magnetism and EPR at the National High Magnetic Field Laboratory*, Institute for Molecules and Materials, University of Nijmegen, The Netherlands, June 8th, 2012.

Departmental seminar: *Molecular Magnetism and EPR at the National High Magnetic Field Laboratory*, Department of Chemical, University of North Florida, February 17th, 2012.

Departmental seminar: *Single-Molecule Magnets*, Department of Chemical and Biomedical Engineering, Florida State University and Florida A&M University College of Engineering, October 23rd, 2009.

Departmental seminar: *Single-Molecule Magnets: Insights from High-Field EPR*, Department of Chemistry, North Carolina State University, September 25th, 2009.

Seminar: *Beyond the giant spin approximation: the view from EPR*, at a small workshop held at the University of Valencia, Spain, June 11-12, 2009.

Colloquium: *Surfing the Organic Fermi Sea*, Dept. of Physics, University of Florida, September 20th, 2007.

Seminar: *High-field EMR: a powerful probe of symmetries and their consequences in quantum matter*, MARTECH seminar, Florida State University, Department of Physics, September 4th, 2007.

Guest lecture: *Cyclotron motion and the quantum harmonic oscillator*, Jonathan Friedman's modern physics class on parent's day, Dept. of Physics, Amherst College, MA, October 27th, 2006.

Seminar: *Magnetic Quantum Tunneling: Insights from Molecules and Magnetic Resonance*, Dept. of Physics, Amherst College, MA, October 26th, 2006.

Colloquium: *Magnetic Quantum Tunneling: Insights from Molecules and Magnetic Resonance*, Dept. of Physics, Florida State University, October 12th, 2006.

Seminar: *Limitations of the Giant Spin Hamiltonian in Explaining the Magnetization Tunneling in a Single-Molecule Magnet*, University of Barcelona, Department of Physics, July 10th (2006).

Seminar: *Molecular control of quantum effects in molecule-based nanomagnets*, California Nanosystems Institute (CNSI) and Department of Physics, University of California at Santa Barbara, May 12th (2006).

Seminar: *Cyclotron resonance studies of organic superconductors*, Geballe Laboratory for Advanced Materials and Department of Applied Physics, Stanford University, May 11th (2006).

Seminar: *The origin of fourth-order zero-field-splitting terms in the giant spin model*, National High Magnetic Field Laboratory, Florida State University, Tallahassee, April 28th (2006).

Colloquium: *Magnetic Resonance Imaging of the Fermi Surfaces of Low-Dimensional Metals*, Dept. of Physics, New York University, November 17th, 2005.

Lecture: *High explosives and flying frogs: research at high magnetic fields*, 47th Annual University of Florida Student Science Training Program (UF-SSTP), July 18th, 2005.

Colloquium: *Multi-high-frequency EPR studies of giant spin single-molecule magnets*, Dept. of Chemistry, University of Stuttgart, Germany, July 11th, 2005.

Colloquium: *Quantum entanglement in an exchange-coupled dimer of single-molecule magnets*, Dept. of Physics, University of Central Florida, April 22nd, 2005.

Seminar: *Angle-resolved microwave spectroscopy of the normal and superconducting states of low-dimensional molecular superconductors*, Advanced Materials and Process Engineering Laboratory (AMPEL), University of British Columbia, Vancouver, Canada, Feb. 10, 2005.

Invited talk: *Single-molecule magnets: exploring quantum magnetization dynamics at the nanoscale*, National Institute for Materials Science, Tsukuba, Japan, Oct. 8th, 2004.

Invited talk: *Single-molecule magnets: exploring quantum magnetization dynamics at the nanoscale*, National High Magnetic Field Laboratory, Renewal proposal retreat, January 2004.

Colloquium: *Single-molecule magnets: exploring quantum magnetization dynamics at the nanoscale*, Dept. of Physics, University of Florida, September 2003.

Colloquium: *Single-molecule magnets: exploring quantum magnetization dynamics at the nanoscale*, Dept. of Physics, University of Utah, January 2004.

Seminar: *Single-molecule magnets: exploring quantum magnetization dynamics at the nanoscale*, Dept. of Materials Engineering, University of Florida, March 2004.

Seminar: *Magneto-electrodynamic and thermodynamic studies of the vortex state in κ -(BEDT-TTF)₂Cu(NCS)₂*, University of Florida, January 29th 2001.

Colloquium: *Microwave spectroscopy of organic conductors*, University of North Dakota, Grand Forks, ND, December 4th, 1998.

Seminar, *Millimeter-wave spectroscopy of low-dimensional systems in high magnetic fields*, Los Alamos National Labs, Materials Science and Technology Division, (December 4th, 1997).

Colloquium: *Research at High Magnetic Fields*, Montana State University physics colloquium, April 1997.

Seminar: *Probing the microwave conductivity of low-dimensional molecular conductors and superconductors in high magnetic fields*, Florida State University, April 1997.

Seminar: *Probing the microwave conductivity of low-dimensional molecular conductors and superconductors in high magnetic fields*, Cornell University, March 1997.

Colloquium: *Probing the microwave conductivity of low-dimensional molecular conductors and superconductors in high magnetic fields*, Clark University, March 1997.

Seminar: *Cyclotron Resonance in Organic Conductors*, Durham University (United Kingdom), October 1994.

Seminar: *Cyclotron Resonance and Effective Mass Renormalizations in BEDT-TTF Charge Transfer Salts*, General Physics Institute, Moscow, July 1994.

K. Contributed talks (Back to Top)

Presented by S. Hill unless indicated otherwise by *

171. *Controlling Quantum Spin Dynamics in Nanoscale Molecular Qubits*, IBS Conference on Quantum Nanoscience, Ewha Womans University, Seoul, South Korea, October 10 – 13, 2023.
170. *High-Field EPR Spectroscopy of a Mn³⁺ Spin-Crossover Complex*, Brittany L. Grimm,* Irina Kühne, Conor Kelly, Grace Morgan, Stephen Hill, American Physical Society March Meeting, Las Vegas, March 5 – 10, 2023.
169. *Tunable clock transitions in lanthanide complexes for quantum information technologies*, Jakub Hruby,* Krishnendu Kundu, Danh Ngo, Ryan Murphy, Randall McClain, Benjamin Harvey, Jeffrey R. Long, Stephen Hill, American Physical Society March Meeting, Las Vegas, March 5 – 10, 2023.
168. *Spin Population Transfer in a Gd³⁺ Molecular Crystal Studied by Pulsed High-Field EPR*, Manoj Vinayaka Hanabe Subramanya,* Elvin Salerno, Miguel Gakiya, Krishnendu Kundu, Michael Shatruk, Stephen Hill, American Physical Society March Meeting, Las Vegas, March 5 – 10, 2023.
167. *Massive 116 GHz Crystal Field Clock Transition in a Tetragonal Molecular Ho(III) Complex*, Robert Stewart,* Anna Celmina, Emma Regincós, Angelos Tsanai, Mark Murrie, Stephen Hill, American Physical Society March Meeting, Las Vegas, March 5 – 10, 2023.
166. *Pulsed 94 GHz EPR for Spin Population Transfer in a Gd(III) Molecular Crystal*, Elvin Salerno,* Manoj Subramanya, Miguel Gakiya, Krishnendu Kundu, Michael Shatruk, Stephen Hill, 50th Southeastern Magnetic Resonance Conference, Tallahassee, FL, Nov. 4 – 6, 2022.
165. *600 MHz MAS-DNP Probe Designed with Microwaves in Mind*, Faith Scott, Peter Gor'kov, Jason Kitchen, Thierry Dubroca, Wenping Mao, Stephen Hill, Fred Mentink-Vigier, Joanna Long, 50th Southeastern Magnetic Resonance Conference, Tallahassee, FL, Nov. 4 – 6, 2022.
164. *Terahertz EPR Spectroscopy Using a 36-Tesla High-Homogeneity Series-Connected Hybrid Magnet*, J. Krzystek,* Thierry Dubroca, Xiaoling Wang, Frederic Mentink-Vigier, Mark Sherwin, Stephen Hill, 50th Southeastern Magnetic Resonance Conference, Tallahassee, FL, Nov. 4 – 6, 2022.
163. *Terahertz EPR Spectroscopy Using a 36-Tesla High-Homogeneity Series-Connected Hybrid Magnet*, Thierry Dubroca,* Xiaoling Wang, Frederic Mentink-Vigier, Mark Sherwin, Stephen Hill, J. Krzystek, Joint Session of the EPR and Solid State NMR Symposia at the 61st Rocky Mountain Conference on Magnetic Resonance, Copper Mountain, CO, July 25 – 29, 2022.
162. *High-Field EPR Investigation of a Potential Molecular Two-Qubit Gate Based on a Cobalt Dimer*, Daphne Lubert-Perquel,* Christianna Brantley, George Christou, Stephen Hill, 43rd EPR Symposium at the 61st Rocky Mountain Conference on Magnetic Resonance, Copper Mountain, CO, July 25 – 29, 2022.
161. *Electron Spin-Echo Envelope Modulation at Spin Clock Transitions*, K. Kundu, J. Chen, S. Hoffman, J. Marbey, D. Komijani, Y. Duan, A. Gaita-Ariño, X.-G. Zhang, H.-P. Cheng, S. Hill, 43rd EPR Symposium at the 61st Rocky Mountain Conference on Magnetic Resonance, Copper Mountain, CO, July 25 – 29, 2022.
160. *Pulsed 94 GHz EPR for Spin Population Transfer in a Gd³⁺ Molecular Crystal*, Elvin Salerno,* Manoj Subramanya, Miguel Gakiya, Krishnendu Kundu, Michael Shatruk, Stephen Hill, 2nd Molecular Magnetism in North America (MAGNA 2022) conference, Gainesville, FL, May 1 – 4, 2022.
159. *Massive 9 GHz Hyperfine Clock Transition in a Molecular Spin Qubit*, Krishnendu Kundu,* Jessica R. K. White, Samuel A. Moehring, Jason M. Yu, Joseph W. Ziller, Filipp Furche, William J. Evans,

- Stephen Hill, 2nd Molecular Magnetism in North America (MAGNA 2022) conference, Gainesville, FL, May 1 – 4, 2022.
158. *Record 9.2 GHz clock transition in a Lu(II) molecular spin qubit arising from a massive 3467 MHz hyperfine interaction*, Krishnendu Kundu, Jessika R. K. White, Samuel A. Moehring, Jason M. Yu, Joseph W. Ziller, Filipp Furche, William J. Evans, Stephen Hill, at the ACS National Spring Meeting, San Diego, CA, March 20 – 24, 2022.
 157. *9.2 GHz Clock Transition in a Lu(II) Molecular Spin Qubit Arising from a Massive 3467 MHz Hyperfine Interaction*, S. Hill, K. Kundu, J. White, S. Moehring, J. Yu, J. Ziller, F. Furche, W. Evans, American Physical Society March Meeting, Chicago, IL, Mar. 14-18, 2022.
 156. *High-Field EPR Study of the High- and Low-Spin States of a Mn³⁺ Complex Exhibiting a Sharp Spin-Crossover Transition*, Brittany Grimm,* Irina Kuehne, Conor Kelly, Grace Morgan, Stephen Hill, 88th Annual Meeting of the Southeastern Section of the American Physical Society, Florida State University, November 18 to 20 (2021).
 155. *Massive 116 GHz crystal-field clock transition in a tetragonal molecular Ho(III) complex*, Robert Stewart,* Anna Celmina, Emma Regincós, Mark Murrie, Stephen Hill, 88th Annual Meeting of the Southeastern Section of the American Physical Society, Florida State University, November 18 to 20 (2021).
 154. *Massive 9 GHz Hyperfine Clock Transition in a Molecular Spin Qubit*, Krishnendu Kundu,* Jessica White, Samuel Moehring, Jason Yu, Joseph Ziller, Filipp Furche, William Evans, Stephen Hill, 88th Annual Meeting of the Southeastern Section of the American Physical Society, Florida State University, November 18 to 20 (2021).
 153. *Massive 9 GHz Hyperfine Clock Transition in a Molecular Spin Qubit*, Krishnendu Kundu,* Jessica White, Samuel Moehring, Jason Yu, Joseph Ziller, Filipp Furche, William Evans, Stephen Hill, 49th Southeastern Magnetic Resonance Conference, Louisiana State University, October 22 – 24, 2021.
 152. *Tetranuclear transition metal clusters with direct metal-metal interactions: Synthesis, electronic structure, and magnetism*, Khetpakorn Chakarawet,* Jonathan Marbey, Stephen Hill, Jeffrey Long, at the ACS National Meeting and Exposition, San Diego, CA, August 25 – 27, 2019.
 151. *An Integrated Magnetic Resonance Investigation of Metal-Metal Bonded Systems: Potential New Routes to Single-Molecule Magnets*, Stephen Hill, Samuel M. Greer, Joscha Nehrkorn, Johannes McKay, Sebastian A. Stoian, Kathryn M. Gramigna, Brian J. Malbrecht, Theodore A. Betley and Christine M. Thomas, 42nd International EPR Symposium – Rocky Mountain Conference on Magnetic Resonance, Denver, CO, July 22-25, 2019.
 150. *Investigating decoherence pathways in Ho (W₅O₁₈)₂ via magneto-infrared spectroscopy*, Avery Blockmon,* Kendall Hughey, Ken O'Neal, Yan Duan, Aman Ullah, Luis Moreno, Mykhaylo Ozerov, Stephen Hill, Alejandro Gaita-Arino, Eugenio Coronado, Janice Musfeldt, at the ACS National Meeting and Exposition, Orlando, FL, March 31 – April 4, 2019.
 149. *Origin of magneto-crystalline anisotropy underlying 2D ferromagnetism in CrI₃ single crystals from ferromagnetic resonance*, Inhee Lee,* Kyusung Hwang, Franz Utermohlen, Daniel Weber, Chi Zhang, Johan van Tol, Stephen Hill, Joshua E. Goldberger, Nandini Trivedi, P. Chris Hammel, American Physical Society March Meeting, Boston, MA, Mar. 4-8, 2019.
 148. *Nature of the Magnetic Anisotropy in the Two-Dimensional Honeycomb Ferromagnet CrI₃*, Franz Utermohlen,* Inhee Lee, Kyusung Hwang, Daniel Weber, Chi Zhang, Johan van Tol, Stephen Hill, Joshua E. Goldberger, Nandini Trivedi, P. Chris Hammel, American Physical Society March Meeting, Boston, MA, Mar. 4-8, 2019.
 147. *Combined THz and Pulsed EPR studies on a Yb(III) Single Ion Magnet*, Jonathan Marbey*, Stergios Piligkos, Joscha Nehrkorn, Mykhaylo Ozerov, Stephen Hill, American Physical Society March Meeting, Boston, MA, Mar. 4-8, 2019.
 146. *Overhauser Dynamic Nuclear Polarization at 600 MHz – 395 GHz*, Thierry Dubroca*, Johan van Tol, Bianca Trociewitz, Sungsool Wi, Lucio Frydman, Stephen Hill, Southeastern Magnetic

Resonance Conference, Clemson University, SC, Oct 2018.

145. *Frequency-Domain EPR in the Far-IR: Direct Determination of Zero-Field Splitting of Co^{II} Single-Ion Magnets*, Joscha Nehrkorn, Sergey Veber, Karsten Holldack, Alexander Schnegg, Jurek Krzystek, Mykhaylo Ozerov, Stephen Hill, International Conference on Coordination Chemistry (ICCC), July 30 to August 4, 2018, Sendai, Japan.
144. *An Integrated Magnetic Resonance Investigation of a Compound Featuring an Fe-V Triple Bond*, Samuel M. Greer,* Johannes McKay, Kathryn Gramigna, Christine Thomas, Sebastian A. Stoian, Stephen Hill, International Conference on Coordination Chemistry (ICCC), July 30 to August 4, 2018, Sendai, Japan.
143. *Magnetic Resonance Investigation of Bonding Between First Row Transition Metals*, Samuel M. Greer,* Johannes McKay, Kathryn Gramigna, Christine Thomas, Sebastian A. Stoian, Stephen Hill, 255th ACS National Meeting, New Orleans, LA, Mar. 18-27, 2018.
142. *Spectroscopic Investigation of the Metal-Metal Bonded Single-Molecule Magnet Fe₆*, Joscha Nehrkorn, Brian Malbrecht, Samuel Greer, Azar Aliabadi, Alexander Schnegg, Karsten Holdack, Theodore Betley, Carmen Hermann, Stefan Stoll, Stephen Hill, American Physical Society March Meeting, Los Angeles, CA, Mar. 5-9, 2018.
141. *Substitution Effects on Exchange Anisotropy in Heavy Atom Radicals*, Jonathan Marbey,* Stephen Winter, Richard T. Oakley, Stephen Hill, American Physical Society March Meeting, Los Angeles, CA, Mar. 5-9, 2018.
140. *EPR Studies of Lanthanide-Lanthanide Interactions in Triple-Decker Molecular Complexes*, Dorsa Komijani,* A. Ghirri, C. Bonizzoni, S. Klyatskaya, E. Moreno-Pineda, M. Ruben, M. Affronte, S. Hill, American Physical Society March Meeting, Los Angeles, CA, Mar. 5-9, 2018.
139. *Overhauser Dynamic Nuclear Polarization in Liquids at 14.1 T*, Thierry Dubroca,* Johannes McKay, Bianca Trociewitz, Frederic Mentink, Sungsool Wi, Johan van Tol, William Brey, Lucio Frydman, Joanna R. Long, Stephen Hill, 46th Southeastern Magnetic Resonance Conference, Tallahassee, FL, Oct. 27-29, 2017.
138. *Reinvestigation of Tetrahedral Cobalt(II) Diphosphine Complexes: What Really is the Zero-Field Splitting?* Joshua Telser,* J. Krzystek, Azar Aliabadi, Alexander Schnegg, Joscha Nehrkorn, Samuel M. Greer, Stephen Hill, Karsten Holldack, 46th Southeastern Magnetic Resonance Conference, Tallahassee, FL, Oct. 27-29, 2017.
137. *Magnetic Resonance Investigation of Bonding Between First Row Transition Metals*, Samuel M. Greer,* Johannes McKay, Kathryn Gramigna, Christine Thomas, Sebastian A. Stoian, Stephen Hill, 46th Southeastern Magnetic Resonance Conference, Tallahassee, FL, Oct. 27-29, 2017.
136. *Magnetic Resonance Investigation of Bonding Between First Row Transition Metals*, Samuel M. Greer*, Kathryn Gramigna, Sebastian A. Stoian, Johannes McKay, Christine Thomas, Stephen Hill, Florida Annual Meeting and Exposition (FAME), Innisbrook Resort, Florida, May 4-6, 2017.
135. *Overhauser Dynamic Nuclear Polarization at 600 MHz – 395 GHz*, T. Dubroca*, J. McKay, B. Trociewitz, F. Mentink, S. Wi, J. van Tol, W. Brey, J. Long, L. Frydman, S. Hill, Experimental Nuclear Magnetic Resonance Conference (ENC), Asilomar, CA, March 26-31 (2017).
134. *Relating Symmetry to Magnetic Anisotropy in a Trigonal Mn(III) Complex Using EPR*, J. Marbey*, P.-R. Gan, E.-C. Yang, S. Hill, American Physical Society March Meeting, New Orleans, Louisiana, Mar. 13-17, 2017.
133. *EPR Study of Radical-Lanthanide Interactions in a Terbium(III) Molecular Spin Qubit*, D. Komijani*, S. Hill, A. Ghirri, M. Affronte, S. Klyatskaya, E. Moreno Pineda, M. Ruben, American Physical Society March Meeting, New Orleans, Louisiana, Mar. 13-17, 2017.
132. *Very High-Field EPR Studies of Orbitally Degenerate Transition Metal Ions*, Stephen Hill, Lakshmi Bhaskaran, Katie Marriott, Mark Murrie, at the 50th Annual International Meeting of the Electron Spin Resonance Group of the Royal Society of Chemistry, Keble College, Oxford, United Kingdom, April 2-6 (2017).

131. *Electro-Nuclear Atomic Clock Transitions in a Holmium Molecular Nanomagnet*, Dorsa Komijani*, M. Shiddiq, Y. Duan, A. Gaita-Arino, E. Coronado, S. Hill, 61st Annual Conference On Magnetism and Molecular Materials, New Orleans, Louisiana, Oct. 31 to Nov. 4, 2016.
130. *Overhauser and Magic Angle Spinning Dynamic Nuclear Polarization at 14.1 T*, T. Dubroca*, A. N. Smith, K. Pike, S. Froud, R. Wylde, B. Trociewitz, J. van Tol, W. Brey, J. R. Long, L. Frydman, and S. Hill, 45th Southeastern Magnetic Resonance Conference, Emory University, Atlanta, October 14-16 2016.
129. *Electro-Nuclear Clock Transitions in a Ho(III) Molecular Nanomagnet*, Dorsa Komijani*, M. Shiddiq, Y. Duan, A. Gaita-Arino, J. M. Clemente-Juan, E. Coronado, S. Hill, 2016 Gordon Research Seminar on Conductivity and Magnetism in Molecular Materials, Mount Holyoke College, South Hadley, MA, August 13-14, 2016.
128. *Probing Giant Magnetic Anisotropies in Mononuclear Single-Molecule Magnets*, Stephen Hill, Lakshmi Bhaskaran, Komalavalli Thirunavukkuarasu, Katie Marriott, Mark Murrie, Mohamed Saber and Kim Dunbar, Rocky Mountain Conference on Magnetic Resonance, EPR Symposium, Breckenridge, CO, July 17-21 (2016).
127. *A Crystal Field Approach to Orbitally Degenerate SMMs: Beyond the Spin Only Hamiltonian*, Lakshmi Bhaskaran,* Katie Marriott, Mark Murrie and Stephen Hill, American Physical Society March Meeting, Baltimore, Maryland, Mar. 14-18, 2016.
126. *Electro-Nuclear Clock Transitions in a Ho(III) Molecular Nanomagnet*, Dorsa Komijani,* Muhandis Shiddiq, Yan Duan, Alejandro Gaita-Ariño, Eugenio Coronado and Stephen Hill, American Physical Society March Meeting, Baltimore, Maryland, Mar. 14-18, 2016.
125. *Pushing the Limits of Magnetic Anisotropy in Mononuclear Ni(II) Single-Molecule Magnet: A High-Field EPR Study*, Lakshmi Bhaskaran,* Katie Marriott, Mark Murrie and Stephen Hill, Southeastern Magnetic Resonance Conference (SEMRC), Daytona Beach, Florida, Oct. 9-11, 2015.
124. *Electron Paramagnetic Resonance Studies of Fe(II) Spin Crossover Complexes and Organic Radicals/Dimers*, Sam Greer,* Sebastian Stoian, Alejandra Arroyave, Alina Dragulescu-Andrasi, Victoria Stubbs, Michael Shatruk, Richard Oakley, Stephen Hill, American Chemical Society Florida Annual Meeting and Exposition, Innisbrook, FL, May 7-9, 2015.
123. *A Spectroscopic and Theoretical Investigation of an Oxo-Bridged, Trinuclear Iron(III) Cluster*, Sebastian A. Stoian,* Christopher C. Beedle, Yi-Ru Peng, En-Che Yang, Stephen Hill, American Chemical Society Florida Annual Meeting and Exposition, Innisbrook, FL, May 7-9, 2015.
122. *Magnetic ordering and conductivity in heavy atom and multiband radicals*, Aaron Mailman, Stephen Winter, Joanne Wong, Di Tian, Craig Robertson, Paul Dube, Stephen Julian, Stephen Hill, Richard Oakley,* American Chemical Society Spring Meeting Symposium on Chemical Approaches to Spintronics Research, March 22 to 26, 2015, Denver, Colorado.
121. *Aggregates of Mn₃ single-molecule magnets: Synthesis, properties, and quantum effects*, George Christou,* Tu Nguyen, Muhandis Shiddiq, Andrew Mowson, Khalil Abboud, Stephen Hill, American Chemical Society Spring Meeting Symposium on Chemical Approaches to Spintronics Research, March 22 to 26, 2015, Denver, Colorado.
120. *Evaluating magnetic properties of molecules with strong anisotropy based on electronic configuration and geometry*, Kim Dunbar,* Maria Ballesteros, Stephen Hill, Dawid Pinkowicz, Mohamed Saber, Toby Woods, Yuan-Zhu Zhang, Han-Hua Zhao, American Chemical Society Spring Meeting Symposium on Chemical Approaches to Spintronics Research, March 22 to 26, 2015, Denver, Colorado.

119. *Pushing the Limits of Magnetic Anisotropy in a Mononuclear Ni(II) Single-Molecule Magnet: A High-Field EPR Study*, L. Bhaskaran,* K. Marriott, M. Murrie and S. Hill, **American Physical Society March Meeting, San Antonio, TX, March 2 to 6, 2015.**
118. *Field-Effect Transistors Based on Few Layered Ambipolar MoSe₂ and α -MoTe₂*, Daniel Rhodes,* Nihar Pradhan, Simin Feng, Byoung-Hee Moon, Yan Xin, Sharhriar Memaran, Muhandis Shiddiq, Lakshmi Bhaskaran, Stephen Hill, Humberto Terrones, Mauricio Terrones, Araján Pulickel and Luis Balicas, **American Physical Society March Meeting, San Antonio, TX, March 2 to 6, 2015.**
117. *Development of Overhauser Dynamic Nuclear Polarization Spectroscopy at High Magnetic Field*, A. Akinfaderin,* T. Dubroca, S. Wi, B. Trociewitz, H. Van Tol, L. Frydman, J.R. Long, W.B. Brey and S. Hill, National Society of Black Physicists conference, Baltimore, February 25-28, 2015.
116. *Solid and Solution Dynamic Nuclear Polarization at 600 MHz/395 GHz*, T. Dubroca,* B. Trociewitz, A. Akinfaderin, J. van Tol, W. Brey, S. Wi, L. Frydman, J. R. Long, and S. Hill, 43rd Southeastern Magnetic Resonance Conference, October 24-26 (2014), Tuscaloosa, Alabama.
115. *A Spectroscopic and Theoretical Investigation of a Trinuclear, Oxo-Bridged Ferric Cluster*, Sebastian A. Stoian,* Christopher C. Beedle, Yi-Ru Peng, En-Che Yang, Stephen Hill, 43rd Southeastern Magnetic Resonance Conference, October 24-26 (2014), Tuscaloosa, AL.
114. *Controlled Under Pressure: High-Field EPR Studies Of Magneto-Structural Correlations In Molecule-Based Magnetic Materials*, Stephen Hill, Komalavalli Thirunavukkuarasu, Christopher Beedle, Stan Tozer, Alessandro Prescimone, Euan Brechin, Stephen Winter, Richard Oakley, John Schlueter and Jamie Manson, 14th International Conference on Molecule-based Magnets (ICMM), St. Petersburg, Russia, July 5 – 9, 2014.
113. *Pressure tuning of anisotropy barrier in Fe₈ SMMs probed using high frequency EPR*, K. Thirunavukkuarasu,* C. C. Beedle, S. Tozer, and S. Hill, March 2014 APS meeting, Denver, CO, March 3-7, 2014.
112. *High-Frequency Electron Paramagnetic Resonance (HF-EPR) Studies of Supramolecular Aggregates of Exchange-Biased Single-Molecule Magnets*, M. Shiddiq,* T. N. Nguyen, T. Ghosh, K. A. Abboud, G. Christou, S. Hill, March 2014 APS meeting, Denver, CO, March 3-7, 2014.
111. *EPR Studies on the Kagomé System Pr₃Ga₅SiO₁₄*, Xi Wang,* Sanhita Ghosh, Saiti Datta, Michael Hoch, Pedro Schlottmann, Haidong Zhou, Stephen Hill, Florida Inorganic and Materials Symposium (FIMS), October 18-19, 2013, Gainesville, FL.
110. *Studies of Coherent Quantum Dynamics Associated with a Mononuclear Holmium Single-Molecule Magnet*, Sanhita Ghosh,* Salvador Cardona-Serra, Alejandro Gaita-Ariño, Eugenio Coronado, Stephen Hill, 58th Annual Conference on Magnetism and Magnetic Materials (MMM), Denver, CO, November 4-8, 2013.
109. *Probing Magnetic Interactions in Molecule-Based Materials Using High-Pressure Electron Paramagnetic Resonance*, K. Thirunavukkuarasu,* C. C. Beedle, S. M. Winter, A. Kovalev, S. Tozer, R. T. Oakley and S. Hill, Southeastern Magnetic Resonance Conference (SEMRC) 2013, Tallahassee, FL, October 12 (2013).
108. *Pressure Dependence of Magnetic Anisotropy in Heavy-Atom Organic Radical Ferromagnet*, K. Thirunavukkuarasu,* C. C. Beedle, S. M. Winter, A. Kovalev, S. Tozer, R. T. Oakley and S. Hill, FSU postdoc symposium, Tallahassee, FL, September 20 (2013).
107. *Probing Magnetic Interactions in Molecule-Based Materials Using High-Pressure Electron Paramagnetic Resonance*, K. Thirunavukkuarasu,* C. C. Beedle, S. M. Winter, A. Kovalev, S. Tozer, R. T. Oakley and S. Hill, 10th International Symposium on Crystalline Organic Metals Superconductors and Ferromagnets (ISCOM2013), Montreal, Canada, July 19 (2013).
106. *EPR studies of pressure induced Jahn-Teller reorientation in the coordination polymer:*

- [$\text{CuF}_2(\text{H}_2\text{O})_2(\text{pyz})$], C. C. Beedle,* C. Morien, A. Prescimone, S. Tozer, J. Manson, J. Schlueter, E. K. Brechin and S. Hill, 245th ACS National Meeting & Exposition, New Orleans, LA, April 7-11 (2013).
105. *Probing magnetic interactions in molecule-based materials using high-pressure electron paramagnetic resonance*, K. Thirunavukkuarasu,* C. C. Beedle, S. Winter, A. Kovalev, S. Tozer, R. A. Oakley, S. Hill, March 2013 APS meeting, Baltimore, MD, March 18-22, 2013.
 104. *High Field Electron Paramagnetic Resonance (HFEP) study on a Mn(IV) monomer*, A. Amjad,* E. del Barco, S. Hill, J. van Tol, A. Ozarowski, M. Ali, March 2013 APS meeting, Baltimore, MD, March 18-22, 2013.
 103. *Magnetic Response of Mn(III)F(salen) at Low Temperatures*, J.-H. Park,* C. C. Beedle, O. N. Risset, M. J. Andrus, D. R. Talham, M. K. Peprah, E. S. Knowles, M. W. Meisel, M. Shiddiq, S. Hill, A. Podlesnyak, G. Ehlers, S. E. Nagler, March 2013 APS meeting, Baltimore, MD, March 18-22, 2013.
 102. *Detection of low energy spin loop excitations in rare earth kagomé systems*, M. Hoch,* S. Ghosh, S. Datta, H. Zhou, C. Wiebe, S. Hill, March 2013 APS meeting, Baltimore, MD, March 18-22, 2013.
 101. *Cavity Perturbation Technique: The Effects of Crystal Size on the EPR Spectra of Fe_8 Single-molecule Magnets*, M. Shiddiq,* C. C. Beedle, S. Hill, March 2013 APS meeting, Baltimore, MD, March 18-22, 2013.
 100. *Low-energy spectroscopy on molecular materials under high pressures*, K. Thirunavukkuarasu,* C. A. Kuntscher, C. C. Beedle, S. M. Winter, K. Kamarás, F. Hennrich, A. Kovalev, S. Tozer, R. T. Oakley and S. Hill, 79th Annual Meeting of the APS Southeastern Section, Tallahassee, FL, November 14–17 (2012).
 99. *Quantum Tunneling of Magnetization in Trigonal Single-Molecule Magnets*, Junjie Liu,* Enrique del Barco and Stephen Hill, 13th International Conference on Molecule-based Magnets, Orlando, FL, October 7-11, 2012.
 98. *High-field EPR studies of molecular magneto-structural correlations under pressure*, Stephen Hill, joint Southeastern Meeting of the American Chemical Society and the 41st Southeastern Magnetic Resonance Conference (SEMRC), Raleigh, North Carolina, Nov. 14-17, 2012.
 97. *High-frequency/field paramagnetic resonance: hydrostatic pressure studies and implementation of a 3-D vector magnet system*, C. C. Beedle,* S. Hill, S. Tozer, A. Kovalev, C. Morien, K. Thirunavukkuarasu, E. K. Brechin, A. Prescimone, J. Schlueter, High-Pressure EPR Meeting, University of Edinburgh, Scotland, June 19, 2012.
 96. *EPR Studies of Organic Radical Ferromagnets Under Pressure*, Stephen Hill, **High-Pressure EPR Meeting, University of Edinburgh, Scotland, June 19, 2012.**
 95. *Interplay between Anisotropy and Exchange in Dinuclear Molecular Magnets*, Junjie Liu,* Jerzy Krzystek, James Walsh, Guillem Aromi, Eric McInnes and Stephen Hill, High-Pressure EPR Meetings, University of Edinburgh, Scotland, June 19, 2012.
 94. *Pressure studies of d- and p-block magnetic materials employing high-frequency paramagnetic resonance techniques*, Christopher C. Beedle,* Alexey Kovalev, Chelsey Morien, Stan W. Tozer, Stephen Hill, Euan K. Brechin, Stephen Winter, Richard Oakley and John Schlueter, First Magnetostructural Correlations Workshop, NHMFL, Tallahassee, April 23-26, 2012.
 93. *Interplay between Exchange and Anisotropy in Dinuclear Molecular Magnets*, Junjie Liu,* Jerzy Krzystek, Ross Inglis, Guillem Aromi, Euan K. Brechin, Stephen Hill, First Magnetostructural Correlations Workshop, NHMFL, Tallahassee, April 23-26, 2012.
 92. *Study of Mitigation of Decoherence in a Holmium-Polyoxometallate (HoPOM) Single-Molecule Magnet using EPR Spectroscopy*, Sanhita Ghosh,* Saiti Datta, Stephen Hill, Enrique del Barco, Salvador Cardona-Serra, Eugenio Coronado, First Magnetostructural Correlations Workshop, NHMFL, Tallahassee, April 23-26, 2012.

91. *Magnetic relaxation in the high-symmetry polynuclear transition metal complex $Cu_{17}Mn_{28}$* , C. C. Beedle,* W.-G. Wang, C. Koo, A.-J. Zhou, M. Nakano, J. O'Brien, W. Wernsdorfer, S. Hill, M.-L. Tong, X.-M. Chen, and D. N. Hendrickson, 243rd ACS National Meeting, March 25-29, 2012, San Diego, CA.
90. *FMR Study of the Field Dependence of the Ferromagnetic Transition in an Organic Magnet*, Alexey Kovalev,* Stephen Winter, Stephen Hill, Richard Oakley, March 2012 APS meeting, Boston, MA (Feb/Mar 2012).
89. *Quantum Tunneling of the Magnetization in Trigonal Single-Molecule Magnets*, Junjie Liu,* Enrique del Barco, Stephen Hill, March 2012 APS meeting, Boston, MA (Feb/Mar 2012).
88. *Exploration of the Berry phase interference in a single-molecule magnet of trigonal symmetry*, H. M. Quddusi,* J. Liu, P. L. Feng, E. del Barco, S. Hill, D. N. Hendrickson, March 2012 APS meeting, Boston, MA (Feb/Mar 2012).
87. *Mitigation of decoherence in crystals of a $Ho_xY_{1-x}W_{10}$ ($x = 0.001$ to 0.25) single-molecule magnet*, Sanhita Ghosh,* Saiti Datta, Stephen Hill, Enrique del Barco, Salvador Cardona-Serra, Eugenio Coronado, March 2012 APS meeting, Boston, MA (Feb/Mar 2012).
86. *Coherent Spin Manipulation of a Mononuclear Lanthanide-based Single Molecule Magnet*, S. Ghosh,* S. Datta, J. van Tol, J. Krzystek, S. Hill, E. del Barco, E. Coronado and S. Cardona-Serra, 40th Southeastern Magnetic Resonance Conference (SEMRC), Atlanta, GA, Nov. 4-6, 2011.
85. *High-Field EPR Studies of a $[ReCl_4(CN)_2]^-$ Molecular Building Block: A New Strategy for Designing Single-Chain Magnets*, J. Liu,* X. Feng, T. D. Harris, R. R. Long and S. Hill, 40th Southeastern Magnetic Resonance Conference (SEMRC), Atlanta, GA, Nov. 4-6, 2011.
84. *Probing Collective Coupling of Single-Molecule Magnets in a Resonant Cavity*, Muhandis Shiddiq,* C. C. Beedle, S. Hill, Florida Inorganic Mini-Symposium (FIMS), Gainesville, October 7-8 (2011).
83. *Multi-Frequency EPR Studies of Coherent Electron-Nuclear Spin Dynamics in a Rare Earth Molecular Nanomagnet*, S. Hill, S. Ghosh, S. Datta, J. Krzystek, E. del Barco, S. Cardona-Serra and E. Coronado, Rocky Mountain Conference on Analytical Chemistry EPR Symposium, Snowmass, CO, July 24-28 (2011).
82. *Asymmetric Berry-Phase Interference Patterns in a Mn_4 Single-Molecule Magnet*, H. M. Quddusi,* J. Liu, S. Singh, K. Heroux, E. del Barco, S. Hill, D. Hendrickson, March 2011 APS meeting, Dallas, TX (March 2011).
81. *High-field EPR study of a $ReCl_4(CN)_2$ molecular magnet building block*, Junji Liu,* T. David Harris, Jeffrey Long, and Stephen Hill, March 2011 APS meeting, Dallas, TX (March 2011).
80. *Electron magnet resonance studies of the $Pr_3Ga_5SiO_{14}$ and $Pr_3Ga_5SiO_{14}$ kagome systems*, Sanhita Ghosh,* Saiti Datta, Haidong Zhou, Michael Hoch, and Stephen Hill, March 2011 APS meeting, Dallas, TX (March 2011).
79. *Electron magnetic resonance studies of the $Pr_3Ga_5SiO_{14}$ and $Nd_3Ga_5SiO_{14}$ kagome systems*, S. Ghosh,* S. Datta, H. Zhou, M. Hoch, C. R. Wiebe, and S. Hill, 55th Annual Conference on Magnetism and Magnetic Materials, Atlanta, GA, November 14-18 (2010).
78. *Coherent manipulation of lanthanide-based single-molecule magnets*, S. Ghosh,* S. Datta, J. Krzystek, S. Hill, E. del Barco, S. Cardona-Serra and E. Coronado, Florida Inorganic Mini-Symposium (FIMS), Gainesville, October 1-2 (2010).
77. *Coherent manipulation of mononuclear lanthanide-based single-molecule magnets*, S. Datta,* S. Ghosh, J. Krzystek, S. Hill, E. del Barco, S. Cardona-Serra and E. Coronado, 3rd Workshop on Current Trends in Nanoscale and Molecular Magnetism, Orlando, FL, June 20-25, 2010.
76. *Coherent manipulation of mononuclear lanthanide-based single-molecule magnets*, S. Datta,* S. Ghosh, J. Krzystek, S. Hill, E. del Barco, S. Cardona-Serra and E. Coronado, March 2010 APS meeting, Portland, OR (March 2010).

75. *Comparison of Magnetization Tunneling in the Giant-Spin and Multi-Spin Descriptions of Single-Molecule Magnets*, J. Liu,* E. del Barco and S. Hill, March 2010 APS meeting, Portland, OR (March 2010).
74. *Relieving Frustration: the Case of Antiferromagnetic Triangular Mn₃ Complexes*, C. Koo,* J. Liu, P. Feng, D. N. Henderson, J. J. Henderson, E. del Barco and S. Hill, March 2010 APS meeting, Portland, OR (March 2010).
73. *Angle-Swept High-Field EPR: Application to Studies of Single Crystal Samples Containing Low-Symmetry Magnetic Species*, Stephen Hill, Muralee Murugesu and George Christou, Southeastern Magnetic Resonance Conference, Vanderbilt University, Nashville, TN, Nov. 4-6 (2009).
72. *Anisotropic exchange in a tetranuclear Co complex*, Junjie Liu,* Saiti Datta, Erica Bolin, Jon Lawrence, Christopher C. Beedle, David N. Hendrickson and Stephen Hill, Florida Inorganic Mini-Symposium (FIMS), Gainesville, October 2-3 (2009).
71. *Towards Terahertz Operation of CMOS*, Swaminathan Sankaran, Chuying Mao, Eunyoung Seok, Dongha Shim, Changhua Cao, Ruonan Han, Daniel J. Arenas, David B. Tanner, Stephen Hill, Chih-Ming Hung, Kenneth K. O,* **IEEE** International Solid-State Circuits Conference, San Francisco, CA (February 2009).
70. *High-Frequency EPR Studies of the Antiferromagnetic Spin Dimer Compound Ba₃Mn₂O₈*, Changhyun Koo,* Stephen Hill, Eric Samulon, Ian R. Fisher, March 2009 APS meeting, Pittsburgh, PA (March 2009).
69. *Magnetization studies of a new single molecule magnet [Net₄]₃[Mn₃Zn₂(salox)₃O(N₃)₆Br₂]*, John Henderson,* Enrique del Barco, Changhyun Koo, Stephen Hill, Patrick Feng, David N. Hendrickson, Motohiro Nakano, March 2009 APS meeting, Pittsburgh, PA (March 2009).
68. *Anisotropic exchange in tetranuclear Co^{II} complexes*, Saiti Datta,* Junjie Liu, Jon Lawrence, Christopher C. Beedle, David N. Hendrickson, Stephen Hill, March 2009 APS meeting, Pittsburgh, PA (March 2009).
67. *Magnetization barrier reduction in Mn₁₂ single-molecule magnets*, Gage Redler,* Changhyun Koo, Saiti Datta, Christos Lampropoulos, Theocharis C. Stamatatos, George Christou, Stephen Hill, March 2009 APS meeting, Pittsburgh, PA (March 2009).
66. *The effective barrier to magnetization reversal in single-molecule magnets*, Stephen Hill, Gage Redler, Saiti Datta, Changhyun Koo, Chris Lampropoulos and George Christou, 53rd Conference on Magnetism and Magnetic Materials (MMM), Austin, TX, November 10-14, 2008.
65. *High-frequency EPR studies of [Mn₁₂(ADEA)₈(CH₃COO)₁₄]·7CH₃CN*, Stephen Hill, Sonali J. Shah, Christopher C. Beedle, Enrique del Barco, David N. Hendrickson, 11th International Conference on Molecule-based Magnets, Florence, Italy, 2008.
64. *Raising the barrier in single-molecule magnets: the interplay between local anisotropy and exchange*, Saiti Datta,* Erica Bolin, Stephen Hill, Constantinos J. Milios and Euan Brechin, Southeastern Magnetic Resonance Conference, 2008, Tallahassee, FL.
63. *High Frequency Electron Paramagnetic Resonance Study of Heterometallic Analogues of Mn₄ Cubane SMMs*, Changhyun Koo,* Patrick L. Feng, Christopher C. Beedle, David N. Hendrickson and Stephen Hill, Florida Inorganic Mini-Symposium (FIMS), Gainesville, September 13th (2008).
62. *Strongly Correlated Electrons in the [Ni(hmp)(ROH)X]₄ Single molecule Magnet: A DFT+U Study*, Chao Cao,* Stephen Hill and Hai-Ping Cheng, March 2008 APS meeting, New Orleans, LA (March 2008).
61. *Looking for higher anisotropy barriers in single-molecule magnets*, Saiti Datta,* Constantinos Milios, Euan Brechin and Stephen Hill, March 2008 APS meeting, New Orleans, LA (March 2008).
60. *Quantum Interference in the Longitudinal Oscillations of the Total Spin of a Dimeric Molecular Nanomagnet*, Christopher Ramsey,* Enrique del Barco, Stephen Hill, Sonali Shah, Christopher Beedle and David N. Hendrickson, March 2008 APS meeting, New Orleans, LA (March 2008).

59. *Spin dynamics in single-molecule magnets combining surface acoustic waves and high frequency electron paramagnetic resonance*, Stephen Hill, Jonathan Lawrence, Ferran Macia, Joan Manel Hernandez, Javier Tejada, Paulo Santos, Christos Lampropoulos and George Christou, March 2008 APS meeting, New Orleans, LA (March 2008).
58. *An antiferromagnetic supramolecular grid: a high frequency EPR overview*, Saiti Datta,* Oliver Waldmann, Andrew Kent, Victoria Milway, Laurie Thompson, Stephen Hill, Florida Inorganic Mini-Symposium (FIMS), Gainesville, September 22nd (2007).
57. *HFEPR studies of new manganese-based single-molecule magnets*, Saiti Datta,* Constantinos J. Milios, Euan Brechin, and Stephen Hill, 52nd Magnetism and Magnetic Materials (MMM) Conference, November 5-9 (2007), Tampa, FL.
56. *Temperature dependent behavior of the high frequency EPR linewidth and determination of the memory function in the spin gap system: BaCuSi₂O₆*, Sung Su Kim,* S. E. Sebastian, I. R. Fisher, S. Hill, 52nd Magnetism and Magnetic Materials (MMM) Conference, November 5-9 (2007), Tampa, FL.
55. *High Frequency Electron Paramagnetic Resonance Studies of High Spin Co(II) complexes*, J. Lawrence,* C. Beedle, E.-C. Yang, J. Ma, S. Hill, and D. N. Hendrickson, March 2007 APS meeting, Denver, CO (March 2007).
54. *High Frequency EPR studies of an antiferromagnetic supramolecular grid*, S. Datta,* S. Hill, O. Waldmann, V. Milway, and L. Thompson, March 2007 APS meeting, Denver, CO (March 2007).
53. *High Frequency Electron Paramagnetic Resonance Studies of NiCl₂-4SC(NH₂)₂*, S. Kim,* S. Hill, P. Sengupta, V. S. Zapf, R. McDonald, M. Jaime, C. D. Batista, and S. Tozer, March 2007 APS meeting, Denver, CO (March 2007).
52. *Behind the Giant Spin Approximation: the View from EPR*, A. Wilson,* J. Lawrence, E.-C. Yang, D. N. Hendrickson and S. Hill, Florida Inorganic Mini-Symposium (FIMS), Gainesville, October 14th (2006).
51. *Pressure-dependence of the zero-field splittings for the Fe₈ single-molecule magnet*, S. Takahashi,* E. Thompson, S. Hill, S. W. Tozer, A. G. Harter and N. S. Dalal, March 2006 APS meeting, Baltimore, MD (March 2006).
50. *Numerical Analysis of the EPR Spectrum of a Ni₄ Single-Molecule Magnet through Direct Diagonalization of the Four-Spin Hamiltonian*, A. Wilson* and S. Hill, March 2006 APS meeting, Baltimore, MD (March 2006).
49. *Magnetic Quantum Tunneling in a Mn₁₂ Single-Molecule Magnet Measured With High Frequency Electron Paramagnetic Resonance*, J. Lawrence,* S. Kim, S. Hill, M. Murugesu, G. Christou, March 2006 APS meeting, Baltimore, MD (March 2006).
48. *Study of Periodic Orbit Resonances in (TMTSF)₂ClO₄*, S. Takahashi* (invited), A. Betancur-Rodriguez, S. Hill, S. Takasaki, J. Yamada and H. Anzai, 6th International Conference on Crystalline Organic Metals, Superconductors and Ferromagnets (ISCOM 2005), September 11-16, 2005, Key West, FL.
47. *Entanglement of Exchange-Coupled Dimers of Single Molecule Magnets*, S. Hill, A. Wilson, R. S. Edwards, N. Aliaga-Alcalde, G. Christou, 24th International Conference on Low Temperature Physics (LT24), August 10-17, 2005, Orlando, FL.
46. *High Frequency EPR study of a Ni₄ Single Molecule Magnets*, J. Lawrence,* S. Hill, E.-C. Yang and D. N. Hendrickson, Florida Inorganic Mini-Symposium (FIMS), Gainesville, September 25th (2005).
45. *Study of the Fermi velocity and scattering time by periodic orbit resonance in the quasi-one-dimensional conductor (TMTSF)₂ClO₄*, S. Takahashi,* S. Hill, S. Takasaki, J. Yamada, H. Anzai, March 2005 APS meeting, Los Angeles, CA (March 2005).

44. *A high-frequency EPR study of a new $S = 10$ Mn_{12} single-molecule magnet*, Norm Anderson, Tony Wilson, Jon Lawrence, Sheng-Chiang Lee,* Stephen Hill, Muralee Murugesu, George Christou, March 2005 APS meeting, Los Angeles, CA (March 2005).
43. *Origin of the fast magnetization tunneling in $[Ni(hmp)(tBuEtOH)Cl]_4$* , Jon Lawrence,* Cem Kirman, Stephen Hill, En-Che Yang, David Hendrickson, March 2005 APS meeting, Los Angeles, CA (March 2005).
42. *A comparison between high-symmetry Mn_{12} single-molecule magnets in different ligand/solvent environments*, S. Hill, N. Anderson, A. Wilson, S. Takahashi, K. Petukhov, N. E. Chakov, M. Murugesu, J. M. North, E. del Barco, A. D. Kent, N. S. Dalal, and G. Christou, 49th Annual Conference on Magnetism and Magnetic Materials, Jacksonville, FL, November 7-11, 2004.
41. *Incommensurate Transverse Anisotropy Induced by Disorder and Spin-Orbit-Vibron Coupling in Mn_{12} -acetate*, K. Park,* M. R. Pederson, T. Baruah, N. Bernstein, J. Kortus, S. L. Richardson, E. del Barco, A. D. Kent, S. Hill, and N. S. Dalal, 49th Annual Conference on Magnetism and Magnetic Materials, Jacksonville, FL, November 7-11, 2004.
40. *Angle-Resolved Mapping of the Fermi Velocity in Quasi-Two-Dimensional Conductors and Superconductors: Probing Quasiparticles in Nodal Superconductors*, S. Takahashi* and S. Hill, 49th Annual Conference on Magnetism and Magnetic Materials, Jacksonville, FL, November 7-11, 2004.
39. *Electron Paramagnetic Resonance Studies of Quantum Coherence in Dimers of Mn_4 Single-Molecule Magnets*, S. Hill, R. S. Edwards, N. Aliaga-Alcalde, G. Christou, International Conference on Molecule-Based Magnets (ICMM 2004), Oct. 4-8, Tsukuba, Japan.
38. *Origin of the Fast Magnetization Tunneling in Tetranuclear Nickel Single-Molecule Magnets*, D. N. Hendrickson* (invited), E-C. Yang, R. M. Isidro, C. Kirman, J. Lawrence, R. S. Edwards, S. Hill, A. Yamaguchi, H. Ishimoto, W. Wernsdorfer, C. Ramsey, N. S. Dalal, M. M. Olmstead, International Workshop on Single-Molecule Magnets and Single-Chain Magnets, October 4th, 2004, Tsukuba, Japan.
37. *Fermi surface studies of Q1D and Q2D organic superconductors using periodic orbit resonance in high magnetic fields*, S. Takahashi,* A. E. Kovalev, D. Benjamin, S. Hill, S. Takasaki, J. Yamada, H. Anzai, K. Kawamo, M. Tamura, T. Naito and H. Kobayashi, SemiMag 16, Tallahassee, FL, August 2nd to 6th, 2004.
36. *Temperature Dependent Studies of Vortex Phases in an Organic Superconductor*, D. Benjamin,* S. Takahashi, J. S. Qualls, University of Florida Scholars Program Symposium, April 2004.
35. *Characterization of the $S = 9$ excited state in Mn_{12} -bromoacetate by electron paramagnetic resonance*, K. Petukhov,* S. Hill, N. Chakov and G. Christou, March 2004 APS meeting, Montreal, Canada (March 2004).
34. *Probing the Fermi surfaces of quasi-2D κ -(ET)₂I₃ and κ -(ET)₂Cu(NCS)₂*, S. Takahashi,* D. Benjamin, A. E. Kovalev, K. Petukhov, S. Hill, J. S. Qualls, K. Kawano, M. Tamura, T. Naito, H. Kobayashi, March 2004 APS meeting, Montreal, Canada (March 2004).
33. *Characterization of the Excited States of Highly Magnetic Systems: Single-Molecule Magnets*, Naresh S. Dalal* (invited), David Zipse, J. Micah North, Stephen Hill, Rachel Edwards, 8th International Symposium on Spin and Magnetic Field Effects in Chemistry and Related Phenomena (SCM2003), Chapel Hill, NC (Sept. 21-26, 2003).
32. *High field high frequency EPR techniques, and their application to single molecule magnets*, R.S. Edwards,* S. Hill, P. Goy and R. Wylde, VIIth International Symposium on Research in High Magnetic Fields (RHMF 2003), Toulouse, July 2003.
31. *Quantum coherence in an exchange coupled dimer of single molecule magnets*, S. Hill, R. S. Edwards, N. Aliaga-Alcalde, G. Christou, and D. N. Hendrickson, XIIth International Workshop on Atomic and Molecular Tunneling in Solids (QAMTS), University of Florida, Gainesville, June 22 to

- 25, 2003.
30. *Microwave studies of the organic conductor λ -(BETS) $_2$ Fe $_x$ Ga $_{1-x}$ Cl $_4$ ($x=1, 0.37$), S. Takahashi,* A. E. Kovalev, S. Hill, D. B. Engel, L. K. Montgomery, S. Uji, M. Tokumoto, A. Kobayashi, H. Tanaka, H. Kobayashi, March 2003 APS meeting, Austin, TX (March 2003).*
 29. *Observation of nodes in the high-frequency Shubnikov-de Haas effect in several highly two-dimensional organic conductors, A.E. Kovalev,* S. Hill, S. Takahashi, S. Uji, K. Kawano, M. Tamura, T. Naito, H. Kobayashi, J.S. Schlueter, N.D. Kushch, March 2003 APS meeting, Austin, TX (March 2003).*
 28. *Definitive determination of the transverse Hamiltonian parameters in the single molecule magnet Mn $_{12}$ -Ac, Rachel S. Edwards,* Stephen Hill, J. Micah North, Naresh Dalal, Shaela Jones, Sara Maccagnano, March 2003 APS meeting, Austin, TX (March 2003).*
 27. *Half-Integer Spin Molecular Nanomagnets, David N. Hendrickson* (invited), George Christou, Wolfgang Wernsdorfer, Stephen O. Hill, N ria Aliaga-Alcade, Sumit Bhaduri, Rachel S. Edwards, Sheila M. J. Aubin and Ziming Sun, Invited talk at Fall 2002 MRS meeting, Boston, MA, Dec. 2-6.*
 26. *Defects, Tunneling and EPR, Kyungwha Park* (invited), M. A. Novotny, N. S. Dalal, S. Hill, P. A. Rikvold, Invited talk presented by S. Hill at Fall 2002 MRS meeting, Boston, MA, Dec. 2-6.*
 25. *High field EPR investigations of quantum and environmental effects in single molecule magnets, Stephen Hill, Rachel Edwards, Shaela Jones and Sara Maccagnano, International EMR Workshop 2002 - Electron Magnetic Resonance Developments and Applications in Chemistry, Biology, and Materials Science, Tallahassee, December 13-14, 2002.*
 24. *Periodic orbit resonance in (TMTSF) $_2$ ClO $_4$, A. Kovalev,* S. Hill; S. Takahashi, J. Yamada, and H. Anzai, 47th Annual Conference on Magnetism and Magnetic Materials, Tampa, FL. Nov. 11-15, 2002.*
 23. *Josephson plasma resonance in κ -(BEDT-TTF) $_2$ Cu(NCS) $_2$ for close to in-plane magnetic fields, S. Hill, A. E. Kovalev, J.S. Qualls, at International conference on the science and technology of synthetic metals (ICSM '02), Shanghai, China (July 2002).*
 22. *Instrumentation for angle dependent high-field millimeter-wave spectroscopic investigations of low-dimensional magnetic and conducting systems, Alexey Kovalev,* Stephen Hill, March 2002 APS meeting, Indianapolis (March 2002).*
 21. *Single crystal high frequency EPR of $S= 9/2$ Mn $_4$ single molecule magnets, Sabina Khan,* Neil Bushong, Stephen Hill, Nuria Aliaga, Sumit Bhaduri, Monica Soler, Alina Vinslava, George Christou, March 2002 APS meeting, Indianapolis (March 2002).*
 20. *Electron Paramagnetic Resonance Linewidths and Lineshapes for the Molecular Magnets Fe $_8$ and Mn $_{12}$, Kyungwha Park,* M. A. Novotny, N. S. Dalal, S. Hill, and P. A. Rikvold, Magnetism and Magnetic Materials conference, Seattle, Nov. 2001.*
 19. *Single crystal EPR determination of the quantum energy level structure for Fe $_8$ molecular clusters, S. Maccagnano,* S. Hill, E. Negusse, A. Lussier, M.M. Mola, R. Achey, N.S. Dalal, Northwest Section Meeting of the American Physical Society, Seattle WA, May 25 to 26, 2001.*
 18. *Single crystal EPR measurements of the Fe $_8$ and Mn $_{12}$ molecular magnetic clusters, Randall Achey,* Naresh Dalal, Sara Maccagnano, Ezana Negusse, Alex Lussier, Stephen Hill, March 2001 Meeting of the American Physical Society, in Seattle, WA (March 2001).*
 17. *Melting of the quasi-two-dimensional vortex lattice in κ -(ET) $_2$ Cu(NCS) $_2$, Stephen Hill, Monty Mola, James Brooks, and Jeremy Qualls, March 2001 Meeting of the American Physical Society, in Seattle, WA (March 2001).*
 16. *Instrumentation for millimeter-wave magneto-electrodynamic investigations of low dimensional conductors and superconductors, Monty Mola,* and Stephen Hill, March 2001 Meeting of the American Physical Society, in Seattle, WA (March 2001).*

15. *Magneto-thermal instabilities in an organic superconductor*, M. M. Mola,* S. Hill, J. S. Brooks, and J. S. Qualls, 48th Annual Midwest Solid State Conference and Solid State Theory Symposium, Grand Forks, ND (October 2000).
14. *Flux jumps and melting of the vortex lattice in κ -(ET)₂Cu(NCS)₂*, S. Hill, M.M. Mola, J. S. Qualls, J. S. Brooks, at International conference on the science and technology of synthetic metals, Bad Gastein, Austria (July 2000).
13. *Determination of Vortex Structure in an Organic Superconductor by Josephson Plasma Resonance*, Monty Mola,* Stephen Hill, Josh King, Chris McRaven, Jeremy Qualls and James Brooks, March 2000 Meeting of the American Physical Society, in Minneapolis, MN (March 2000).
12. *Cyclotron Resonance in the Layered Perovskite Superconductor Sr₂RuO₄*, Fall meeting of the Japanese Physical Society (Sep. 24-28, 1999) - Authors: S. Hill, J. S. Brooks, Z. Q. Mao and Y. Maeno*.
11. *Fermi surface spectroscopy: a magnetic resonance approach*, J. M. Schrama* (invited), S. O. Hill, J. Singleton, A. Ardavan, E. Rzepniewski and R. Edwards, presented as invited talk at LT22, Helsinki, FI (August 1999).
10. *Millimeter-wave Spectroscopy in High Magnetic Fields*, Stephen Hill and Monty Mola, March meeting of the American Physical Society, Atlanta (March 1999).
9. *High sensitivity EPR of Mn₁₂-Ac*, S. Hill, N.S. Dalal, T. Hathaway, T. Stalcup and J.S. Brooks, March meeting of the American Physical Society, Los Angeles CA (March 1998).
8. *Metamagnetic transitions and high-field magnetoresistance in the low-carrier-density strongly correlated electron system CeP*, T. Terashima,* S. Uji, H. Aoki, J.A.A.J. Perenboom, Y. Haga, A. Uesawa, T. Suzuki, S. Hill and J.S. Brooks, March meeting of the American Physical Society, Los Angeles CA (March 1998).
7. *A semiclassical description of cyclotron resonance in highly anisotropic molecular metals*, S. Hill, March meeting of the American Physical Society, Kansas City MO (1997).
6. *Millimeter wave spectroscopy of low-dimensional molecular metals in high magnetic fields*, C. Buhler,* S. Hill, J. S. Brooks, J. S. Qualls, March meeting of the American Physical Society, Kansas City MO (1997).
5. *A comparison of the high field quantum oscillations observed by electrodynamic and d.c. transport techniques in the organic superconductor κ -(BEDT-TTF)₂Cu(NCS)₂*, S. Hill, International conference on the science and technology of synthetic metals, Snowbird, UT (July 1996).
4. *High magnetic field groundstate in the molecular conductor η -Mo₄O₁₁*, S. Hill, International conference on the science and technology of synthetic metals, Snowbird, UT (July 1996).
3. *High frequency, high magnetic field, studies of the complex conductivity in the organic superconductor κ -(BEDT-TTF)₂Cu(NCS)₂*, S. O. Hill, J.S. Brooks and L. D. Seger, March meeting of the American Physical Society, St. Louis MO (1996).
2. *High Magnetic Field SdH Oscillation and Phase Transition in a Low Dimensional Conductor η -Mo₄O₁₁*, J.S. Brooks,* B Uji, T. Terashima, H. Aoki, S. Valfells, S. Hill, T. Sarrao, Z. Fisk, J. Goettee, P. Sandhu, March meeting of the American Physical Society, St. Louis MO (1996).
1. *Low Magnetic Field SdH Oscillation and Fermi Surface in a Low Dimensional Conductor η -Mo₄O₁₁*, S. Uji,* T. Terashima, H. Aoki, J.S. Brooks, S. Valfells, S. Hill, T. Sarrao, Z. Fisk, J. Goettee, P. Sandhu, March meeting of the American Physical Society, St. Louis MO (1996).

L. Poster Presentations (Back to Top)

Presented by first author unless indicated otherwise by *

New 2p-4f heterospin systems: synthesis, crystal structure and magnetic properties, Livia Batista Lopes Escobar, Vinicius Rangel Campos, Stéphane Soriano, Matteo Briganti, Stephen Hill, Guilherme Pereira Guedes e Maria das Gracas Fialho Vaz, 46th Reunião Annual da Sociedade Brasileira de Química, Águas de Lindóia, Brazil, April 28 – 31, 2023.

Tunable clock transitions in lanthanide complexes for quantum information technologies, Jakub Hruby,* Krishnendu Kundu, Danh Ngo, Ryan Murphy, Randall McClain, Benjamin Harvey, Jeffrey R. Long, Stephen Hill, American Physical Society March Meeting, Las Vegas, March 5 – 10, 2023.

Proton-Observed ¹³C Overhauser DNP at 14 T, Sungsool Wi, Thierry Dubroca, Murari Soundararajan, Hans van Tol, Lucio Frydman, Stephen Hill, 50th Southeastern Magnetic Resonance Conference, Tallahassee, FL, Nov. 4 – 6, 2022.

Wideband Fourier-Transform-Detected EPR at W-Band, M.V.H. Subramanya, J. Marbey, K. Kundu, J.E. McKay, S. Hill, 50th Southeastern Magnetic Resonance Conference, Tallahassee, FL, Nov. 4 – 6, 2022.

54 GHz Clock Transition in a Ho(III) Complex, Robert Stewart, Miguel Gakiya Teruya, Michael Shatruk, Stephen Hill, 50th Southeastern Magnetic Resonance Conference, Tallahassee, FL, Nov. 4 – 6, 2022.

Tunable Clock Transitions in Lanthanide Complexes for Quantum Information Technologies, J. Hrubý, K. Kundu, D. Ngo, R. Murphy, K. R. McClain, B. G. Harvey, J. R. Long, and S. Hill, 50th Southeastern Magnetic Resonance Conference, Tallahassee, FL, Nov. 4 – 6, 2022.

Investigation of the Spin-Crossover Transition in a Metalorganic Mn³⁺ Complex with Continuous-Wave High-Field Powder EPR Spectroscopy, Brittany Grimm, Irina Kuehne, Conor Kelly, Grace Morgan, Stephen Hill, 50th Southeastern Magnetic Resonance Conference, Tallahassee, FL, Nov. 4 – 6, 2022.

Giant Magnetic Anisotropy in a Trigonal Ni(II) Complex, Wei-Hao Chou, Talal Mallah, Stephen Hill, 50th Southeastern Magnetic Resonance Conference, Tallahassee, FL, Nov. 4 – 6, 2022.

Proton-detected, scalar-driven ¹³C Overhauser dynamic nuclear polarization NMR at 14.1 T, S. Wi, M. Soundararajan, T. Dubroca, J. van Tol, S. Hill, L. Frydman, Solid State NMR Symposium at the 61st Rocky Mountain Conference on Magnetic Resonance, Copper Mountain, CO, July 25 – 29, 2022.

High-Frequency EPR Investigation of Trinuclear Cobalt-Oxo Clusters, Xiaoling Wang,* Daphne Lubert-Perquel, ChristiAnna Brantley, Johan van Tol, George Christou, Stephen Hill, 43rd EPR Symposium at the 61st Rocky Mountain Conference on Magnetic Resonance, Copper Mountain, CO, July 25 – 29, 2022.

Tunable Clock Transitions in Lanthanide Complexes for Quantum Information Technologies, J. Hrubý, K. Kundu, D. Ngo, R. Murphy, J. R. Long, and S. Hill, 43rd EPR Symposium at the 61st Rocky Mountain Conference on Magnetic Resonance, Copper Mountain, CO, July 25 – 29, 2022.

Giant Magnetic Anisotropy in a Trigonal Ni(II) Complex, Wei-Hao Chou, Talal Mallah, Stephen Hill, 2nd Molecular Magnetism in North America (MAGNA 2022) conference, Gainesville, FL, May 1 – 4, 2022.

High-Field EPR Investigation of a Potential Molecular Two-Qubit Gate Based on a Cobalt Dimer, Daphné Lubert-Perquel, ChristiAnna L. Brantley, George Christou, Stephen Hill, 2nd Molecular Magnetism in North America (MAGNA 2022) conference, Gainesville, FL, May 1 – 4, 2022.

Massive 116 GHz Crystal-Field Clock Transition in a Tetragonal Molecular Ho(III) Complex, Robert Stewart, Anna Celmina, Emma Regincós, Angelos Tsanai, Mark Murrie, Stephen Hill, 2nd Molecular Magnetism in North America (MAGNA 2022) conference, Gainesville, FL, May 1 – 4, 2022.

Continuous-Wave High-Field Powder EPR Investigation of the Spin- Crossover Transition in a Mn³⁺ Complex, Brittany Grimm, Irina Kuehne, Conor Kelly, Grace Morgan, Stephen Hill, 2nd Molecular Magnetism in North America (MAGNA 2022) conference, Gainesville, FL, May 1 – 4, 2022.

Radical-lanthanide ferromagnetic interaction in a Dy^{III} bis-phthalocyaninato complex, Robert Stewart, Dorsa Komijani, Miguel Gakiya, Mike Shatruk, Alberto Ghirri, Claudio Bonizzoni, Svetlana Klyatskaya, Eufemio Moreno-Pineda, Mario Reuben, Marco Affronte, Stephen Hill, Southeastern Section APS Meeting

(Remote), Nov. 5, 2020.

High-Field EPR Study of the Spin-Crossover Transitions in a Mn (III) Schiff-Base Complex, B Grimm, I Kuehne, C Kelly, G Morgan, S Hill, Southeastern Section APS Meeting (Remote), Nov. 5, 2020.

Spectroscopic Evidence of Spin-Phonon Coupling in an Yb(trensal) Single-Molecule Magnet, Jonathan Marbey, Jon Kragoskow, Joscha Nehrkorn, Mykhaylo Ozerov, Nick Chilton, Stergios Piligikos, Stephen Hill, at the Magnetism in North America (MAGNA) Conference, St. Simons Island, GA, Feb. 21 – 24, 2020.

395 GHz Electron Paramagnetic Spectrometer at 14.1 T, Ellen Gulian*, J. van Tol, S. Hill, T. Dubroca, Annual Biomedical Research Conference for Minority Students, Indianapolis, IN, November 2018.

Optimization of Polarizing Agent for Scalar Overhauser DNP, Nia Harmon*, Thierry Dubroca, Elżbieta Megiel, Johan van Tol, Stephen Hill, Southeastern Magnetic Resonance Conference, Clemson, SC, October 2018.

Suppression of 2nd Order Axial Anisotropy in a Trigonal [Mn^{III}]₃ Complex, Jonathan J. Marbey, Pei-Rung Gan, En-Che Yang, Stephen Hill, 16th International Conference on Molecule-Based Magnets (ICMM), Rio de Janeiro, Brazil, Sept. 1 to 5, 2018.

High Enhancement and Large Volume Overhauser Liquid DNP at 14.1 T, Thierry Dubroca*, Johan van Tol, Bianca Trociewitz, Frederic Mentink, Sungsool Wi, William Brey, Lucio Frydman, Joanna Long, and Stephen Hill, Hyperpolarization conference (HYP18), Southampton, UK, Sept 2018.

Ultra-Wideband Magnetic Resonance Studies of Two-Coordinate Ni(I), Samuel Greer, Joscha Nehrkorn, Mikhaylo Ozerov, Will Blackaby, Damian Murphy, Michael Whittlesey and Stephen Hill,* 16th International Conference on Molecule-Based Magnets (ICMM), Rio de Janeiro, Brazil, Sept. 1 to 5, 2018.

395 GHz Electron Paramagnetic Resonance Spectrometer at 14.1 T, Ellen Gulian*, Johan van Tol, Bianca Trociewitz, Stephen Hill, Thierry Dubroca, 2018 REU student presentation at the Maglab, Tallahassee, FL, Aug 2018.

A Combined Magnetic Resonance and Theoretical Study of Orbitally Degenerate Ni(I), Samuel M. Greer, Joscha Nehrkorn, William J. M. Blackaby, Mykhaylo Ozerov, Damien M. Murphy, Michael K. Whittlesey, and Stephen Hill, 3rd Gordon Research Conference on Conductivity and Magnetism in Molecular Materials, Bryant College, RI, Aug. 12-17, 2018.

Combined THz and Pulsed EPR studies on a Yb(III) Single Ion Magnet, Jonathan Marbey, Stergios Piligikos, Joscha Nehrkorn, Mykhaylo Ozerov, Stephen Hill, 3rd Gordon Research Conference on Conductivity and Magnetism in Molecular Materials, Bryant College, RI, Aug. 12-17, 2018.

Substitution Effects on Exchange Anisotropy in Heavy Atom Radicals, Jonathan Marbey, Stephen Winter, Richard T. Oakley, Stephen Hill, 2nd Gordon Research Seminar on Conductivity and Magnetism in Molecular Materials, Bryant College, RI, Aug. 10-11, 2018.

Oxygen Degassing in Liquid Overhauser Dynamic Nuclear Polarization at 14.1 T, Nia Harmon*, Thierry Dubroca, Stephen Hill, Maglab-FSU Intern Program, April 2018.

Overhauser liquid Dynamic Nuclear Polarization and in-situ Electron Paramagnetic Resonance at 14.1 T – 395 GHz, Thierry Dubroca*, Johan van Tol, Bianca Trociewitz, Frederic Mentink-Vigier, Sungsool Wi, William Brey, Lucio Frydman, Joanna R. Long, Stephen Hill, Experimental Nuclear magnetic resonance Conference (ENC), Orlando, FL, April 2018.

Understanding the Diffusional Dynamics of Overhauser DNP at High Magnetic Field, Adewale Akinfaderin, Sungsool Wi, Johan van Tol, Bianca Trociewitz, Thierry Dubroca, Lucio Frydman and Stephen Hill, 46th Southeastern Magnetic Resonance Conference, Tallahassee, FL, Oct. 27-29, 2017.

Double Quantum Transitions in Ni(II) Systems, Robert Goff,* Samuel M. Greer, Jonathon Marbey, Andrew Ozarowski, Stephen Hill, 46th Southeastern Magnetic Resonance Conference, Tallahassee, FL, Oct. 27-29, 2017.

Substitution Effects on Exchange Anisotropy in Heavy Atom Radicals, Jonathan Marbey, Stephen Winter, Richard T. Oakley, Stephen Hill, 46th Southeastern Magnetic Resonance Conference, Tallahassee, FL, Oct. 27-29, 2017.

EPR Study of Lanthanide (III) Double- and Triple-Decker Phthalocyanine Complexes, Dorsa Komijani, A. Ghirri, C. Bonizzoni, S. Klyatskaya, E. Moreno-Pineda, and M. Ruben, M. Affronte, S. Hill, 46th Southeastern Magnetic Resonance Conference, Tallahassee, FL, Oct. 27-29, 2017.

EPR Investigation of Bonding Between First Row Transition Metals, Samuel M. Greer, Johannes McKay, Kathryn Gramigna, Christine Thomas, Sebastian A. Stoian, Stephen Hill, EPR Present and Future: Joint SPP1601/SharedEPR Conference, Mohonk Mountain House, New Paltz, NY, Oct. 9 to 12, 2017.

Synthesis, Crystal Structure and EPR Studies of First Mn^{III}Ln^{III} Hetero-Bimetallic Complexes, Livia Batista Lopes Escobar, Guilherme Pereira Guedes, Stéphane Soriano, Rafael Alves Allao Cassero, Jonathan Marbey, Stephen Hill, Miguel Alexandre Novak, Marius Andruh, Maria Das Graças Fialho Vaz, E. Coronado, 46th World Chemistry Congress, 40a Reunião Annual da Sociedade Brasileira de Química and IUPAC 49th General Assembly, July 7-14, 2017, São Paulo, Brazil.

Overhauser Dynamic Nuclear Polarization at 14.1 T, T. Dubroca, J. McKay, B. Trociewitz, F. Mentink, S. Wi, J. van Tol, W. Brey, J. Long, L. Frydman, S. Hill, European Congress on Magnetic Resonance (EUROMAR), Warsaw, Poland, July 2-6 (2017).

Electro-Nuclear Clock Transitions in a Ho(III) Molecular Qubit, Dorsa Komijani, M. Shiddiq, Y. Duan, A. Gaita-Arino, J. M. Clemente-Juan, E. Coronado, S. Hill, 2017 Quantum Science Summer School, Johns Hopkins University, Baltimore, MD, June 5-16, 2017.

Experimental Methods to Measure the Dielectric Properties of Liquids in the Microwave Region of the Electromagnetic Spectrum, Gabriel Jurado, Thierry Dubroca, Johannes McKay, Stephen Hill, APS Graduate Education and Bridge Program Conference, College Park, MD, February 10-12, 2017.

The Physics MS-to-PhD Bridge Program at Florida State University, Simon Capstick*, Stephen Hill*, Jeremiah Murphy, APS Graduate Education and Bridge Program Conference, College Park, MD, February 10-12, 2017.

Electron Paramagnetic Resonance Studies of the Interconversion Between Organic Radicals and Dimers, Samuel M. Greer, Alina Dragulescu-Andrasi, Johannes McKay, Richard Oakley, Michael Shatruk, and Stephen Hill, 61st Annual Conference On Magnetism and Molecular Materials, New Orleans, Louisiana, Oct. 31 to Nov. 4, 2016.

EPR Studies of Magnetic Anisotropy in a Trigonal Mn(III) Complex, J. Marbey, E.-C. Yang, S. Hill, 61st Annual Conference On Magnetism and Molecular Materials, New Orleans, Louisiana, Oct. 31 to Nov. 4, 2016.

Hardware Developments for a High-Power Pulsed W-Band EPR Spectrometer for Biological Studies, T. Szymanski, J. McKay, Le Li, M. Cueno, D. Myles, and S. Hill, 45th Southeastern Magnetic Resonance Conference, Emory University, Atlanta, October 14-16 2016.

EPR Study of Radical-Lanthanide Interaction in a Terbium(III) Bis-Phthalocyaninato Complex, Dorsa Komijani, A. Ghirri, M. Affronte, S. Klyatskaya, E. Moreno Pineda, M. Ruben, and S. Hill, Workshop on Molecular Magnets, Amherst College, Amherst, MA, August 19, 2016.

Point Charge Electrostatics in Orbitally Degenerate Mononuclear Single-Molecule Magnets, Lakshmi Bhaskaran, Katie Marriott, Mark Murrie, and Stephen Hill, Workshop on Molecular Magnets, Amherst College, Amherst, MA, August 19, 2016.

Relating Symmetry to Magnetic Anisotropy in a Trigonal Mn(III) Complex, Jonathan Marbey, Pei-Rung Gan, En-Che Yang, Stephen Hill, Workshop on Molecular Magnets, Amherst College, Amherst, MA, August 19, 2016.

Electron Paramagnetic Resonance and ⁵⁷Fe Mössbauer Characterization of Compounds Containing Metal-Metal Bonds, Samuel M. Greer, Sebastian A. Stoian, Johannes McKay, Kathryn Gramigna, Christine Thomas, Stephen Hill, Workshop on Molecular Magnets, Amherst College, Amherst, MA, August 19, 2016.

EPR Study of Radical-Lanthanide Interaction in a Terbium(III) Bis-Phthalocyaninato Complex, Dorsa Komijani, A. Ghirri, M. Affronte, S. Klyatskaya, E. Moreno Pineda, M. Ruben, and S. Hill, 2016 Gordon Research Conference on Conductivity and Magnetism in Molecular Materials, Mount Holyoke College, South Hadley, MA, August 14-19, 2016.

Point Charge Electrostatics in Orbitally Degenerate Mononuclear Single-Molecule Magnets, Lakshmi Bhaskaran, Katie Marriott, Mark Murrie, and Stephen Hill, 2016 Gordon Research Conference on Conductivity and Magnetism in Molecular Materials, Mount Holyoke College, South Hadley, MA, August 14-19, 2016.

Relating Symmetry to Magnetic Anisotropy in a Trigonal Mn(III) Complex, Jonathan Marbey, Pei-Rung Gan, En-Che Yang, Stephen Hill, 2016 Gordon Research Conference on Conductivity and Magnetism in Molecular Materials, Mount Holyoke College, South Hadley, MA, August 14-19, 2016.

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Electro-Nuclear Clock Transitions in a Ho(III) Molecular Qubit, Dorsa Komijani, M. Shiddiq, Y. Duan, A. Gaita-Arino, J. M. Clemente-Juan, E. Coronado, S. Hill, 2016 Gordon Research Seminar on Conductivity and Magnetism in Molecular Materials, Mount Holyoke College, South Hadley, MA, August 13-14, 2016.

Point Charge Electrostatics in Orbitally Degenerate Mononuclear Single-Molecule Magnets, Lakshmi Bhaskaran, Katie Marriott, Mark Murrie, and Stephen Hill, 2016 Gordon Research Seminar on Conductivity and Magnetism in Molecular Materials, Mount Holyoke College, South Hadley, MA, August 13-14, 2016.

Relating Symmetry to Magnetic Anisotropy in a Trigonal Mn(III) Complex, Jonathan Marbey, Pei-Rung Gan, En-Che Yang, Stephen Hill, 2016 Gordon Research Seminar on Conductivity and Magnetism in Molecular Materials, Mount Holyoke College, South Hadley, MA, August 13-14, 2016.

Electron Paramagnetic Resonance Studies of the Interconversion Between Organic Radicals and Dimers, Samuel M. Greer, Alina Dragulescu-Andrasi, Johannes McKay, Richard Oakley, Michael Shatruk, and Stephen Hill, 2016 Gordon Research Seminar on Conductivity and Magnetism in Molecular Materials, Mount Holyoke College, South Hadley, MA, August 13-14, 2016.

Electro-Nuclear Clock Transitions in a Ho(III) Molecular Nanomagnet, Dorsa Komijani, Muhandis Shiddiq, Yan Duan, Alejandro Gaita-Ariño, Eugenio Coronado, Stephen Hill, Florida State University, Department of Physics Student Research Showcase, Apr. 14, 2016.

Development of Overhauser Dynamic Nuclear Polarization at 14.1 T, Thierry Dubroca, Bianca Trociewitz, Adewale Akinfaderin, Johan van Tol, Sungsool Wi, William W. Brey, Lucio Frydman, Joanna R. Long, and Stephen Hill, Southeastern Magnetic Resonance Conference (SEMRC), Daytona Beach, Florida, Oct. 9-11, 2015.

Preliminary Results from NMR and EPR Spectroscopy for Achieving Overhauser-DNP at 14.1 T, A. Akinfaderin, T. Dubroca, S. Wi, B. Trociewitz, L. Frydman, S. Hill, Southeastern Magnetic Resonance Conference (SEMRC), Daytona Beach, Florida, Oct. 9-11, 2015.

HFEPR studies of Zero Field Splitting in a trigonal Mn(III) complex, Jonathan J. Marbey, En-Che Yang, Stephen Hill, Southeastern Magnetic Resonance Conference (SEMRC), Daytona Beach, Florida, Oct. 9-11, 2015.

Enhancement in Phase Coherence Time Using Clock Transitions, Dorsa Komijani, Muhandis Shiddiq, Yan Duan, Alejandro Gaita-Ariño, Eugenio Coronado and Stephen Hill, Southeastern Magnetic Resonance Conference (SEMRC), Daytona Beach, Florida, Oct. 9-11, 2015.

Electron Paramagnetic Resonance and ⁵⁷Fe Mossbauer Characterization of Complexes Containing Metal-Metal Bonds, Samuel M. Greer, Sebastian A. Stoian, Christine Thomas, Stephen Hill, Southeastern Magnetic Resonance Conference (SEMRC), Daytona Beach, Florida, Oct. 9-11, 2015.

EPR Studies of Heterometallic Systems Containing Mn^{III} and Rare Earth Ions, Livia B. L. Escobar, Guilherme P. Guedes, Jon Marbey, Stephen Hill, Rafael A. A. Cassaro, Stéphane Soriano, Miguel Novak, Marius Andruh and Maria G. F. Vaz, Southeastern Magnetic Resonance Conference (SEMRC), Daytona Beach, Florida, Oct. 9-11, 2015.

Enhancement in Phase Coherence Time Using Clock Transitions, Dorsa Komijani, Muhandis Shiddiq, Yan Duan, Alejandro Gaita-Ariño, Eugenio Coronado and Stephen Hill, 7th Summer School of the European

Federation of EPR Groups on Advanced EPR, Berlin, Germany, Aug. 24-31, 2015.

Electron Paramagnetic Resonance Studies of Fe(II) Spin Crossover Complexes and Organic Radicals/Dimers, S. M. Greer, S. A. Stoian, A. A. Arroyave, M. Shatruk, R. T. Oakley and S. Hill, 7th Summer School of the European Federation of EPR Groups on Advanced EPR, Berlin, Germany, Aug. 24-31, 2015.

Overhauser dynamic nuclear polarization at 600 MHz – 395 GHz, T. Dubroca, B. Trociewitz, A. Akinfaderin, J. van Tol, S. Wi, W. Brey, L. Frydman and J.R. Long, and S. Hill, Experimental NMR Conference (ENC), Asilomar, CA, April 19-24, 2015.

Strategies for Membrane Protein Studies via DNP MAS ssNMR, A.N. Smith, Gail Fanucci, T. Dubroca, S. Hill, Joanna Long, Experimental NMR Conference (ENC), Asilomar, CA, April 19-24, 2015.

Solution-State DNP at High Magnetic Field: Preliminary Study from Relaxation in Supercritical Fluids, A. Akinfaderin, S. Wi, T. Dubroca, B. Trociewitz, J. van Tol, L. Frydman, Stephen Hill, Experimental NMR Conference (ENC), Asilomar, CA, April 19-24, 2015.

Uniaxial pressure dependence of the magnetization dynamics in the high-symmetry single-molecule magnet Mn₁₂-MeOH, James Atkinson, Lakshmi Bhaskaran, Stephen Hill, Eli Zeldov, Enrique del Barco, Jonathan Friedman, Adeline Fournet and George Christou, American Physical Society March Meeting, San Antonio, TX, March 2 to 6, 2015.

High-frequency EPR Studies of Supramolecular Aggregates of Mn₃, Muhandis Shiddiq, Tu N. Nguyen, Tuhin Ghosh, Khalil A. Abboud, George Christou, and Stephen Hill, 43rd Southeastern Magnetic Resonance Conference, October 24-26 (2014), Tuscaloosa, Alabama.

Multi-Frequency Electron Paramagnetic Resonance Studies under Hydrostatic Pressure, Lakshmi Bhaskaran, Angelika B. Boeer, James P. Walsh, Eric Mcinnes and Stephen Hill, 43rd Southeastern Magnetic Resonance Conference, October 24-26 (2014), Tuscaloosa, Alabama.

Electron paramagnetic resonance study of the magnetic anisotropy in a mononuclear Terbium Nanomagnet, Dorsa Komijani, Yan Duan, Jose Baldovi, Alejandro Gaita-Arino, Juan M. Clemente-Juan, Eugenio Coronado, Stephen Hill, 43rd Southeastern Magnetic Resonance Conference, October 24-26 (2014), Tuscaloosa, Alabama.

A Combined High-Frequency EPR and ⁵⁷Fe Mossbauer Spectroscopic investigation of a high spin Fe(II) Complex, Samuel M. Greer, Sebastian A. Stoian, Alejandra Arroyave, Hoa Phan, Michael Shatruk and Stephen Hill, 43rd Southeastern Magnetic Resonance Conference, October 24-26 (2014), Tuscaloosa, Alabama.

Towards Improving Overhauser Dynamic Nuclear Polarization at High Magnetic Field: Preliminary Insights From Relaxation In Supercritical Fluids, Adewale Akinfaderin, Sungsool Wi, Thierry Dubroca, Bianca Trociewitz, Lucio Frydman and Stephen Hill, 43rd Southeastern Magnetic Resonance Conference, October 24-26 (2014), Tuscaloosa, Alabama.

Dynamic Nuclear Polarization facilities at 600 MHz/395 GHz, T. Dubroca, B. Trociewitz, A. Akinfaderin, J. van Tol, W. Brey, S. Wi, L. Frydman, J.R. Long and S. Hill, 43rd Southeastern Magnetic Resonance Conference, October 24-26 (2014), Tuscaloosa, Alabama.

Dynamic Nuclear Polarization: A Disruptive Technology For Nuclear Magnetic Resonance, T. Dubroca, B. Trociewitz, A. Akinfaderin, S. Hill, J. van Tol, W. Brey, S. Wi, L. Frydman and J.R. Long, 6th annual Florida State University Sneak Peek conference, Tallahassee (Oct 2014).

Multi-Frequency Electron Paramagnetic Resonance Studies under Hydrostatic Pressure, Lakshmi Bhaskaran, Angelika B. Boeer, James P. Walsh, Eric Mcinnes and Stephen Hill, Florida Inorganic and Materials Symposium (FIMS), October 3-4, 2014, University of Florida, Gainesville, FL.

Electron paramagnetic resonance study of the magnetic anisotropy in a mononuclear Terbium Nanomagnet, Dorsa Komijani, Yan Duan, Jose Baldovi, Alejandro Gaita-Arino, Juan M. Clemente-Juan, Eugenio Coronado, Stephen Hill, Florida Inorganic and Materials Symposium (FIMS), October 3-4, 2014, University of Florida, Gainesville, Florida.

Dynamic Nuclear Polarization facilities at 600 MHz/395 GHz, T. Dubroca, B. Trociewitz, A. Akinfaderin, J.

van Tol, W. Brey, S. Wi, L. Frydman, J.R. Long, and S. Hill, Florida State University 2nd annual postdoc symposium, Tallahassee (Sept 2014).

Electronic Structure Characterization of Ferromagnetic Hexachlororhenate(IV) Salts Using High Field Electron Paramagnetic Resonance, S. Greer, J. Martinez-Lillo, E. Brechin, M. Shatruk, S. Hill, Gordon Research Conference on Conductivity and Magnetism in Molecular Materials, August 3-8, 2014, Bates College, Lewiston, Maine.

Multi-Frequency Electron Paramagnetic Resonance Studies under Hydrostatic Pressure, Lakshmi Bhaskaran, Angelika B. Boeer, James P. Walsh, Eric McInnes and Stephen Hill, Gordon Research Conference on Conductivity and Magnetism in Molecular Materials, August 3-8, 2014, Bates College, Lewiston, Maine.

Electron paramagnetic resonance study of the magnetic anisotropy in a mononuclear Terbium Nanomagnet, Dorsa Komijani, Yan Duan, Jose Baldovi, Alejandro Gaita-Arino, Juan M. Clemente-Juan, Eugenio Coronado, Stephen Hill, Gordon Research Conference on Conductivity and Magnetism in Molecular Materials, August 3-8, 2014, Bates College, Lewiston, Maine.

Dynamic Nuclear Polarization, T. Dubroca, B. Trociewitz, A. Akinfaderin, S. Hill, J. van Tol, W. Brey, S. Wi, L. Frydman and J.R. Long, EPR Symposium at the Rocky Mountain Conference on Magnetic Resonance, July 13 to 17, 2014, Copper Mountain, CO.

Dynamic Nuclear Polarization, T. Dubroca, B. Trociewitz, A. Akinfaderin, S. Hill, J. van Tol, W. Brey, S. Wi, L. Frydman and J.R. Long, 55th Experimental Nuclear Magnetic Resonance Conference (ENC), Boston, MA, March 22-28 (2014).

Dynamic Nuclear Polarization at the MagLab, T. Dubroca, B. Trociewitz, A. Akinfaderin, S. Hill, J. van Tol, W. Brey, S. Wi, L. Frydman and J. R. Long, Research in Materials Science at FSU Retreat, January 11, 2014, Tallahassee, FL.

Low-energy spectroscopy on molecular materials under high pressures, K. Thirunavukkuarasu,* C. A. Kuntscher, C. C. Beedle, S. M. Winter, K. Kamarás, F. Henrich, A. Kovalev, S. Tozer, R. T. Oakley and S. Hill, Research in Materials Science at FSU Retreat, January 11, 2014, Tallahassee, FL.

On the Interactions Between a Cavity Mode and Fe₈ Single Molecule Magnets, Muhandis Shiddiq, Christopher C. Beedle and Stephen Hill, 42nd Southeastern Magnetic Resonance Conference (SEMRC), October 11-13, 2013 in Tallahassee

EPR Studies on the Kagomé System Pr₃Ga₅SiO₁₄, Xi Wang, Sanhita Ghosh, Saiti Datta, Michael Hoch, Pedro Schlottmann, Haidong Zhou, Stephen Hill, 42nd Southeastern Magnetic Resonance Conference (SEMRC), October 11-13, 2013 in Tallahassee

Pressure Dependence of Magnetic Anisotropy In Heavy-Atom Organic Radical Ferromagnet, K. Thirunavukkuarasu, C. C. Beedle, S. M. Winter, A. Kovalev, S. Tozer, R. T. Oakley and S. Hill, Florida Inorganic and Materials Symposium (FIMS) 2013, October 19 (2013).

EPR Technique for Probing the Effect of Anisotropies in Exchange Coupled Co(II) Dimers, Lakshmi Bhaskaran, Angelika B Boeer, James P Walsh, Eric McInnes and Stephen Hill, Florida Inorganic and Materials Symposium (FIMS) 2013, October 19 (2013); awarded student poster prize.

EPR studies of pressure induced Jahn-Teller reorientation in the coordination polymer: [CuF₂(H₂O)₂(pyrazine)], C. C. Beedle, C. Morien, A. Prescimone, S. Tozer, J. Manson, J. A. Schlueter, E. K. Brechin, S. Hill, 55th Annual Rocky Mountain Conference on Magnetic Resonance, July 28 to August 1, 2013, Denver, CO.

High-field/frequency EPR studies of symmetry-induced magneto-structural correlations in Ni(II) coordination complexes, C. C. Beedle, S. Rodríguez-Jiménez, R. Díaz-Torres, N. Aliaga-Alcalde and S. Hill, 245th ACS National Meeting & Exposition, New Orleans, LA, April 7-11 (2013).

Pressure-dependence of magnetic anisotropy in heavy-atom organic radical ferromagnets, C. C. Beedle, K. Thirunavukkuarasu, S. M. Winter, A. E. Kovalev, S. Tozer, R. T. Oakley, S. Hill, 13th International Conference on Molecule-based Magnets, Orlando, FL, October 7-11, 2012.

Cavity Perturbation Technique: The Effects of Crystal Size on the EPR Spectra of Fe₈, M. Shiddiq, J. Liu, C. C. Beedle, S. Hill, 79th Annual Meeting of the APS Southeastern Section, Tallahassee, FL, November 14–17 (2012).

EPR Studies on a Holmium Based Single-Molecule Magnet, S. Ghosh, M. Shiddiq,* K. Thirunavukkuarasu, S. Datta, L. Friend, S. Cardona-Serra, Eugenio Coronado, and S. Hill, 13th International Conference on Molecule-based Magnets, Orlando, FL, October 7-11, 2012.

Cavity Perturbation Technique: The Effects of Crystal Size on the EPR Spectra of Fe₈, M. Shiddiq, J. Liu, C. C. Beedle, S. Hill, 13th International Conference on Molecule-based Magnets, Orlando, FL, October 7-11, 2012.

Quantum Tunneling of Magnetization in Trigonal Single-Molecule Magnets, Junjie Liu, Enrique del Barco and Stephen Hill, 13th International Conference on Molecule-based Magnets, Orlando, FL, October 7-11, 2012.

High-Field Electron Paramagnetic Resonance Studies of Anisotropic Molecular Magnets, Junjie Liu, Xiaowen Feng, Joseph Zadrozny, Luke Batchelor, Talal Mallah, Jeffrey Long, Stephen Hill, 13th International Conference on Molecule-based Magnets, Orlando, FL, October 7-11, 2012.

EPR studies of CN bridged Fe²⁺Ni^{II} complexes and their Fe^{III} mononuclear building-blocks, C.C. Beedle, A. E. Kovalev, Y.-Z. Zhang, S. M. Holmes, S. Hill, 13th International Conference on Molecule-based Magnets, Orlando, FL, October 7-11, 2012.

Magnetic Response of MnF(salen) at Low Temperatures and in High Magnetic Fields, O. N. Risset, J.-H. Park, M. Shiddiq, M. K. Peprah, E. S. Knowles, Y. M. Calm, C. C. Beedle, M. F. Dumont, G. Ehlers, A. Podlesnyak, S. E. Nagler, S. Hill, D. R. Talham, M. W. Meisel, 13th International Conference on Molecule-based Magnets, Orlando, FL, October 7-11, 2012.

High-Frequency EPR Studies of the Coordination-Polymer [CuF₂(H₂O)₂(pyridine) Under Pressure, C. C. Beedle, C. Morien, A. Prescimone, S. Tozer, J. Manson, J. A. Schlueter, E. K. Brechin, S. Hill, 13th International Conference on Molecule-based Magnets, Orlando, FL, October 7-11, 2012.

Photocontrol via Strain in Core-Shell Prussian Blue Analogues, E. S. Knowles, C. Li, M. K. Peprah, J. van Tol, S. Hill, D. R. Talham, M. W. Meisel, Florida Inorganic Mini-Symposium (FIMS), Gainesville, September 29-30 (2012).

Electron Paramagnetic Resonance: Pressure Induced Modulation of the Anisotropy Field in a Selenium-Based Organic Radical, C. C. Beedle, J. Liu, T. Tokumoto, H. Quddusi, E. del Barco, S. A. McGill, D. N. Hendrickson, S. Hill, 243rd ACS National Meeting, March 25-29, 2012, San Diego, CA.

Locating the Hard Plane of Fe₈ Using a 9/5/1 Superconducting Vector Magnet, Eugene Miltshayn, J. Liu, C. C. Beedle and S. Hill, Florida Inorganic Mini-Symposium (FIMS), Gainesville, October 7-8 (2011).

Coherent Spin Manipulation in a Holmium-based Single Molecule Magnet, S. Ghosh, S. Datta, J. van Tol, J. Krzystek, S. Hill, E. del Barco, S. Cardona-Serra and E. Coronado, Florida Inorganic Mini-Symposium (FIMS), Gainesville, October 7-8 (2011).

Decoherence in a Fe-based Magnetic Cluster, Z. Wang, S. Datta, C. Papatrifiantafylopoulou, G. Christou, N. S. Dalal, J. van Tol, and S. Hill, Florida ACS Annual Meeting and Exposition, Innisbrook, FL, May 12-14 (2011).

Single-Molecule Magnets: Modulation of Physical Properties and Multifunctionalization Through Synthetic Modification, C. C. Beedle, J. Liu, H. M. Quddusi, J. Ma, J. Lawrence, E. del Barco, D. N. Hendrickson, S. Hill, International Symposium and School on Multifunctional Molecule-based Materials (ISSMMM), Argonne National Lab, Chicago, IL, March 13-18, 2011.

High-field EPR study of a ReCl₄(CN)₂ molecular magnet building block, J. Liu, T. D. Harris, J. R. Long, and S. Hill, International Symposium and School on Multifunctional Molecule-based Materials (ISSMMM), Argonne National Lab, Chicago, IL, March 13-18, 2011.

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