Curriculum Vitae – Stephen Hill

National High Magnetic Field Laboratory
1800 E. Paul Dirac Drive
Tallahassee FL 32310

Tel: 850-644 1647
Email: shill@magnet.fsu.edu
http:// http://fs.magnet.fsu.edu/~shill/

Professional preparation

University of Oxford, England	Physics	B. A. with 1st 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

08/08–present	Director of EMR users program, National High Magnetic Field Laboratory.
08/08–present	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

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/).

Memberships

1995–present	American Physical Society
2013–present	American Chemical Society
2013–present	American Association for the Advancement of Science
2014-present	International EPR Society

Short summary of research interests

Hill has >20 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 low-power sources (gas lasers, backward-wave oscillators and solid-state devices) and measurement techniques (cyclotron resonance, optical conductivity and EPR). Through this work, Hill has gained an international reputation in microwave and far-infrared spectroscopy of low-dimensional conducting, superconducting and magnetic systems in high 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 recent 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.

Synergistic activities

- Advisory Boards/Committees: Gordon Conference on Conductivity and Magnetism in Molecular Materials (co-Chair, 2014-2016); Int. Conference on Molecule-based Magnets, ICMM (Chair 2010 - 2012, International Advisory Board 2010 - present); Physical Phenomena in High Magnetic Fields, PPHMF (Program Committee, 2014-2016); European Conference on Molecule-based Magnetism,

ECMM (International Advisory Board 2011 - present); International Symposium on Crystalline Organic Conductors and Ferromagnets, ISCOM (International Advisory Board 2014 - present); Editor of Proceedings of 24th International Conference on Low Temperature Physics.

- Elected Co-Chair of the International EPR Society, 2014-2017; Elected member-at-large of executive committee of APS topical group GMAG (2006 - 2009).
- Co-PI on APS funded Masters-to-PhD Bridge program at Florida State University; Member of the Diversity Committee and active participant in NHMFL outreach activities; Coordinator of the graduate program in physics at the University of Florida, 2007-2008; Coordinator and PI of Montana State University REU/RET, 1999-2001, and REU/RET mentor since then.
- Coordinator of effort to develop an accelerator-based THz/IR lightsource at the NHMFL.

Recent single investigator funding: over $7.5M since 1997

- American Physical Society – *Proposal for a Masters Bridge Site at Florida State University*, co-PIs – S. Capstick, S. Hill, D. Popovic, $202,833 (recommended March 2014) – June 2014 to May 2017.
- NSF/DMR/CMP – *High-Frequency EPR Studies of Strong Spin-Orbit Effects in Molecular Magnetism*, $400,000 – June. 2013 to June 2016.
- AFOSR/AOARD – *Quantum Properties of Molecular Nanomagnets*, $75,000 – Sept. 2013 to Sept. 2016.
- NSF/CHE – *MRI: Development of Instrumentation for Dynamic Nuclear Polarization of Organic Solutions*, $1,352,735 for 60 months, Sept. 2012 to Aug. 2017.
- NSF/PHY (Physics of Living Systems): *Workshop on Applications of Terahertz-to-Infrared Probes in Molecular and Materials Sciences*, $49,995 for 12 months, May. 2011 to April. 2012.
- NSF/CHE (Inorganic): *International Collaboration in Chemistry: EPR Characterization or Molecular Magneto-Structural Correlations Under Pressure*, $450,000 for 36 months, Sept. 2009 to Aug. 2013.
- NSF/DMR/CMP: *Magnetic resonance investigations of symmetries, interactions and their consequences in electronic matter*, $365,000 – Nov. 2008 to June 2011.
- NSF Nanoscale Interdisciplinary Research Team: *Quantum Spin Dynamics in Molecular Nanomagnets*, $1,666,000 for 48 months (Hill share $252,050). Other team members: A. Kent (NYU), G. Christou (UF), D. Hendrickson (UCSD), and N. Dalal (Florida State University) – July 2005 to June 2009.
- NSF/MRI: *Development of a transient spectrometer for education and research into quantum coherence in molecular nanomagnets*, $198,000 – Aug. 2004 to July 2007.
- NSF *CAREER: Magnetic Resonance - From Materials Research to Science Education*, $450,000 – May 2003 to April 2008.
- NSF Nanoscale Interdisciplinary Research Team: *Quantum Effects in Single Molecule Magnets*, $1,996,359 for 48 months (Hill share $339,926). Other team members: A. Kent (NYU), G. Christou (UF), D. Hendrickson (UCSD), N. Dalal (FSU) – July 2001 to June 2005.

Papers presented at national and international conferences

- Six Plenary/Keynote/Award lectures and two Tutorials at International Conferences.
- Invited: 51 at international conferences; 24 at national conferences; 43 seminars and colloquia.
- Contributed: 34 at international conferences; 77 at national conferences.
- 110 papers have been presented as posters at national and international conferences.

Ten significant publications (out of >200, with over 3,850 citations)

- *Influence of Electronic Spin and Spin-Orbit Coupling on Decoherence in Mononuclear Transition Metal Complexes*, M. Graham, J. Zadrozny, M. Shiddiq, J. Anderson, M. Fataftah, S. Hill, D. Freedman, J. Am. Chem. Soc. **136**, 7623-7626 (2014).

- *Influence of the Ligand Field on Slow Magnetization Relaxation versus Spin Crossover in Mononuclear Cobalt Complexes*, Fatemah Habib, Oana R. Luca, Veacheslav Vieru, Muhandis Shiddiq, Ilia Korobkov, Serge I. Gorelsky, Michael K. Takase, Liviu F. Chibotaru, Stephen Hill, Robert H. Crabtree, and Muralee Murugesu, Angew. Chem. **43**, 11500-11503 (2013).
- *Slow Magnetic Relaxation Induced by Large Transverse Zero-Field Splitting in a $Mn^{II}Re^{IV}(CN)_2$ Single-Chain Magnet*, Xiaowen Feng, Junjie Liu, T. David Harris, Stephen Hill and Jeffrey R. Long, J. Am. Chem. Soc. **134**, 7521-7529 (2012).
- *Slow Magnetic Relaxation in a Pseudotetrahedral Cobalt(II) Complex with Easy-Plane Anisotropy*, J. M. Zadrozny, J. Liu, N. A. Piro, C. J. Chang, S. Hill, and J. R. Long, Chem. Commun. **48**, 3927-3929 (2012).
- *Pressure-driven orbital reorientations and coordination sphere reconstructions in $[CuF_2(H_2O)_2(pyz)]$,* A. Prescimone, C. Morien, D. Allan, J. A. Schlueter, S. Tozer, J. L. Manson, S. Parsons, E. K. Brechin, and S. Hill, Angew. Chem. **51**, 7490-7494 (2012).
- *Magnetic Anisotropy in a Heavy Atom Radical Ferromagnet*, S. M. Winter, S. Datta, S. Hill, R. T. Oakley, J. Am. Chem. Soc. **133**, 8126-8129 (2011).
- *Asymmetric Berry-Phase Interference Patterns in a Single-Molecule Magnet*, H. M. Quddusi, J. Liu, S. Singh, K. J. Heroux, E. del Barco, S. Hill, D. N. Hendrickson, Phys. Rev. Lett. **106**, 227201 (2011); 4 pages.
- *Manifestation of Spin Selection Rules on the Quantum Tunneling of Magnetization in a Single Molecule Magnet*, J. J. Henderson, C. Koo, P. L. Feng, E. del Barco, S. Hill, I. S. Tupitsyn, P. C. E. Stamp, D. N. Hendrickson, Phys. Rev. Lett. **103**, 017202 (2009); 4 pages.
- *Quantum interference of tunnel trajectories between states of different spin length in a dimeric molecular nanomagnet*, C. M. Ramsey, E. del Barco, S. Hill, S. J. Shah, C. C. Beedle, D. N. Hendrickson, Nature Physics **4**, 277-281 (2008).
- *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).

Collaborators (past 48 months) and other affiliations

G. Aromi, C. Sanudo, J. Cano, J. Tejada, J. M. Hernandez and N. Domingo (U. Barcelona); E. Brechin, S. Parsons, K. Kamanev (U. Edinburgh); G. Christou, K. Abboud, H.-P. Cheng, M. Meisel, D. Tanner, D. Talham (U. Florida); R. Clerac (Bordeaux); E. Coronado, U. Valencia; N. Dalal, M. Hoch, S. Tozer (NHMFL and Florida State U.); E. del Barco (U. Central Florida); K. Dunbar (Texas A&M); I. Fisher (Stanford U.); L. Frydman (Weizmann Inst.); P. Goy (AB*mm*, Paris); D. N. Hendrickson (UC San Diego); A. D. Kent (New York U.); J. R. Long (UC Berkeley); F. Luis (Zaragoza); T. Mallah (Paris-Sud); J. L. Manson (E. Washington U.); E. McInnes (Manchester); M. Murrie (U. Glasgow); M. Murugesu, D. Richeson (U. Ottowa); M. Nakano (Osaka U.); K. O (U. Texas); R. Oakley (U. Waterloo); S. Perlepes (U. Patras); S. Piligkos (Copenhagen); C. Raptopoulou (NCSR Demokritos); J. Schlueter (Argonne Nat'l lab); G. Smith (St. Andrews); P. C. E. Stamp and I. Tupitsyn (U. British Columbia); H.-L. Tsai (NCKU, Taiwan); W. Wernsdorfer (Louis Neel lab, Grenoble); C. Wiebe (U. Manitoba); R. Wylde (Thomas Keating LtD, UK); E.-C. Yang (Fu-Jen University, Taiwan); H. Zhou (U. Tennessee).

Graduate and postdoctoral mentors

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

Past Predoctoral and Postdoctoral Students

Thesis students: Samuel Greer, Dorsa Komijani, Adewale Akinfaderin, Lakshmi Bhaskaran, Muhandis Shiddiq, Sanhita Ghosh (PhD Aug. 2012, now at Intel), Junjie Liu (PhD Apr. 2012, now at U. Oxford), Changhyun Koo (PhD 2011, now at U. Heidelberg), Saiti Datta (PhD 2009, postdoc Amherst College), Jon Lawrence (PhD Dec. 2007, adjunct faculty at U. Arizona), Susumu Takahashi (PhD 2005, now faculty at U. Sothern Cal.), Monty Mola (PhD 2001, faculty at Humboldt State University, CA).

Postdoctoral: (current) Thierry Dubroca, Sebastian Stoian, Komalavalli Thirunavukkuarasu; former Chris Beedle (now at LANL), Alexey Kovalev (now full-time at MagLab), Kyuil Cho (now at Ames Lab), Saiti Datta (postdoc at Amherst College), John Lee (faculty at Mercer University), Konstantin Petukhov (now Erlangen, Germany), Rachel Edwards (faculty at Warwick University, England), Gordon Machel (freelance Programmer, Germany).

Full List of Publications and Presentations

(in reverse chronological order)

Published or in press

207. *A new "offset" analogue of the classical oxime-bridged [Mn^{III}_6] Single-Molecule Magnets*, Katye Poole, Maria Korabik, Muhandis Shiddiq, Kylie Mitchell, Adeline Fournet, Zhilang You, George Christou, Stephen Hill, Malgorzata Holynska, Inorg. Chem. (accepted. Jan. 2015).

206. *Pressure dependence of the exchange anisotropy in an organic ferromagnet*, Komalavalli Thirunavukkuarasu, Stephen M. Winter, Christopher C. Beedle, Alexey E. Kovalev, Richard T. Oakley, Stephen Hill, Phys. Rev. B **91**, 014412 (2015).

205. *Field-Induced Slow Relaxation in a Monometallic Mn(III) Single-Molecule Magnet*, Gavin Craig, Jonathan Marbey, Stephen Hill, Olivier Roubeau, Simon Parsons, Mark Murrie, Inorg. Chem. **54**, 13-15 (2015).

204. *Spin cluster excitations in the rare earth kagome system $Nd_3Ga_5SiO_{14}$*, S. Ghosh, S. Datta, H. Zhou, M.J.R. Hoch, C. R. Wiebe, P. Schlottmann and S. Hill, Phys. Rev. B **90**, 224405 (2014).

203. *Magnetic Response of Mn(III)F(salen) at Low Temperatures*, J.-H. Park, O. N. Risset, M. Shiddiq, M. K. Peprah, E. S. Knowles, M. J. Andrus, C. C. Beedle, G. Ehlers, A. Podlesnyak, E. Čižmár, S. E. Nagler, S. Hill, D. R. Talham, and M. W. Meisel, Acta Physica Polonica A **126**, 228-229 (2014).

202. *Spectroscopy Methods for Molecular Nanomagnets*, Michael L. Baker, Stephen J. Blundell, Neus Domingo, Stephen Hill, in *Molecular Nanomagnets*, edited by Song Gao, Structure and Bonding (Springer-Verlag, Berllin); accepted for publication (June 2014).

201. *Ambipolar $MoSe_2$ Field-Effect Transistors: Field-Effect and Hall Mobilities*, N. Pradhan, D. Rhodes, Y. Xin, S. Memaran, L. Bhaskaran, M. Shiddiq, S. Hill, P. M. Ajayan, L. Balicas, accepted for publication in ACS Nano (July, 2014); DOI: 10.1021/nn501693d

200. *Influence of Electronic Spin and Spin-Orbit Coupling on Decoherence in Mononuclear Transition Metal Complexes*, M. Graham, J. Zadrozny, M. Shiddiq, J. Anderson, M. Fataftah, S. Hill, D. Freedman, accepted for publication in J. Am. Chem. Soc. (May. 2014).

199. *Electronic and Magnetic Structure of Neutral Radical FBBO*, S. M. Winter, A. Mailman, R. T. Oakley, K. Thirunavukkuarasu, S. Hill, D. E. Graf, S. W. Tozer, J. S. Tse, M. Mito and H. Yamaguchi, accepted for publication in Phys. Rev. B (May. 2014).

198. *Reprint of "EPR Studies of a Cyano-Bridged $Fe_2^{III}Ni^{II}$ coordination complex and its corresponding Fe^{III} Mononuclear Building-Block"*, Christopher C. Beedle, Yaun-Zhu Zhang, Stephen M. Holmes, Stephen Hill, Polyhedron **66**, 279-282 (2013).

197. *Influence of the Ligand Field on Slow Magnetization Relaxation versus Spin Crossover in Mononuclear Cobalt Complexes*, Fatemah Habib, Oana R. Luca, Veacheslav Vieru, Muhandis Shiddiq, Ilia Korobkov, Serge I. Gorelsky, Michael K. Takase, Liviu F. Chibotaru, Stephen Hill, Robert H. Crabtree, and Muralee Murugesu, Angew. Chem. **43**, 11500-11503 (2013).

196. *Microwave-induced excitations in the kagome system $Pr_3Ga_5SiO_{14}$*, Sanhita Ghosh, Saiti Datta, Haidong Zhou, Michael Hoch, Christopher R. Wiebe, Pedro Schlottmann and Stephen Hill, Physical Review B **88**, 094414 (2013).

195. *Preface: Proceedings of the 13th International Conference on Molecule-based Magnets*, Stephen Hill and Enrique del Barco, Polyhedron **66**, 1-2 (2013); http://dx.doi.org/10.1016/j.poly.2013.06.032

194. *Electron spin resonance studies of trityl OXO63 at optimal concentration for DNP*, Lloyd Lumata, Zoltan Kovacs, A. Dean Sherry, Craig Malloy, Stephen Hill, Johan van Tol, Lu Yu, Likai Song and Matthew Merritt, Physical Chemistry Chemical Physics **15**, 9800-9807 (2013). DOI:10.1039/c3cp50186h.

193. *Single-crystal EPR spectroscopy of a Co(II) single-chain magnet*, A. Amjad, G. Minguez Espallargas, J. Liu, J. M. Clemente-Juan, E. Coronado, S. Hill, E. del Barco, Polyhedron **66**, 218 – 221 (2013); http://dx.doi.org/10.1016/j.poly.2013.04.044

192. *EPR Studies of a Cyano-Bridged $Fe_2^{III}Ni^{II}$ coordination complex and its corresponding Fe^{III} Mononuclear Building-Block*, Christopher C. Beedle, Yaun-Zhu Zhang, Stephen M. Holmes, Stephen Hill, Polyhedron **59**, 48-51(2013); http://dx.doi.org/10.1016/j.poly.2013.04.023

191. *New nanostructured materials: synthesis of dodecanuclear Ni(II) complexes and surface deposition studies*, A. Pons-Balagué, S. Piligkos, S. J. Teat, J. Sanchez Costa, M. Shiddiq, S. Hill, G. R. Castro, P. Ferrer-Escorihuela, E. C. Sañudo, Chemistry – A European Journal **19**, 9064-9071 (2013); DOI: 10.1002/chem.201204081.

190. *Magnetization Quantum Tunneling and Improper Rotational Symmetry*, Junjie Liu, Stephen Hill, Polyhedron **66**, 147-152 (2013); http://dx.doi.org/10.1016/j.poly.2013.03.018

189. *Magnetization tunneling in high-symmetry Mn_{12} single-molecule magnets*, S. Hill, invited review article, Special Issue of Polyhedron in recognition of George Christou's 60th birthday, Polyhedron **64**, 128-135 (2013). http://dx.doi.org/10.1016/j.poly.2013.03.005

188. *A Microscopic and Spectroscopic View of Quantum Tunneling of the Magnetization*, Junjie Liu, Enrique del Barco, Stephen Hill, in *Molecular Magnets – Physics and Applications*, pp 77-110, edited by Juan Bartolomé, Fernando Luis and JulioF. Fernández, Springer Series on NanoScience and Technology (Springer-Verlag, Berlin-Heidelberg 2014); http://link.springer.com/book/10.1007%2F978-3-642-40609-6

187. *Giant Ising-type magnetic anisotropy in trigonal Ni(II) complexes: experiment and theory*, R. Ruamps, R. Maurice, L. Batchelor, M. Boggio-Pasqual, R. Guillot, A.-L. Barra, J. Liu, E.-E. Bendief, S. Pillet, S. Hill, T. Mallah, N. Guihery, J. Am. Chem. Soc. **135**, 3017-3026 (2013).

186. *Elucidating magnetic exchange and anisotropy in weakly coupled Mn^{III} dimers*, Junjie Liu, J. Krzystek, Leoni Barrios, Stephen Hill, Guillem Aromì, Inorg. Chem. **52**, 718-723 (2013).

185. *Synthesis, Structure, and Spectroscopic and Magnetic Characterization of $[Mn_{12}O_{12}(O_2CCH_2Bu^t)_{16}(MeOH)_4].MeOH$, a Mn_{12} Single-Molecule Magnet with True Axial Symmetry*, Christos Lampropoulos, Muralee Murugesu, Andrew G. Harter, Wolfgang Wernsdofer, Stephen Hill, Naresh S. Dalal, Khalil A. Abboud, and George Christou, Inorg. Chem. **52**, 258-272 (2013).

184. *Synthetic, Structural, Spectroscopic and Theoretical Study of a Mn(III)-Cu(II) Dimer Containing a Jahn-Teller Compressed Mn ion*, Nelly Berg, Thomas N. Hooper, Junjie Liu, Christopher C. Beedle, Saurabh Kumar Singh, Gopalan Rajaraman, Stergios Piligkos, Stephen Hill, Euan K. Brechin, and Leigh F. Jones, Dalton Transactions **42**, 207-216 (2013).

183. *Multi-Frequency EPR Studies of a Mononuclear Holmium Single-Molecule Magnet Based on the Polyoxometalate $[Ho^{III}(W_5O_{18})_2]^{9-}$*, Sanhita Ghosh, Saiti Datta, Lisa Friend, Salvador Cardona-Serra, Eugenio Coronado, Stephen Hill, Dalton Trans. **41**, 13697 (2012); DOI:10.1039/C2DT31674A.

182. *Ferromagnetic Exchange in a Twisted, Oxime-Bridged $[Mn^{III}{}_2]$ Dimer*, Edel Houton, Stephanie Taylor, Christopher C. Beedle, Joan Cano, Stergios Piligkos, Stephen Hill, Alan G. Ryder, Euan K. Brechin, Leigh F. Jones, Dalton Trans. **41**, 8340-8347 (2012); DOI: 10.1039/c2dt30674c.

181. *Pressure-driven orbital reorientations and coordination sphere reconstructions in $[CuF_2(H_2O)_2(pyz)]$,* Alessandro Prescimone, Chelsey Morien, David Allan, John A. Schlueter, Stan Tozer, Jamie L. Manson, Simon Parsons, Euan K. Brechin, and Stephen Hill, Angew. Chem. **51**, 7490-7494 (2012); DOI: 10.1002/anie.201202367.

180. *Slow Magnetic Relaxation Induced by Large Transverse Zero-Field Splitting in a $Mn^{II}Re^{IV}(CN)_2$ Single-Chain Magnet*, Xiaowen Feng, Junjie Liu, T. David Harris, Stephen Hill and Jeffrey R. Long, J. Am. Chem. Soc. **134**, 7521-7529 (2012).

179. *Half-Integer Spin Heptanuclear Single-Molecule Magnet with an Unusual (Mn6MnII)-MnIII Exchange-Coupled Core*, Siou-Yin Chen, Christopher C. Beedle, Pei-Rung Gan, Gene-Hsian Lee, Stephen Hill and En-Che Yang, Inorg. Chem. **51**, 4448-4457 (2012).

178. *Spin-Orbit Effects in Heavy Atom Organic Radical Ferromagnets*, Stephen M. Winter and Richard T. Oakley**,** Alexey Kovalev and Stephen Hill, Phys. Rev. B **85**, 094430 (2012); 9 pages. **Selected as an Editors Suggestion.**

177. *Quantum Tunneling of Magnetization in Trigonal Single-Molecule Magnets*, J. Liu, E. del Barco and S. Hill, Phys. Rev. B **85**, 014206 (2012).

176. *Slow Magnetic Relaxation in a Pseudotetrahedral Cobalt(II) Complex with Easy-Plane Anisotropy*, Joseph M. Zadrozny, Junjie Liu, Nicholas A. Piro, Christopher J. Chang, Stephen Hill, and Jeffrey R. Long, Chem. Commun. **48**, 3927-3929 (2012); **featured on the cover of the journal.**

175. *Relieving Frustration: the Case of Antiferromagnetic Mn_3 Molecular Triangles*, J. Liu, C. Koo, A. Amjad, P. L. Feng, E.-S. Choi, E. del Barco, D. N. Hendrickson and S. Hill, Phys. Rev. B **84**, 094443 (2011).

174. *Accidentally on purpose: construction of a ferromagnetic, oxime-based $[Mn^{III}_2]$ dimer,* Ross Inglis, Edel Houton, Junjie Liu, Alessandro Prescimone, Joan Cano, Stergios Piligkos, Stephen Hill, Leigh F. Jones, and Euan K. Brechin, Dalton Trans. **40**, 9999-10006 (2011); also represented on cover of the issue; DOI: 10.1039/C1DT11118C.

173. *Cationic Mn_4 SMM with a Sterically Isolated Core*, Katie J. Heroux, Hajrah M. Quddusi, Junjie Liu, James R. O'Brien, Motohiro Nakano, Enrique del Barco, Stephen Hill and David N. Hendrickson, Inorg. Chem. **50**, 7367-7369 (2011).

172. *Asymmetric Berry-Phase Interference Patterns in a Single-Molecule Magnet*, H. M. Quddusi, J. Liu, S. Singh, K. J. Heroux, E. del Barco, S. Hill, D. N. Hendrickson, Phys. Rev. Lett. **106**, 227201 (2011).

171. *Magnetic Anisotropy in a Heavy Atom Radical Ferromagnet*, Stephen M. Winter, Saiti Datta, Stephen Hill, Richard T. Oakley, J. Am. Chem. Soc. **133**, 8126 (2011); **DOI:** 10.1021/ja202156u.

170. *Short range ordering in the modified honeycomb lattice compound $SrHo_2O_2$*, S. Ghosh, H. D. Zhou, L. Balicas, J. S. Gardner, Y. Qiu, C. R. Wiebe, J. Phys. Condens. Matter **23**, 164203 (2011).

169. *Spin Decoherence in a Fe-based Magnetic Cluster*, Z. Wang, S. Datta, C. Papatriantafyllopoulou, G. Christou, N. Dalal, J. van Tol, S. Hill, Polyhedron **30**, 3193-3196 (2011); doi:10.1016/j.poly.2011.04.009.

168. *EPR and magnetic quantum tunneling studies of the mixed valent $[Mn_4(anca)_4(Hedea)_2(edea)_2].2CHCl_3.EtOH$* single-molecule magnet, J. Liu, C. C. Beedle, H. M. Quddusi, E. del Barco, D. N. Hendrickson, S. Hill, Polyhedron **30**, 2965-2968 (2011); doi:10.1016/j.poly.2011.01.029.

167. *Magnetic anisotropy in thin films of Prussian blue analogues*, D. M. Pajerowski, J. E. Gardner, M. J. Andrus, S. Datta, A. Gomez, S. W. Kycia, S. Hill, D. R. Talham, and M. W. Meisel, Phys. Rev. B **82**, 214405 (2010).

166. *Electron magnetic resonance studies of the $Pr_3Ga_5SiO_{14}$ and $Nd_3Ga_5SiO_{14}$ kagomé systems*, Sanhita Ghosh, Saiti Datta, Haidong Zhou, Michael Hoch, Christopher Wiebe and Stephen Hill, J. Appl. Phys. **109**, 07E137 (2011).

165. *Tunneling and inversion symmetry in single-molecule magnets: The case of the Mn_{12} wheel molecule*, E. del Barco, S. Hill, C. C. Beedle, D. N. Hendrickson, I. S. Tupitsyn, P. C. E. Stamp, Phys. Rev. B **82**, 104426 (2010).

164. *Studies of Magnetic Properties and HFEPR of Octanuclear Manganese Single-Molecule Magnets*, C.-C. Wu, S. Datta, W. Wernsdorfer, G.-H. Lee, S. Hill and E.-C. Yang, Dalton Transactions **39**, 10160-10168 (2010).

163. *Magnetic quantum tunneling: Insights from simple molecule-based magnets*, S. Hill, S. Datta, J. Liu, R. Inglis, C. J. Milios, P. L. Feng, J. J. Henderson, E. del Barco, E. K. Brechin, D. N. Hendrickson, Perspectives Article in Themed Issue, Dalton Trans. **39**, 4693-4707 (2010).

162. *Binding of Higher Alcohols onto Mn_{12} Single-Molecule Magnets: Engineering the Highest Barrier Mn_{12} SMM*, Christos Lampropoulos, Gage Redler, Saiti Data, Khalil A. Abboud, Stephen Hill and George Christou, Inorg. Chem. **49**, 1325-1336 (2010).

161. *Anisotropy barrier reduction in fast-relaxing Mn_{12} single-molecule magnets*, Stephen Hill, Muralee Murugesu and George Christou, Phys. Rev. B **80**, 174416 (2009); 14 pages. **Selected as an Editors Suggestion.**

160. *Twisting, Bending, Stretching: Strategies for Making Ferromagnetic $[Mn^{III}_3]$ Triangles*, Ross Inglis, Stephanie M. Taylor, Leigh F. Jones, Giannis S. Papaefstathiou, Spyros P. Perlepes, Saiti Datta, Stephen Hill, Wolfgang Wernsdorfer and Euan K. Brechin, Dalton Transactions **2009**, 9157-9168 (2009).

159. *Crystal lattice desolvation effects on the magnetic quantum tunneling of single-molecule magnets*, G. Redler, C. Lampropoulos, S. Datta, C. Koo, T. C. Stamatatos, N. E. Chakov, G. Christou and S. Hill, Phys. Rev. B **80**, 094408-1 to 9 (2009).

158. *Towards Terahertz Operation of CMOS*, S. Sankaran, Chuying Mao, E.-Y. Seok, Dongha Shim, Changhua Cao, Ruonan Han, Daniel Arenas, David Tanner, Stephen Hill, Chih-Ming Hung, Kenneth K. O, Proceedings of the Solid-State Circuits Conference (ISSCC 2009). IEEE International, 8-12 Feb. 2009, 202 - 203, 203a; DOI: 10.1109/ISSCC.2009.4977378.

157. *Manifestation of Spin Selection Rules on the Quantum Tunneling of Magnetization in a Single Molecule Magnet*, J. J. Henderson, C. Koo, P. L. Feng, E. del Barco, S. Hill, I. S. Tupitsyn, P. C. E. Stamp, D. N. Hendrickson, Phys. Rev. Lett. **103**, 017202 (2009).

156. *Comment on ``Influence of the Dzyaloshinskii-Moriya exchange interaction on quantum phase interference of spins''*, E. del Barco, S. Hill, and D.N. Hendrickson, Phys. Rev. Lett. **103**, 059701 (2009).

155. *A Caveat for Single-Molecule Magnetism: Nonlinear Arrhenius Plots*, C. Lampropoulos, S. O. Hill and G. Christou, European Journal of Chemical Physics and Physical Chemistry **10**, 2397-2400 (2009); DOI: 10.1002/cphc.200900420

154. *Magnetic Quantum Tunneling: Key Insights from Multi-Dimensional High-Field EPR*, J. Lawrence, S. Hill, E.-C. Yang and D. N. Hendrickson, Phys. Chem. Chem. Phys. **2009 (11)**, 6743-6749 (2009); DOI: 10.1039/b908460f.

153. *Attempting to Understand (and Control) the Relationship between Structure and Magnetism in an Extended Family of Mn_6 Single-Molecule Magnets*, Ross Inglis, Leigh F. Jones, Constantinos J. Milios, Saiti Datta, Anna Collins, Simon Parsons, Wolfgang Wernsdorfer, Stephen Hill, Spyros P. Perlepes, Stergios Piligkos and Euan K. Brechin, Dalton Transactions **2009**, 3403-3412 (2009).

152. *Effects of quantum mechanics on the deflagration threshold in the molecular magnet Mn_{12}-acetate*, F. Macia, J. M. Hernandez, J. Tejada, S. Datta, S. Hill, C. Lampropoulos, and G. Christou, Phys. Rev. B **79**, 092403 (2009).

151. *A comparative EPR study of high- and low-spin Mn_6 single molecule magnets*, Saiti Datta, Erica Bolin, R. Inglis, Constantinos J. Milios, Euan K. Brechin, and Stephen Hill, Polyhedron **28**, 1911-1916 (2009); DOI: 10.1016/j.poly.2008.12.025.

150. *Nanomodulation of Molecular Nanomagnets*, Patrick L. Feng, Changhyun Koo, John Henderson, Paul Manning, Motohiro Nakano, Enrique del Barco, Stephen Hill, and David N. Hendrickson, Inorg. Chem. **48**, 3480-3492 (2009); special issue entitled Forum on Magnetism.

149. *Anisotropic exchange in a tetranuclear Co^{II} complex*, Junjie Liu, Saiti Datta, Erica Bolin, Jon Lawrence, Christopher C. Beedle, En-Che Yang, Philippe Goy, David N. Hendrickson and Stephen Hill, Polyhedron **28**, 1922-1926 (2009); DOI: 10.1016/j.poly.2008.10.064.

148. *Synthesis, Magnetism, and High-Frequency EPR Spectroscopy of a Family of Mixed-Valent Cuboctahedral Mn_{13} Complexes with 1,8-Naphthalenedicarboxylate Ligands*, C. Lampropoulos, C. Koo, S. O. Hill, K. Abboud and G. Christou, Inorg. Chem. **47**, 11180–11190 (2008).

147. *Single-Molecule-Magnet Behavior and Spin Changes Affected by Crystal Packing Effects*, Patrick L. Feng, Changhyun Koo, John J. Henderson, Motohiro Nakano, Stephen Hill, Enrique del Barco, and David N. Hendrickson, Inorg. Chem. **47**, 8610-8612 (2008).

146. *A Large Mn_{25} Single-Molecule Magnet with Spin S = $^{51}/_{2}$: Magnetic and High-Frequency EPR Spectroscopic Characterization of a Giant Spin State*, Muralee Murugesu, Susumu Takahashi, Anthony Wilson, Khalil A. Abboud, Wolfgang Wernsdorfer, Stephen Hill, and George Christou, Inorg. Chem. **47**, 9459-9470 (2008).

145. *Synthesis and characterization of a Ni_4 single-molecule magnet with S_4 symmetry*, A. Ferguson, J. Lawrence, A. Parkin, J. Sanchez-Benitez, K. V. Kamanev, E. K. Brechin, W. Wernsdorfer, S. Hill, M. Murrie, Dalton Transactions **2008**, 6409 - 6414 (2008).

144. *Microwave detection of magnetic phase avalanches in $La_{0.225}Pr_{0.4}Ca_{0.375}MnO_3$ manganites*, F. Macia, G. Abril, N. Domingo, J. M. Hernandez, J. Tejada, F. Parisi and S. Hill, Europhysics Letters **82**, 37005-1 to 5 (2008).

143. *Origin of Magnetization Tunneling in Single-Molecule Magnets as Determined by Single-Crystal High-Frequency EPR*, P. L. Feng, C. C. Beedle, C. Koo, J. Lawrence, S. Hill and D. N. Hendrickson, Inorganica Chimica Acta **361**, 3465-3480 (2008); Special Issue devoted to Dante Gatteschi.

142. *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, Phys. Rev. Lett. **100**, 167206 (2008).

141. *Microwave spectroscopy of Q1D and Q2D organic conductors*, Stephen Hill and Susumu Takahashi, in *The Physics of Organic Superconductors and Conductors*, edited by Andrei Lebed (Springer-Verlag, Berlin Heidelberg, 2008).

140. *Quantum interference of tunnel trajectories between states of different spin length in a dimeric molecular nanomagnet*, C. M. Ramsey, E. del Barco, S. Hill, S. J. Shah, C. C. Beedle, D. N. Hendrickson, Nature Physics **4**, 277-281 (2008).

139. *Heterometallic Integer-Spin Analogues of the S = 9/2 Mn_4 Cubane Single-Molecule Magnets*, Patrick L. Feng, Christopher C. Beedle, Changhyun Koo, Wolfgang Wernsdorfer, Motohiro Nakano, Stephen Hill, and David N. Hendrickson, Inorg. Chem. **47**, 3188-3204 (2008).

138. *Spin dynamics in single-molecule magnets combining surface acoustic waves and high frequency electron paramagnetic resonance*, F. Macia, J. Lawrence, S. Hill, J. M. Hernandez, J. Tejada, P. V. Santos, C. Lampropoulos, and G. Christou, Phys. Rev. B **77**, 020403(R) (2008).

137. *Transverse anisotropy in the mixed-valent $Mn_2^{II}Mn_4^{III}Mn_3^{IV}$ single-molecule magnet*, Saiti Datta, Constantinos J. Milios, Euan Brechin, and Stephen Hill, J. Appl. Phys. **103**, 07B913 (2008).

136. *Disorder and Intermolecular Interactions in a Family of Tetranuclear Ni(II) Complexes Probed by High-Frequency Electron Paramagnetic Resonance*, J. Lawrence, E.-C. Yang, R. Edwards, M. M. Olmstead, C. Ramsey, N. S. Dalal, P. K. Gantzel, S. Hill, D. N. Hendrickson, Inorg. Chem. **47**, 1965-1974 (2008).

135. *Heterometallic cubane single-molecule magnets*, P. L. Feng, C. C. Beedle, W. Wernsdorfer, C. Koo, M. Nakano, S. Hill and D. N. Hendrickson, Inorg. Chem. (Communication), **46**, 8126-8128 (2007).

134. *Direct observation of mixing of spin-multiplets in an antiferromagnetic molecular nanomagnet by electron paramagnetic resonance*, S. Datta, O. Waldmann, A. D. Kent, V. A. Milway, L. K. Thompson, S. Hill, Phys. Rev. B **76**, 052407 (2007).

133. *'Switching on' the Properties of Single-Molecule Magnetism in Triangular Manganese(III) Complexes*, Theocharis C. Stamatatos, Dolos Foguet-Albiol, Constantinos C. Stoumpos, Sheng-Chiang Lee, Stephen O. Hill, Catherine P. Raptopoulou, Arzis Terzis, Wolfgang Wernsdorfer, Spyros P. Perlepes, and George Christou, J. Am. Chem. Soc. **129** 9484-9499 (2007).

132. *Diversity of New Structural Types in Polynuclear Iron Chemistry with a (N, N, O) - Tridentate Ligand*, Rashmi Bagai, Saiti Datta, Amalia Bentacur-Rodriguez, Khalil A. Abboud, Stephen Hill, and George Christou, Inorg. Chem. **46**, 4535-4547 (2007).

131. *High Frequency Electron Paramagnetic Resonance Study of a High Spin Co(II) Complex*, Jon Lawrence, Chris Beedle, James Ma, Stephen Hill and David N. Hendrickson, Polyhedron **26**, 2299-2303 (2007).

130. Y. Takano, S.P. Hershfield, S.O. Hill, P.J. Hirschfeld and A.M. Goldman (eds.), "Proceedings of the 24th Int. Conf. on Low Temperature Physics (LT24)", *AIP Conference Proceedings Series, (American Institute of Physics, New York, 2006)*, **850**, 2006.

129. *EPR Characterization of Half-Integer-Spin Iron Molecule-Based Magnets*, Saiti Datta, Amalia Betancur-Rodriguez, Sheng-Chiang Lee, Stephen Hill, Dolos Foguet-Albiol, Rashmi Bagai and George Christou, Polyhedron **26**, 2243-2246 (2007).

128. *Role of anisotropy in the spin-dimer compound $BaCuSi_2O_6$*, S. E. Sebastian, P. Tanedo, P. A. Goddard, S.-C. Lee, A. Wilson, S. Kim, R. D. McDonald, S. Hill, N. Harrison, C. D. Batista, and I. R. Fisher, Phys. Rev. B **74**, 180401(R) (2006).

127. *Magnetization tunneling in high-symmetry single-molecule magnets: Limitations of the giant spin approximation*, A. Wilson, J. Lawrence, E-C. Yang, M. Nakano, D. N. Hendrickson and S. Hill, Phys. Rev. B **74**, R140403 (2006).

126. *On the Validity of the Giant Spin Approximation and its Application to Single-Molecule Magnets*, Anthony Wilson, En-Che Yang, David N. Hendrickson and Stephen Hill, Polyhedron **26**, 2065-2068 (2007).

125. *High-Frequency EPR Characterization of a Triangular Mn_3 Single-Molecule Magnet*, Sheng-Chiang Lee, Theocharis C. Stamatatos, Stephen Hill, Spyros P. Perlepes and George Christou, Polyhedron **26**, 2225-2229 (2007).

124. *The Properties of the $[Mn_{12}O_{12}(O_2CR)_{16}(H_2O)_4]$ Single-Molecule Magnets in Truly Axial Symmetry: $[Mn_{12}O_{12}(O_2CCH_2Br)_{16}(H_2O)_4]\cdot 4CH_2Cl_2$*, Nicole E. Chakov, Sheng-Chiang Lee, Andrew G. Harter, Philip L. Kuhns, Arneil P. Reyes, Stephen O. Hill, N. S. Dalal, Wolfgang Wernsdorfer, Khalil A. Abboud, and George Christou, J. Am. Chem. Soc. **128**, 6975-6989 (2006).

123. *Entanglement of exchange-coupled dimers of single-molecule magnets*, A. Wilson, S. Hill, R. S. Edwards, N. Aliaga-Alcalde, G. Christou, in Proc. 24th Int. Conf. on Low Temperature Physics, AIP conference proceedings, Volume **850**, 1141 (2006).

122. *Dendritic flux jumps in an organic superconducting crystal*, M. M. Mola, R. Haddad, S. Hill, Solid State Commun. **137**, 611-614 (2006).

121. *Magnetic quantum tunneling in a Mn_{12} single-molecule magnet measured with high frequency electron paramagnetic resonance*, J. Lawrence, S-C. Lee, S. Kim, S. Hill, M. Murugesu and G. Christou, in Proc. 24th Int. Conf. on Low Temperature Physics, AIP conference proceedings, Volume **850**, 1133 (2006).

120. *Study of Non-Magnetic Impurity Effects of the Organic Superconductor $(TMTSF)_2ClO_4$*, S. Takahashi, S. Hill, S. Takasaki, J. Yamada, H. Anzai, in Proc. 24th Int. Conf. on Low Temperature Physics, AIP conference proceedings, Volume **850**, 619 (2006).

119. *Calculation of the EPR Spectrum for an Entangled Dimer of S = 9/2 Mn_4 Single-Molecule Magnets*, S. Hill and A. Wilson, J. Low Temp. Phys. **142**, 267 (2006).

118. *Are Lebed's Magic Angles Truly Magic?* S. Takahashi, A. Betancur-Rodiguez, S. Hill, S. Takasaki, J. Yamada and H. Anzai, J. Low Temp. Phys. **142**, 311 (2006).

117. *Single-Molecule Magnets: High-Field Electron Paramagnetic Resonance Evaluations of the Single-Ion Zero-Field Interaction in $Zn^{II}{}_3Ni^{II}$ Complex*, En-Che Yang, Cem Kirman, Jon Lawrence, Lev. N. Zakharov, Arnold L. Rheingold, Stephen Hill and David N. Hendrickson, Inorg. Chem. **44**, 3827-3836 (2005).

116. *The Symmetry of Magnetic Quantum Tunneling in Single Molecule Magnet Mn_{12}*, E. del Barco, A. D. Kent, S. Hill, J. M. North, N. S. Dalal, E. M. Rumberger, D. N. Hendrickson, N. Chakov, G. Christou, J. Low Temp. Phys. **140**, 119-174 (2005).

115. *Cyclotron resonance in the quasi-1D organic superconductor $(TMTSF)_2ClO_4$*, S. Takahashi, S. Hill, S. Takasaki, J. Yamada, and H. Anzai, Phys. Rev. B **72**, 024540 (2005).

114. *EPR and NMR Characterization of the S =9 Excited State and Spin Density Distribution in the Single-Molecule Magnet Fe_8Br_8 : Implications to the S=10 Model and Magnetization Tunneling Pathways*, D. Zipse, N. S. Dalal, R. M. Achey, J. M. North, S. Hill, and R. S. Edwards, Applied Magnetic Resonance **27**, 151-163 (2004).

113. *Origin of the Fast Magnetization Tunneling in Tetranuclear Nickel Single-Molecule Magnets*, D. N. Hendrickson, 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, Polyhedron **24**, 2280 (Dec. 2005).

112. *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, Polyhedron **24**, 2284-2292 (2005).

111. *Fast Tunneling Jahn-Teller Isomer of the $[Mn_{12}O_{12}(O_2CC_6H_4\text{-}2\text{-}CH_3)_{16}(H_2O)_4] \cdot S$ Single-molecule Magnet*, E. M. Rumberger, E. del Barco, J. Lawrence, S. Hill, A. D. Kent, L. N. Zakharov, A. L. Rheingold, D. N. Hendrickson, Polyhedron **24**, 2557 (2005).

110. *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, J. Appl. Phys. **97**, 10M505 (2005).

109. *A spectroscopic comparison between several high-symmetry S = 10 Mn_{12} single-molecule magnets*, S. Hill, N. Anderson, A. Wilson, S. Takahashi, N. E. Chakov, M. Murugesu, J. M. North, N. S. Dalal, and G. Christou, J. Appl. Phys. **97**, 10M510 (2005).

108. *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.

107. *A rotating cavity for high-Field angle-dependent microwave spectroscopy of low-dimensional conductors and magnets*, Susumu Takahashi and Stephen Hill, Rev. Sci. Inst. **76**, 023114 (2005).

106. *Fermi Surface Studies of Quasi-1D and Quasi-2D Organic Superconductors Using Periodic Orbit Resonance in High Magnetic Fields*, S. Takahashi, A. E. Kovalev, S. Hill, S. Takasaki, J. Yamada, H. Anzai, J. S. Qualls, K. Kawano, M. Tamura, T. Naito, H. Kobayashi, Int. J. Mod. Phys. B **18**, Nos 27-29, 3499-3504 (2004).

105. *Origin of the fast magnetization tunneling in the single-molecule magnet $[Ni(hmp)(tBuEtOH)Cl]_4$*, C. Kirman, J. Lawrence, S. Hill, E-C. Yang, and D. N. Hendrickson, J. Appl. Phys. **97**, 10M501 (2005).

104. *Angle-Resolved Mapping of the Fermi Velocity in Quasi-Two-Dimensional Conductors and Superconductors: Probing Quasiparticles in Nodal Superconductors*, S. Takahashi and S. Hill, J. Appl. Phys. **97**, 10B106 (2005).

103. *Discrete easy-axis tilting in Mn_{12}-acetate, as determined by EPR: implications for the magnetic quantum tunneling mechanism*, S. Takahashi, R. S. Edwards, J. M. North, S. Hill and N. S. Dalal, Phys. Rev. B **70**, 094429 (2004).

102. *Single-Molecule Magnets: Preparation and Properties of Low Symmetry $[Mn_4O_3(O_2CR)_4(dbm)_3]$ complexes with S = 9/2*, Nuria Aliaga-Alcalde, Rachel S. Edwards, Stephen Hill, Wolfgang Wernsdorfer, Kirsten Folting and George Christou, J. Am. Chem. Soc. **126**, 12503-12516 (2004).

101. *Temperature Dependence of the Josephson Plasma Resonance Between Vortex Phases in the Organic Superconductor κ-$(BEDT\text{-}TTF)_2Cu(NCS)_2$*, D. K. Benjamin, S. Takahashi, S. Hill and J. S. Qualls, Solid State Commun. **131 (11**), 719-723 (2004).

100. *Evidence for the S = 9 excited state in Mn_{12}-bromoacetate measured by electron paramagnetic resonance*, K. Petukhov, S. Hill, N. E. Chakov, G. Christou, Phys. Rev. B **70**, 054426 (2004).

99. *Semiconductivity, Spin Delocalization, and Excited States of the Single Molecule Magnets Fe_8Br_8 and Mn_{12}-Acetate*, D. Zipse, J. M. North, R. M. Achey, N. S. Dalal, S. Hill, R. S. Edwards, E. Choi and J. S. Brooks, J. Appl. Phys. **95**, 6900 (2004).

98. *High field high frequency EPR techniques and their application to single molecule magnets*, R.S. Edwards, S. Hill, P. Goy, R. Wylde and S. Takahashi, Physica B **346-347**, 211-215 (2004).

97. *Mapping the Fermi Velocity in the Quasi-2D Organic Conductor κ-$(BEDT\text{-}TTF)_2I_3$*, A. E. Kovalev, S. Hill, K. Kawano, M. Tamura, T. Naito, and H. Kobayashi, featured article in NHMFL Reports, **vol. 11**, No. 1, pages 18-19 (January 2004).

96. *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, featured article in NHMFL Reports, **vol. 11**, No. 1, pages 17-18 (January 2004).

95. *A Method to Study Angle-Dependent High Field Microwave Magneto-Conductivity Using a Cavity Perturbation Technique*, S. Takahashi and S. Hill, featured article in NHMFL Reports, **vol. 11**, No. 1, 11 (January 2004).

94. *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).

93. *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 (Nov 7 2003).

92. *Angle-resolved mapping of the Fermi velocity in a quasi-2D organic conductor*, A. E. Kovalev, S. Hill, K. Kawamo, M. Tamura, T. Naito, H. Kobayashi, Phys. Rev. Lett. **91**, 216402 (2003).

91. *Characterization of the S=9 excited state in Fe_8Br_8 by electron paramagnetic resonance*, D. Zipse, J. M. North, N. S. Dalal, S. Hill, R. S. Edwards, Phys. Rev. B **68**, 184408 (2003).

90. *Definitive spectroscopic determination of the transverse interactions responsible for the magnetic quantum tunneling in Mn_{12}-acetate*, S. Hill, R. S. Edwards, S. I. Jones, J. M. North, N. S. Dalal, Phys. Rev. Lett. **90**, 217204 (2003).

89. *Single Molecule Magnets*, S. Hill, Part of a book chapter entitled: *Modern Developments and Prospects in Multi Frequency High Field EMR: Applications in Chemistry and Biology*, in *Very High Frequency (VHR) ESR/EPR*, Volume 22 of *Biological Magnetic Resonance*, eds Oleg Grinberg and Lawrence J. Berliner (Kluwer, New York, 2004).

88. *Effect of an in-plane magnetic field on the interlayer phase coherence in the extreme-2D organic superconductor κ-$(BEDT\text{-}TTF)_2Cu(NCS)_2$*, A. E. Kovalev, S. Takahashi, S. Hill and J. S. Qualls, Int. J. of Modern Phys. B **17**, Nos. 18-20 (2003) 3547-3553.

87. *Defects, Tunneling, and EPR*, Kyungwha Park, M. A. Novotny, N. S. Dalal, S. Hill, and P. A. Rikvold, Mat. Res. Soc. Symp. Proc. Vol. **746**, 241-252 (Materials Research Society, 2003); also http://arXiv.org/abs/cond-mat/0301561 (Jan 30th, 2003).

86. *Josephson plasma resonance in κ-$(BEDT\text{-}TTF)_2Cu(NCS)_2$ for close to in-plane magnetic fields,* A. E. Kovalev, S. Hill, J.S. Qualls, Synth. Met. **137**, 1289-1290 (2003).

85. *On the origin of anomalous EPR peaks observed in Mn_{12}-Ac*, S. Hill, R. S. Edwards, J. M. North, S. Maccagnano, N. S. Dalal, Polyhedron, Volume 22, Issues 14-17, 15 July 2003, Pages 1897-1904.

84. *Environmental factors influencing EPR in Mn_{12}-Ac and Fe_8Br*, S. Hill, R. S. Edwards, J. M. North, K. Park, N. S. Dalal, Polyhedron Volume 22, Issues 14-17, 15 July 2003, Pages 1889-1896.

83. *A comparative high frequency EPR study of monomeric and dimeric Mn_4 single molecule magnets*, R. S. Edwards, S. Hill, S. Bhaduri, N. Aliaga-Alcade, E. Bolin, S. Maccagnano, G. Christou, and D. N. Hendrickson, Polyhedron, Volume 22, Issues 14-17, 15 July 2003, Pages 1911-1916.

82. *The search for new iron single-molecule magnets*, Evan Rumberger, Stephen O. Hill, Rachel S. Edwards, Wolfgang Wernsdorfer, Lev N. Zakharov, Arnold L. Rheingold, George Christou, David N. Hendrickson, Polyhedron, Volume 22, Issues 14-17, 15 July 2003, Pages 1865-1870.

81. *Exchange bias in Ni_4 single-molecule magnets*, En-Che Yang, Wolfgang Wernsdorfer, Stephen O. Hill, Rachel S. Edwards, Motohiro Nakano, S. Maccagnano, Lev N. Zakharov, Arnold L. Rheingold, George Christou, David N. Hendrickson, Polyhedron, Volume 22, Issues 14-17, 15 July 2003, Pages 1727-1733.

80. *High frequency electron paramagnetic resonance investigations of tetranuclear nickel-based single molecule magnets*, R.S. Edwards, S. Maccagnano, E-C. Yang, S. Hill, W. Wernsdorfer, D. Hendrickson, and G. Christou, J. Appl. Phys. **93**, 7807-7809 (2003).

79. *Periodic orbit resonance in $(TMTSF)_2ClO_4$*, A. Kovalev, S. Hill; S. Takasaki, J. Yamada, and H. Anzai, J. Appl. Phys. **93**, 8665-8667 (2003).

78. *Single Crystal High Frequency Cavity-based EPR Spectroscopy of Single Molecule Magnets*, S. Hill, R. S. Edwards, S. I. Jones, S. Maccagnano, J. M. North, N. Aliaga, E-C. Yang, N. S. Dalal, G. Christou, D. N. Hendrickson, Mat. Res. Soc. Symp. Proc. Vol. **746**, 253-264 (Materials Research Society, 2003).

77. *Half-Integer Spin Molecular Nanomagnets*, David N. Hendrickson, George Christou, Wolfgang Wernsdorfer, Stephen O. Hill, Núria Aliaga-Alcade, Sumit Bhaduri, Rachel S. Edwards, Sheila M. J. Aubin and Ziming Sun, Mat. Res. Soc. Symp. Proc. Vol. **746**, 231-240 (Materials Research Society, 2003).

76. *Quantum and environmental effects in single molecule nanomagnets*, Stephen Hill, invited article in NHMFL reports, **vol. 9**, No. 4, pages 5-7 (Fall 2002).

75. *Electron magnetic resonance Fermi surface imaging: applications to organic conductors and Sr_2RuO_4*, S. Hill, A. Kovalev, M. M. Mola, C. Palassis, Z. Q. Mao, Y. Maeno, and J. S. Qualls, in proc. *Physical Phenomena in High Magnetic Fields - IV*, pp 205-208, edited by G. Boebinger, L. P. Gor'kov, A. Lacerda and J. R. Schrieffer (World Scientific, Singapore 2002); also Int. J. Mod. Phys. B, **Vol. 16**, Nos. 20, 21 & 22, 3109-3112 (2002).

74. *D-strain, g-strain, and dipolar interactions in the Fe_8 and Mn_{12} single molecule magnets: an EPR lineshape analysis*, Stephen Hill, Sara Maccagnano, Naresh Dalal, Randall Achey and Kyungwha Park, in proc. *Physical Phenomena in High Magnetic Fields - IV*, pp 434-437, edited by G. Boebinger, L. P. Gor'kov, A. Lacerda and J. R. Schrieffer (World Scientific, Singapore 2002); also Int. J. Mod. Phys. B, **Vol. 16**, Nos. 20, 21 & 22, 3326-3329 (2002).

73. *Determination of the Fermi Velocity by Angle-dependent Periodic Orbit Resonance Measurements in the Organic Conductor α-$(BEDT\text{-}TTF)_2KHg(SCN)_4$*, A. E. Kovalev, S. Hill and J. S. Qualls, Phys. Rev. B **66**, 134513 (2002).

72. *Role of dipolar and exchange interactions in the positions and widths of EPR transitions for the single-molecule magnets Fe_8 and Mn_{12}*, Kyungwha Park, M.A. Novotny, N.S. Dalal, S. Hill, P.A. Rikvold, Phys. Rev. B **66**, 144409 (2002).

71. *Interlayer electrodynamics in the organic superconductor κ-$(BEDT\text{-}TTF)_2Cu(NCS)_2$: evidence for a transformation within the vortex state*, S. Hill, M. M. Mola, J. S. Qualls, J. Phys. Condens. Matter **14**, 6701 (2002).

70. *Detailed single crystal EPR lineshape measurements for the single molecule magnets Fe_8Br and Mn_{12}–ac*, S. Hill, S. Maccagnano, K. Park, R. M. Achey, J. M. North and N. S. Dalal, Phys. Rev. B **65**, 224410 (2002).

69. *Interlayer electrodynamics of the vortex state in κ-$(BEDT\text{-}TTF)_2Cu(NCS)_2$*, M. M. Mola, S. Hill, J. S. Qualls, Synth. Met. **133-134**, 255 (2003).

68. *The critical state in κ-$(BEDT\text{-}TTF)_2Cu(NCS)_2$*, S. Hill, M. M. Mola, J. S. Qualls, and J. S. Brooks, Synth. Met. **133-134**, 221 (2003).

67. *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, J. Appl. Phys. **91**, 7167 (2002).

66. *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, Phys. Rev. B **65**, 014426 (2001).

65. *Anisotropy of the Superconducting Order Parameter in κ-$(BEDT\text{-}TTF)_2Cu(NCS)_2$*, S. Hill, N. Harrison, M. Mola and J. Wosnitza, Phys. Rev. Lett. **86**, 3451 (2001).

64. *Electron magnetic resonance imaging of the Fermi surface of Sr_2RuO_4*, C. Palassis, M.M. Mola, S. Hill, J.S. Brooks, Y. Maeno, and Z.Q. Mao, Physica C **364-365**, 386 (2001).

63. *Quantum melting of the quasi-two-dimensional vortex lattice in κ–$(ET)_2Cu(NCS)_2$*, M. M. Mola, S. Hill, J. S. Brooks, and J. S. Qualls, Phys. Rev. Lett. **86**, 2130 (2001).

62. *Magneto-thermal instabilities in an organic superconductor*, M. M. Mola, S. Hill, J. S. Brooks, and J. S. Qualls, Int. J. Mod. Phys. B, **Vol. 15**, Nos. 24 & 25 (2001) 3353-3356 (World Scientific Publishing Company).

61. *Flux jumps and melting of the vortex lattice in κ-$(ET)_2Cu(NCS)_2$*, M.M. Mola, S. Hill, J. S. Qualls, J. S. Brooks, Synth. Met. **120**, 729-730 (2001).

60. *Single crystal EPR determination of the spin Hamiltonian parameters for Fe_8 molecular clusters*, S. Maccagnano, R. Achey, E. Negusse, A. Lussier, M.M. Mola, S. Hill, and N.S. Dalal, Polyhedron **20**, 1441 (2001).

59. *Periodic Orbit Resonances in κ-$(ET)_2I_3$*, C. Palassis, M. Mola, J. Tritz, S. Hill, S. Uji, K. Kawano, M. Tamura, T. Naito, H. Kobayashi, Synth. Met. **120**, 999-1000 (2001).

58. *Vortex Structure and Dynamics in κ-$(ET)_2Cu(NCS)_2$*, M.M. Mola, S. Hill, J. S. Qualls, J. S. Brooks, Physica B **294-295**, 422-426 (2001).

57. *Determination of the vortex structure in κ-$(ET)_2Cu(NCS)_2$ by Josephson plasma resonance*, M.M. Mola, S. Hill, J. S. Qualls, J. S. Brooks, Synth. Met. **120**, 811-812 (2001).

56. *Electrodynamics of quasi-two-dimensional BEDT-TTF charge transfer salts*, Stephen Hill, Phys. Rev. B **62**, 8699 (2000).

55. *Josephson plasma resonance in κ-$(BEDT\text{-}TTF)_2Cu(NCS)_2$*, M. Mola, J. T. King, C. P. McRaven, S. Hill, J. S. Qualls and J. S. Brooks, Phys. Rev. B **62**, 5965 (2000).

54. *Magnetotransport studies of the low-carrier-density semimetal CeP*, T. Terashima, S. Uji, H. Aoki, J. S. Qualls, T. F. Stalcup, S. Hill, J. S. Brooks, J. A. A. J. Perenboom, Y. Haga, A. Uesawa, T. Suzuki, Physica B **281&282** 432-433 (2000).

53. *Cyclotron Resonance in the Layered Perovskite Superconductor Sr_2RuO_4*, S. Hill, J. S. Brooks, Z. Q. Mao and Y. Maeno, Phys. Rev. Lett. **84**, 3374 (2000).

52. *Fermi surface spectroscopy: a magnetic resonance approach*, J. M. Schrama, S. O. Hill, J. Singleton, A. Ardavan, E. Rzepniewski and R. Edwards, Physica B **280**, 281 (2000).

51. *Millimeter-wave spectroscopy in high magnetic fields*, Stephen Hill, M. Mola, J. S. Brooks, M. Tokumoto, N. Kinoshita, T. Kinoshita and Y. Tanaka, in *Physical Phenomena in High Magnetic Fields - III*, edited by Z. Fisk, L. P. Gor'kov and J. R. Schrieffer, p218 (World Scientific, Singapore 1999).

50. *Dipole-dipole coupling in Mn_{12}-acetate*, J. A. A. J. Perenboom, M. R. Schaapman, S. O. Hill, J. S. Brooks and N. S. Dalal, in *Physical Phenomena in High Magnetic Fields - III*, edited by Z. Fisk, L. P. Gor'kov and J. R. Schrieffer, p469 (World Scientific, Singapore 1999).

49. *The quantum hall effect in quasi-3D conductors,* S. Hill, J. S. Brooks, J. S. Qualls, Z. Fisk, S. Uji and J. Sarrao, in *Physical Phenomena in High Magnetic Fields - III*, edited by Z. Fisk, L. P. Gor'kov and J. R. Schrieffer, p245 (World Scientific, Singapore 1999).

48. *Cyclotron resonance and effective mass renormalizations in Sr_2RuO_4*, S. Hill, J. S. Brooks, Z. Q. Mao and Y. Maeno, Physica B **280**, 283 (2000).

47. *Instrumentation for Millimeter-wave Magnetoelectrodynamic Investigations of Low-Dimensional Conductors and Superconductors*, Monty Mola, Stephen Hill, Philippe Goy and Michel Gross, Rev. Sci. Inst. **71**, 186 (2000).

46. *The phase diagram of alpha-$(ET)_2MHg(SCN)_4$ [M = K & Tl]: An Electrodynamic Investigation*, S. Hill; J.S. Brooks; J.S. Qualls; B.W. Fravel; L.K. Montgomery, Synth. Met. **103**, 1807 (1999).

45. *A multi frequency, resonator based system for high sensitivity high-field EPR investigations of small single crystals*, S. Hill, N. S. Dalal and J. S. Brooks, Appl. Magn. Reson. **16**, 237 (1999).

44. *Cyclotron Resonance in Low-Dimensional Molecular Metals*, S. Hill, Synth. Met. **103**, 1809 (1999).

43. *High-Field Electrodynamic Investigation of $(TMTSF)_2ClO_4$*, S. Hill; J.S. Brooks; S. Takasaki; J. Yamada; H. Anzai, Synth. Met. **103**, 2092 (1999).

42. *Bulk quantum Hall effect in η-Mo_4O_{11},* S. Hill, J. S. Brooks, S. Uji, T. Terashima, H. Aoki, Z. Fisk and J. Sarrao, Synth. Met. **103**, 2667 (1999).

41. *Millimeter-wave spectroscopy of low-dimensional molecular metals in high magnetic fields*, S. Hill, J. S. Brooks, J. S. Qualls, T. Burgin, B. Fravel, L. K. Montgomery, J. Sarrao and Z. Fisk, Physica B **246-247**, 110 (1998).

40. *Single Crystal EPR of Mn_{12}-Acetate Clusters*, S. Hill, J. A. A. J. Perenboom, T. Stalcup, N. S. Dalal, T. Hathaway and J. S. Brooks, Physica B **246-247**, 549 (1998).

39. *Quantum tunneling of magnetization in Mn_{12}-acetate clusters*, J. A. A. J. Perenboom, J. S. Brooks, S. O. Hill, T. Hathaway and N. S. Dalal, Physica B **246-247**, 294 (1998).

38. *Near quantum limit SdH and dHvA wave forms in low-dimensional metals*, J. S. Brooks, P. Sandhu, J. S. Qualls, S. Hill, M. Tokumoto, Physica B **246-247**, 307 (1998).

37. *Bulk quantum Hall effect in η-Mo_4O_{11},* S. Hill, J. S. Brooks, S. Uji, T. Terashima, H. Aoki, Z. Fisk and J. Sarrao, Phys. Rev. B **58**, 10778 (1998).

36. *Relaxation of the Magnetization of Mn_{12}-Acetate*, J. A. A. J. Perenboom, J. S. Brooks, S. Hill, T. Hathaway and N. S. Dalal, Phys. Rev. B **58**, 330 (1998).

35. *Successive metamagnetic transitions and 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, Phys. Rev. B **58**, 309 (1998).

34. *High-sensitivity EPR of Mn_{12}-Acetate*, S. Hill, J. A. A. J. Perenboom, N. S. Dalal, T. Hathaway, T. Stalcup and J. S. Brooks, Phys. Rev. Lett. **80**, 2453 (1998).

33. *Collective motion in GaAs-(Ga,Al)As 2D hole systems: a two component Fermi Liquid*, B.E. Cole, J.M. Chamberlain, M. Henini, T. Cheng, A. Ardavan, A. Polisski, S.O. Hill, J. Singleton, W. Batty, V. Nakov & G. Gobsch, in *Proc. 23rd Int. Conf. on the Physics of Semiconductors* (ICPS 22), Berlin, July 1996, ed. by M. Scheffler and R. Zimmermann (World Scientific, Singapore 1996) p2475.

32. *High Field Millimeter-wave Spectroscopy*, M. E. J. Boonman, J. A. A. J. Perenboom, P. J. M. van Bentum, A. Wittlin, J. C. Maan, W. Mac, A. Twardowski, S. O. Hill, R. Kato, H. Sawa and S. Aonuma, in *High Magnetic Fields in the Physics of Semiconductors*; eds G. Landwehr and W. Ossau, World Scientific, Singapore pp 777-780 (1997).

31. *Collective cyclotron modes in high-mobility two-dimensional hole systems in GaAs - (Ga,Al)As hetero-junctions: I. Experiments at low magnetic fields and theory,* B E Cole, F M Peeters, A Ardavan, S. O. Hill,

J. Singleton, W. Batty, J. M. Chamberlain, A. Polisskii, M. Henini and T. Cheng J. Phys. Condens. Matter **9**, 3163-3179 (1997).

30. *The Bulk Quantum Hall Effect: Evidence that Surface States Play a Key Role*, S. Hill, P. S. Sandhu, J. S. Qualls, J. S. Brooks, M. Tokumoto, N. Kinoshita, T. Kinoshita and Y. Tanaka, Phys. Rev. B **55**, R4891 (1997).

29. *A semiclassical description of cyclotron resonance in quasi two-dimensional conductors: theory and experiment*, Stephen Hill, Phys. Rev. B **55**, 4931 (1997).

28. *Quantum limit and anomalous field-induced insulating behavior in* η *-*Mo_4O_{11}, S. Hill, S. Valfells, S. Uji, J. S. Brooks, G. J. Athas, P. S. Sandhu, J. Sarrao, Z. Fisk, J. Goettee, H. Aoki and T. Terashima, Phys. Rev. B **55**, 2018 (1997).

27. *Magnetoelectrodynamics of a three-dimensional organic conductor: Observation of cyclotron resonance in* d_2*[1,1;0]-(DMe-DCNQI)*$_2$*Cu*, S. Hill, P. S. Sandhu, M. Boonman, J. A. A. J. Perenboom, A. Wittlin, S. Uji, J. S. Brooks, R. Kato, H. Sawa and S. Aonuma, Phys. Rev. B **54**, 13536 (1996).

26. *Cyclotron resonance and spin states in GaAs-*$Ga_{1-x}Al_xAs$ *heterojunctions: experiment and theory*, J. G. Michels, M. S. Daly, P. Gee, S. Hill, R. J. Nicholas, J. Singleton, G. M. Summers, R. J. Warburton, C. T. Foxon and J. J. Harris, Phys. Rev. B **54**, 13807 (1996).

25. *Resonant magnetoabsorption of millimeter-wave radiation in the quasi-two-dimensional organic metals* α *-(BEDT-TTF)*$_2$*MHg(SCN)*$_4$ *(M=K, Tl)*, S. V. Demishev, A. V. Semeno, N. E. Sluchanko, N. A. Samarin, I. B. Voskoboinikov, V. V. Glushkov, J. Singleton, S. J. Blundell, S. O. Hill, W. Hayes, M. V. Kartsovnik, A. E. Kovalev, M. Kurmoo, P. Day and N. D. Kushch, Phys. Rev. B **53**, 12794 (1996).

24. *Probing the microwave conductivity of low dimensional organic conductors in high magnetic fields*, S. Hill, P. S. Sandhu, C. Buhler, S. Uji, J. S. Brooks, L. Seger, M. Boonman, A. Wittlin, J. A. A. J. Perenboom, P. Goy, R. Kato, H. Sawa and S. Aonuma, in Millimeter and Submillimeter Waves III, Mohammed N. Afsar, Editor, Proc. SPIE 2842, pp 296-306 (1996).

23. *A comparison of the high field quantum oscillations observed by electrodynamic, thermodynamic and d.c. transport techniques in the organic superconductor* κ*–(BEDT-TTF)*$_2$*Cu(NCS)*$_2$, S. Hill, S. Uji, P. S. Sandhu, M. Chaparalla, J. S. Brooks and L. Seger, Synth. Met. **86**, 1955 (1997).

22. *Cyclotron resonance studies of (DMe-DCNQI)*$_2$*Cu*, S. Hill, P. S Sandhu, M. Boonman, S. Uji, J. A. A. J. Perenboom, A. Wittlin, J. S. Brooks, R. Kato, H. Sawa and S. Aonuma, Synth. Met. **86**, 2113 (1997).

21. *Effective mass and combination frequencies of de Haas-van Alphen oscillations in* κ*-(ET)*$_2$*Cu(NCS)*$_2$, S. Uji, M. Chaparalla, S. Hill, P. S Sandhu, J. Qualls, L. Seger and J. S. Brooks, Synth. Met. **85**, 1573 (1997).

20. *High magnetic field ground state in the molecular conductor* η *-*Mo_4O_{11}, J. S. Brooks, S. Valfells, S. Uji, S. Hill, Z. Fisk and J. Sarrao, Synth. Met. **86**, 1963 (1997).

19. *Magneto-optical studies of magnetic defects in CeNiSn*, J. Singleton, S. O. Hill, A. Ardavan, H. Matsui, S. J. Blundell, W. Hayes, P. Goy, E. Bucher, H. Hohl, G. Nakamoto, A. A. Menovsky and T. Takabatake, Physica B **216**, 333 (1996).

18. *Cyclotron resonance observation of heavy and light spin subbands in an ultra-high mobility 2D hole gas in GaAs/AlGaAs: evidence for coupled magneto-plasmons and many body effects*, S. O. Hill, B. E. Cole, Y. Imanaka, Y. Shimamoto, J. Singleton, J M Chamberlain, N. Miura, M Henini, T. Cheng and P Goy, Plenum Press, New York, May 1996, editors K. Hess and J. P. Leburton.

17. *Cyclotron resonance studies of the molecular conductor (DMe-DCNQI)*$_2$*Cu*, S. Hill, M. Boonman, S. Uji, J. A. A. J. Perenboom, A. Wittlin, J. S. Brooks, R. Kato, H. Sawa and S. Aonuma, in *Proc. "Physical Phenomena in High Magnetic Fields II"* (PPHMF-II), Tallahassee, FL, May 6-9 1995, edited by Z. Fisk, L. P. Gor'kov, D. Meltzer and J. R. Schrieffer (World Scientific, Singapore 1996) p. 322-327.

16. *Quantum oscillations in low-dimensional metals to 36 T at low temperatures: Application of the Dysprosium field enhancement method*, J. S. Brooks, S. Hill, S. Uji, S. Valfells, P. Sandhu, L. D. Seger, Z. Fisk, J. Sarrao and T. Szabo, in *Proc. Int. Workshop on High Magnetic Fields: Industry, Materials and Technology*, Tallahassee, FL (Feb/March 1996).

15. *Effective mass anisotropy and many body effects in 2D GaAs/AlGaAs hole gases observed in very high magnetic fields: Comparison of theory and experiment*, B. E. Cole, S. O. Hill, Y. Imanaka, Y. Shimamoto, W. Batty, J. Singleton, J. M. Chamberlain, N. Miura, M. Henini and T. Cheng, Surf. Sci. **361-362**, 464 (Elsevier 1996).

14. *Cyclotron resonance studies of electron dynamics in ET charge transfer salts*, S. Hill, A. Wittlin, J. van-Bentum, J. Singleton, W. Hayes, J. A. A. J. Perenboom, M. Kurmoo and P. Day, Synth. Met. **70**, 821 (1995).

13. *Magneto-optical studies of the Heavy Fermion compound CeNiSn*, S. O. Hill, H. Matsui, S. J. Blundell, J. Singleton, W. Hayes, E. Bucher and H. Hohl, Physica B **211**, 220 (1995).

12. *High magnetic field millimeter and submillimeter spectroscopy of ultra-high mobility 2D Hole Systems*, S. Hill, B. E. Cole, P. J. Rodgers, T. J. B. M. Janssen, J. Singleton, J. M. Chamberlain, B. L. Gallagher, G. Hill and M. Henini, Physica B **211**, 440 (1995).

11. *Cyclotron resonance and spin states in GaAs-GaAlAs heterojunctions in the Wigner Solid Regime*, R. J. Nicholas, M. S. Daly, P. Gee, S. O. Hill, J. G. Michels, J. Singleton, G. M. Summers, R. J. Warburton, C. T. Foxon and J. J. Harris, in "*Proc. Int. Conf. on the Physics of Semiconductors*" (ICPS), Vancouver, August 15-19 1994 edited by D. Lockwood, p. 1440-1447 (World Scientific, Singapore 1995).

10. *Temperature dependence of quantum Hall plateaux width for low and high mobility heterojunctions*, P. J. Gee, D. R. Leadley, S. O. Hill, J. Singleton, R. J. Nicholas, J. J. Harris and C. T. Foxon, in Proc. Int. Conf. on High Magnetic Fields in Semiconductor Physics (SEMI MAG 94), Cambridge, Mass., August 8-12 1994, edited by D. Heiman (World Scientific, Singapore 1995), p. 20-30.

9. *Fermi surface studies of low-dimensional organic conductors based on BEDT-TTF*, J. Singleton, J. Caulfield, S. Hill, S. Blundell, W. Lubczynski, A. House, W. Hayes, J. Perenboom, M. Kurmoo and P. Day, Physica B **211**, 275 (1995).

8. *Cyclotron Resonance to 100 mK of a GaAs heterojunction in the ultra-quantum limit*, J. G. Michels, S. O. Hill, R. J. Warburton, G. M. Summers, P. Gee, J. Singleton, R. J. Nicholas, C. T. Foxon and J. J. Harris, Surf. Sci. **305,** 33 (1994).

7. *The influence of magnetic order in quasi-2D organic conductors*, M. Doporto, J. Caulfield, S. O. Hill, J. Singleton, F. L. Pratt, M. Kurmoo, P. J. T. Hendriks, J. A. A. J. Perenboom, W. Hayes and P. Day, Surf. Sci. **305,** 187 (1994).

6. *Cyclotron resonance studies of effective masses in BEDT-TTF salts*, S. O. Hill, J. Singleton, F. L. Pratt, M. Doporto, W. Hayes, T. J. B. M. Janssen, J. A. A. J. Perenboom, M. Kurmoo and P. Day, Synth. Met. **56**, 2566 (1993).

5. *Cyclotron Resonance of high mobility GaAs/GaAlAs (311) 2DHG's*, S. J. Hawksworth, S. O. Hill, T. J. B. M. Janssen, J. M. Chamberlain, J. Singleton, U. Ekenberg, G. M. Summers, G. A. Davies, R. J. Nicholas, E. C. Valadares, M. Henini and J. A. A. J. Perenboom, Semi. Sci. Tech. **8**, 1465 (1993).

4. *Magneto-optical and Magneto-transport studies of electron-electron interactions in Organic Conductors using Fields up to 50T*, J. Singleton, F. L. Pratt, M. Doporto, J. M. Caulfield, S. O. Hill, T. J. B. M. Janssen, I. Deckers, G. Pitsi, F. Herlach, W. Hayes, J. A. A. J. Perenboom, M. Kurmoo and P. Day, Physica B **184,** 470 (1993).

3. *High field magnetotransport studies of β″-(BEDT-TTF)$_2$AuBr$_2$*, M. Doporto, J. Caulfield, F. L. Pratt, J. Singleton, S. O. Hill, W. Hayes, J. A. A. J. Perenboom, M. Kurmoo and P. Day, Synth. Met. **56**, 2572 (1993).

2. *High magnetic field studies of two dimensional organic molecular metals based on ET*, J. Singleton, J. Caulfield, S. O. Hill, P. J. T. Hendriks, F. L. Pratt, M. Doporto, I. Deckers, G. Pitsi, F. Herlach, W. Hayes, T. J. B. M. Janssen, J. A. A. J. Perenboom, M. Kurmoo and P. Day, in *Proc. Int. Conf. "Physique en Champs Magnetiques Tres Intenses et Technologies Associees",* Toulouse (1993).

1. *The effects of open sections of the Fermi surface on the physical properties of 2D organic molecular metals*, J. Caulfield, J. Singleton, F. L. Pratt, M. Doporto, M. Kurmoo, P. J. T. Hendriks, S. O. Hill, J. A. A. J. Perenboom, W. Hayes and P. Day, Synth. Met. **61,** 63 (1993).

Non-refereed articles

41. *Quantum Tunneling of the Magnetization (QTM): insights from magnetic and EPR spectroscopies*, Junjie Liu, Enrique del Barco, Stephen Hill, to be published as a chapter in a book published by Springer on Molecular Nanomagnets (Mar. 2013); http://xxx.lanl.gov/abs/1302.7305

40. *On the Anisotropy barrier reduction in fast-relaxing Mn_{12} single-molecule magnets*, Stephen Hill, Muralee Murugesu and George Christou, http://arxiv.org/abs/0908.4434.

39. *Crystal lattice desolvation effects on the magnetic quantum tunneling of single-molecule magnets*, G. Redler, C. Lampropoulos, S. Datta, C. Koo, T. C. Stamatatos, N. E. Chakov, G. Christou and S. Hill, http://arxiv.org/abs/0907.4434.

38 *Manifestation of Spin Selection Rules on the Quantum Tunneling of Magnetization in a Single Molecule Magnet*, J. J. Henderson, E. del Barco, C. Koo, S. Hill, P. L. Feng, D. N. Hendrickson, http://arxiv.org/abs/0906.0732.

37. *A Caveat for Single-Molecule Magnetism: Nonlinear Arrhenius Plots*, C. Lampropoulos, S. O. Hill and G. Christou, http://arxiv.org/abs/0906.0812.

36. *Reply to Wernsdorfer's post: "Correspondence on: Quantum interference of tunnel trajectories between states of different spin lenght in a dimeric molecular nanomagnet"*, Christopher M. Ramsey, Enrique del Barco, Stephen Hill, Sonali J. Shah, Christopher C. Beedle, David N. Hendrickson, http://xxx.lanl.gov/abs/0806.1922.

35. *Strongly Correlated Electrons in the $[Ni(hmp)(ROH)X]_4$ Single Molecule Magnet: A DFT+U Study*, Chao Cao, Stephen Hill, Hai-Ping Cheng , http://xxx.lanl.gov/abs/0803.3235.

34. *Direct observation of mixing of spin-multiplets in an antiferromagnetic molecular nanomagnet by electron paramagnetic resonance*, S. Datta, O. Waldmann, A. D. Kent, V. A. Milway, L. K. Thompson, S. Hill, http://xxx.lanl.gov/abs/0707.4109.

33. *Microwave spectroscopy of Q1D and Q2D organic conductors*, Stephen Hill and Susumu Takahashi, http://xxx.lanl.gov/abs/cond-mat/0608490.

32. *Limitations of the Giant Spin Hamiltonian in Explaining Magnetization Tunneling in a Single-Molecule Magnet*, A. Wilson, J. Lawrence, E-C. Yang, M. Nakano, D. N. Hendrickson and S. Hill, http://xxx.lanl.gov/abs/cond-mat/0606252.

31. *Role of anisotropy in the spin-dimer compound $BaCuSi_2O_6$*, S. E. Sebastian, P. Tanedo, P. A. Goddard, S.-C. Lee, A. Wilson, S. Kim, R. D. McDonald, S. Hill, N. Harrison, C. D. Batista, and I. R. Fisher, http://xxx.lanl.gov/abs/cond-mat/0606244.

30. *A rotating cavity for high-Field angle-dependent microwave spectroscopy of low-dimensional conductors and magnets*, Susumu Takahashi and Stephen Hill, http://xxx.lanl.gov/abs/cond-mat/0505513.

29. *Origin of the fast magnetization tunneling in the single-molecule magnet $[Ni(hmp)(tBuEtOH)Cl]_4$*, C. Kirman, J. Lawrence, S. Hill, E-C. Yang, and D. N. Hendrickson, http://xxx.lanl.gov/abs/cond-mat/0505445.

28. *Single-Molecule Magnets: High-Field Electron Paramagnetic Resonance Evaluations of the Single-Ion Zero-Field Interaction in $Zn^{II}_3Ni^{II}$ Complex*, En-Che Yang, Cem Kirman, Jon Lawrence, Lev. N. Zakharov, Arnold L. Rheingold, Stephen Hill and David N. Hendrickson, http://xxx.lanl.gov/abs/cond-mat/0502564 (Feb. 23, 2005).

27. *Incommensurate Transverse Anisotropy Induced by Disorder and Spin-Orbit-Vibron Coupling in Mn12-acetate*, Kyungwha Park, Mark R. Pederson, Tunna Baruah, Noam Bernstein, Jens Kortus, Steven L. Richardson, Enrique del Barco, Andrew D. Kent, Steve Hill, Naresh S. Dalal, http://xxx.lanl.gov/abs/cond-mat/0409206 (Sep. 8, 2004).

26. *Dendritic flux jumps in an organic superconducting crystal*, M. M. Mola, R. Haddad, S. Hill, http://xxx.lanl.gov/abs/cond-mat/0408415 (Aug. 19, 2004).

25. *Cyclotron resonance in the quasi-1D organic superconductor $(TMTSF)_2ClO_4$*, A. E. Kovalev, S. Takahashi, S. Hill, S. Takasaki, J. Yamada, H. Anzai, http://xxx.lanl.gov/abs/cond-mat/0404545 (Apr. 23, 2004).

24. *Symmetry of Magnetic Quantum Tunneling in the Single-Molecule Magnet Mn12-Acetate*, E. del Barco, A. D. Kent, S. Hill, J. M. North, N. S. Dalal, E. M. Rumberger, D. N. Hendrickson, N. Chakov, G. Christou, http://xxx.lanl.gov/abs/cond-mat/0404390 (Apr. 16, 2004).

23. *Evidence for the S=9 excited state in Mn12-bromoacetate measured by electron paramagnetic resonance*, K. Petukhov, S. Hill, N. E. Chakov, G. Christou, K. Abboud, http://xxx.lanl.gov/abs/cond-mat/0403435 (Mar. 17, 2004).

22. *Discrete easy-axis tilting in Mn_{12}-acetate, as determined by EPR: implications for the magnetic quantum tunneling mechanism*, S. Hill, S. Takahashi, R. S. Edwards, J. M. North and N. S. Dalal, http://xxx.lanl.gov/abs/cond-mat/0401515 (Jan. 27, 2004).

21. *Quantum Coherence in an Exchange-Coupled Dimer of Single-Molecule Magnets*, S. Hill, R. S. Edwards, N. Aliaga-Alcalde, G. Christou, cond-mat/0311209 (Nov. 11, 2003).

20. *Characterization of the S=9 excited state in Fe_8Br_8 by electron paramagnetic resonance*, D. Zipse, J. M. North, N. S. Dalal, S. Hill, R. S. Edwards, cond-mat/0309159 (Sept. 5, 2003).

19. *Mapping the Fermi velocity in the quasi-2D organic conductor κ-$(BEDT\text{-}TTF)_2I_3$*, A. E. Kovalev, S. Hill, K. Kawamo, M. Tamura, T. Naito, H. Kobayashi, cond-mat/0306104 (June 5th, 2003).

18. *Effect of an in-plane magnetic field on the interlayer phase coherence in the extreme-2D organic superconductor κ-$(BEDT\text{-}TTF)_2Cu(NCS)_2$*, A. E. Kovalev, S. Takahashi, S. Hill and J. S. Qualls, cond-mat/0302244 (Feb. 4th, 2003).

17. *Evidence for a very low-lying S = 9 excited state of the S = 10 single molecule magnet Mn_{12}-acetate*, R. S. Edwards, S. Hill, S. Maccagnano, J. M. North, N. S. Dalal, cond-mat/ 0302052 (Feb. 4th, 2003).

16 *Definitive spectroscopic determination of the transverse interactions responsible for the magnetic quantum tunneling in Mn_{12}-acetate*, S. Hill, R. S. Edwards, S. I. Jones, J. M. North, N. S. Dalal, cond-mat/0301599 (Jan 31st, 2003); also Virtual Journal of Nanoscale Science and Technology, Jun 16th, 2003, Volume 7, Issue 24, http://link.aps.org/abstract/PRL/v90/e217204.

15. *Defects, Tunneling, and EPR*, Kyungwha Park, M. A. Novotny, N. S. Dalal, S. Hill, and P. A. Rikvold, cond-mat/0301561 (Jan 30th, 2003).

14. *Determination of the Fermi Velocity by Angle-dependent Periodic Orbit Resonance Measurements in the Organic Conductor α-$(BEDT\text{-}TTF)_2KHg(SCN)_4$*, A. E. Kovalev, S. Hill and J. S. Qualls, cond-mat/0205159 (May 8th, 2002).

13. *Role of dipolar and exchange interactions in the positions and widths of EPR transitions for the single-molecule magnets Fe_8 and Mn_{12}*, Kyungwha Park, M.A. Novotny, N.S. Dalal, S. Hill, P.A. Rikvold, cond-mat/0204481 (April 24th 2002).

12. *Interlayer electrodynamics in the organic superconductor κ-$(BEDT\text{-}TTF)_2Cu(NCS)_2$: evidence for a transformation within the vortex state*, S. Hill, M. M. Mola, J. S. Qualls, cond-mat/0201567.

11. *Detailed single crystal EPR lineshape measurements for the single molecule magnets Fe_8Br and Mn12–ac*, S. Hill, S. Maccagnano, K. Park, R. M. Achey, J. M. North and N. S. Dalal, cond-mat/0112172.

10. *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, cond-mat/0111589.

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, cond-mat/0106276 (14 Jun2001).

8. *Magneto-thermal instabilities in an organic superconductor*, M. M. Mola, S. Hill, J. S. Brooks, and J. S. Qualls, cond-mat/0011227 (13 Nov2000).

7. *Quantum melting of the quasi-two-dimensional vortex lattice in κ–(ET)$_2$Cu(NCS)$_2$*, M. M. Mola, S. Hill, J. S. Brooks, and J. S. Qualls, cond-mat/ 0008262 (17 Aug2000).

6. *Electrodynamics of quasi-two-dimensional BEDT-TTF charge transfer salts*, Stephen Hill, cond-mat/0003246 (14 Mar2000).

5. Report on *Determination of vortex structure in κ-(BEDT-TTF)$_2$Cu(NCS)$_2$ by Josephson plasma resonance*, in high-T_c update, Vol. **14**, No. 3 (Feb 2000).

4. *Josephson plasma resonance in κ-(BEDT-TTF)$_2$Cu(NCS)$_2$*, M. Mola, J. T. King, C. P. McRaven, S. Hill, J. S. Qualls and J. S. Brooks, cond-mat/0001149 (11 Jan2000).

3. *Instrumentation for Millimeter-wave Magnetoelectrodynamic Investigations of Low-Dimensional Conductors and Superconductors*, Monty Mola, Stephen Hill, Philippe Goy and Michel Gross, cond-mat/9907310 (20th July 1999).

2. Report on cyclotron resonance in Sr_2RuO_4, in *High-T_c Update*, Vol. **13**, No. 11.

1. *Cyclotron Resonance in the Layered Perovskite Superconductor Sr_2RuO_4*, S. Hill, J. S. Brooks, Z. Q. Mao and Y. Maeno, cond-mat/9905147 (12th May 1999).

Invited talks

(in reverse chronological order)
Presented by S. Hill unless indicated otherwise by *

Invited talk: *Atomic Clock Transitions in Molecular Spin Qubits*, presented at the Workshop on Molecular Electron Spin Qubits, University of Manchester, January 12 to 15, 2015, Manchester, United Kingdon.

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.

Invited talk: *Recent Developments in the Application of High-Field Electron Paramagnetic Resonance to the Study of Molecular Nanomagnetism*, presented at the EPR Symposium at the Rocky Mountain Conference on Magnetic Resonance, July 13 to 17, 2014, Copper Mountain, CO.

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.

Invited talk: *FMR Studies of Spin-Orbit Effects in Organic Radical Ferromagnets*, presented at the Fifth Workshop on Current Trends in Molecular and Nanoscale Magnetism, Larnaka, Cyprus, May 25-29, 2014.

Invited talk: *EPR Studies of Rare-Earth Molecular Nanomagnets*, German Physical Society (DPG) Spring meeting, March 30 to April 4, 2014, Dresden, Germany.

Invited talk: *Materials for Spin-Based Information Technologies*, Research in Materials Science at FSU Retreat, January 11, 2014, Tallahassee, FL.

Plenary Lecture: *EPR studies of highly anisotropic mononuclear nanomagnets*, presented at the Symposium on the Frontiers of Molecular Magnetism, Sept. 17 to 19, 2013, Nanjing, China.

Invited talk: *EPR studies of highly anisotropic mononuclear nanomagnets*, presented at the 246th ACS National Meeting and Exposition, Sept. 8 to 12, 2013, Indianapolis, IN.

Invited talk: *High-Field EPR Studies of an Organic Radical Ferromagnet Under Pressure*, presented at the 55th Annual Rocky Mountain Conference on Magnetic Resonance, July 28 to August 1, 2013, Denver, CO.

Plenary Lecture: *Controlled under pressure: high-field EPR studies of magnetostructural correlations in molecule-based magnetic materials*, presented at the annual meeting of the European magnetic resonance community, EUROMAR 2013, Hersonissos, Crete, Greece, June 30 to July 5, 2013.

Showcase Lecture: *High-Field EPR and Molecular Magnetism at the Tallahassee Magnet Lab*, presented at the 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.

Invited talk: *EPR and X-ray studies of pressure effects in molecule-based magnets*, presented at the 12th Joint MMM/Intermag Conference, Chicago, IL (January 14-18, 2013).

Invited talk: *High-field EPR studies of molecular magneto-structural correlations under pressure*, presented at the International Symposium and School on Multifunctional Molecular Materials and Devices (ISSMMD), Durham, UK (September 23-29, 2012).

Invited talk: *EPR of Molecule-Based Magnets With Strong Spin-Orbit Coupling*, presented at the Fourth Workshop on Current Trends in Molecular and Nanoscale Magnetism, Chalkidiki, Greece (June 11-14, 2012).

Invited talk: *Molecule-Based Magnets: the View from EPR*, presented at the 62nd Fujihara Seminar, Sendai, Japan (May 7-10, 2012).

Keynote Lecture: *Molecular Magnetism and High-Field EPR at the National High Magnetic Field Laboratory*, presented at the Royal Society of Chemistry Conference on EPR, York, England, April 3-7, 2011.

Invited Lecture: *Single-Molecule Magnets*, presented at the 22nd Annual Harry C. Allen Jr. Symposium: Magnetism Through Molecular Materials, Clark University, Worcester, MA, March 18, 2011.

Invited Talk: *Single-Molecule Magnets*, presented at the International Symposium and School on Multifunctional Molecule-based Materials (ISSMMM), Argonne National Lab, Chicago, IL, March 13-18, 2011.

Invited Talk: *EPR Studies of Heavy Atom Molecule-Based Magnets*, presented at the 3rd Workshop on Quantum Coherent Properties of Spins (QCPS-III), Orlando, Florida, December 20-22, 2010.

Invited Talk: *Very High-Field Wideband EPR Studies of Quantum Magnets*, presented at the 7th International Conference on Physical Phenomena at High Magnetic Fields (PPHMF-VII), Tallahassee, Florida, December 3-8, 2010.

Invited Talk: *Molecular Nanomagnets: the View from EPR*, presented at the Southeastern Magnetic Resonance Conference (SEMRC), Department of Chemistry, University of Florida, Gainesville, October 22-24, 2010.

Keynote Lecture: *Molecule-Based Magnets with Strong Spin-Orbit Coupling*, presented at the International Conference on Molecule-Based Magnetism (ICMM XII), Beijing, China, October 8-12, 2010.

Invited Talk: *EPR at the National High Magnetic Field Laboratory and Studies Under Pressure*, presented at the UK/USA Meeting on Coordination Chemistry, Molecular Magnetism and High Pressure, Department of Chemistry, University of Edinburgh, Scotland, August 5/6th 2010.

Invited talk: *The Effective Barrier to Magnetization Reversal in Mn_{12} Single-Molecule Magnets*, Stephen Hill, presented at the 3rd Workshop on Current Trends in Nanoscale and Molecular Magnetism, Orlando, FL, June 20-25, 2010.

Invited talk: *EPR Studies of Quantum Coherent Properties of Rare-Earth Spins*, Stephen Hill, at the 2nd Workshop on Quantum Coherent Properties of Spins, Vancouver, Canada, Dec. 4-6, 2009.

Invited talk: *Applications of Electron Magnetic Resonance at the NHMFL*, Stephen Hill, at the 1st MagLab Summer School, Tallahassee, June 21-28, 2009.

Invited talk: *EPR at the National High Magnetic Field Laboratory: Shameless Advertising*, Stephen Hill, at the 3rd North America-Greece-Cyprus Workshop in Paramagnetic Materials, Protaras, Cyprus, June 15-19, 2009.

Invited talk: *Microwave Spectroscopy of Organic Superconductors and Conductors*, Stephen Hill, 429 WE-Heraeus Seminar, *Microwaves for Condensed Matter Physics*, Physikzentrum Bad Honnef (Germany), April 5-8, 2009.

Invited talk: *Beyond the giant spin approximation: the view from EPR*, Stephen Hill, Symposium on Spin Physics and Nanomagnetism, March 13-14, 2009, Lehman College, New York.

Invited talk: *Intermolecular correlations in SMMs*, Stephen Hill, Workshop on Quantum Properties of Magnetic Molecules, November 14-16, 2008, Tulane University, New Orleans, LA.

Invited talk: *Single-Molecule Magnets*, Stephen Hill, 31st International EPR Symposium at the 50th Rocky Mountain Conference on Analytical Chemistry, July 27-31, 2008, Breckenridge, Colorado.

Invited talk: *Quantum dynamics of molecular nanomagnets*, Stephen Hill, 2nd workshop on novel electronic materials, May 15-17, 2008, University of Kentucky, Lexington, KY.

Invited talk: *Quantum spin dynamics in single-molecule magnets: the view from EPR*, Stephen Hill, Florida Award Symposium at the 84th Annual American Chemical Society Meeting—Florida section, May 8-10, 2008, Kissimmee, FL.

Invited talk: *Recent Developments in High-Frequency EPR at the University of Florida*, Stephen Hill, Southeastern Magnetic Resonance Conference, November 9-11, 2007, Tuscaloosa, AL.

Invited talk: *Quantum spin dynamics in molecular nanomagnets: the view from EPR*, S. Hill, International Workshop on Nanomagnetism, July 1-4, 2007, Coma-Ruga (Costa Daurada), Spain.

Invited talk: *Single-molecule magnets and the validity of the giant spin approximation*, Stephen Hill, Southeastern Magnetic Resonance Conference, November 3-5, 2006, Gainesville, FL.

Invited talk: *The effect of anisotropy on the Bose-Einstein condensation of magnons in* $BaCuSi_2O_6$, Stephen Hill, International Workshop on Current Trends in Nanoscopic and Mesoscopic Magnetism, September 6-9, 2006, Santorini, Greece.

Invited talk: *Beyond the giant spin approximation: the view from EPR*, S. Hill, International Conference on Molecule-based Magnets (ICMM 2006), August 13-17, 2006, Victoria, Canada.

Invited talk: *Fermi Surfing: Magneto-Optical Studies of Organic Superconductors*, S. Hill, International Workshop on Nanomagnetism, July 2-6, 2006, Coma-Ruga (Costa Daurada), Spain.

Invited talk: *Cyclotron Resonance Studies of Organic Superconductors*, S. Hill, International Conference on Low Energy Electrodynamics in Solids (LEES '06), July 2-6, 2006, Tallin, Estonia.

Invited talk: *Magnetic Quantum Tunneling: New Insights from EPR*, S. Hill, International Conference on Single-Molecule Quantum Magnets and Single-Chain Quantum Magnets, March 11-13, 2006, Okazaki, Japan.

Invited talk: *Quantum effects in single-molecule magnets*, S. Hill, Southeastern Section of the American Physical Society meeting (SESAPS2005), November 10-12, 2005, Gainesville, FL.

Invited talk: *High-field/frequency EMR: application to molecular conductors, superconductors and magnets*, S. Hill, Free electron laser workshop, October 27, 2005, Gainesville, FL.

Invited talk: *Molecular control of the quantum dynamics of single-molecule magnets*, S. Hill*, 6th International Conference on Crystalline Organic Metals, Superconductors and Ferromagnets (ISCOM 2005), September 11-16, 2005, Key West, FL.

Invited talk: *Study of Periodic Orbit Resonances in (TMTSF)2ClO4*, S. Takahashi*, 6th International Conference on Crystalline Organic Metals, Superconductors and Ferromagnets (ISCOM 2005), September 11-16, 2005, Key West, FL.

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.

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.

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.

Invited talk: *Quantum Entanglement in exchange-coupled dimmers of SMM's*, S. Hill*, presented at workshop on Frontiers in Molecular Magnetism, Feb 11-12, 2005, at Pacific Institute for Theoretical Physics (PITP), University of British Columbia, Vancouver, Canada.

Invited talk: *Origin of the Fast Magnetization Tunneling in Tetranuclear Nickel Single-Molecule Magnets*, D. N. Hendrickson, 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, Tsukuba, Japan.

Invited talk: *Quantum coherence in an exchange coupled dimer of single molecule magnets*, S. Hill, presented at a one day symposium on quantum computing at the NHMFL, Oct. 20th, 2004.

Plenary talk: *Exchange-Coupled Dimers of Molecular Magnets*, S. Hill, presented at Low Energy Electrodynamics in Solids (LEES '04), Kloster Banz, Germany, July 18th - 23rd, 2004.

Invited talk: *Just-In-Time-Teaching*, S. Hill, Cottrell Scholars conference organized by Research Corporation, Tucson, AZ, July 9-11 2004.

Invited talk: *Coherent quantum spin dynamics: the need for powerful microwave sources*, S. Hill, presented at the "Big Light" Workshop, NHMFL, Tallahassee, FL (May. 6-7, 2004).

Invited talk: *Magnetic quantum tunneling and quantum coherence in manganese-based single-molecule magnets*, S. Hill, presented at the March meeting of the American Physical Society, Montreal, Canada (Mar. 22-26, 2004).

Invited talk: *Angle-resolved microwave spectroscopy of the normal and superconducting states of low-dimensional molecular superconductors*, S. Hill, presented at the annual meeting of the Southeastern section of the American Physical Society (SESAPS), Wrightsville Beach, NC (Nov. 6-8, 2003).

Invited talk: *Broadband single crystal EPR spectroscopy from 8 to 715 GHz in magnetic fields to 33 tesla*, S. Hill, presented at the 33rd Southeastern Magnetic Resonance Conference (SEMRC), Tallahassee, FL (Oct. 17-19, 2003).

Invited talk: *Characterization of the Excited States of Highly Magnetic Systems: Single-Molecule Magnets*, Naresh S. Dalal*, David Zipse, J. Micah North, Stephen Hill, Rachel Edwards, presented at the 8th International Symposium on Spin and Magnetic Field Effects in Chemistry and Related Phenomena (SCM2003), Chapel Hill, NC (Sept. 21-26, 2003).

Invited talk: *Interlayer electrodynamics in the organic superconductor* κ*-(BEDT-TTF)$_2$Cu(NCS)$_2$*, S. Hill, A. E. Kovalev, S. Takahashi and J. S. Qualls, presented at the Fourth International Conference on New Theories, Discoveries, and Applications of Superconductors and Related Materials (New^{3}SC-4), San Diego (January 2003).

Invited talk: *Single Crystal High Frequency Cavity-based EPR Spectroscopy of Single Molecule Magnets*, S. Hill, R. S. Edwards, S. I. Jones, S. Maccagnano, J. M. North, N. Aliaga, E-C. Yang, N. S. Dalal, G. Christou, D. N. Hendrickson, Invited talk at Fall 2002 MRS meeting, Boston, MA, Dec. 2-6.

Invited talk: *Half-Integer Spin Molecular Nanomagnets*, David N. Hendrickson*, George Christou, Wolfgang Wernsdorfer, Stephen O. Hill, Núria 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.

Invited talk: *Defects, Tunneling and EPR*, Kyungwha Park*, 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.

Invited talk: *High field EPR investigations of quantum and environmental effects in single molecule nanomagnets*, S. Hill, Low Energy Electrodynamics in Solids (LEES '02), Montauk, Long Island, NY, October 13 to 18, 2002.

Invited talk: *Developing effective scientific communicative skills*, S. Hill, Cottrell Scholars conference organized by Research Corporation, Tucson, AZ, July 12-13 2002.

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)

Invited talk: *Cyclotron resonance in Sr_2RuO_4*, S. Hill, M. M. Mola, C. Palassis, J. S. Brooks, Z. Q. Mao and Y. Maeno, presented at the Third International Conference on New Theories, Discoveries, and Applications of Superconductors and Related Materials (New^3SC-3), Honolulu (January 2001).

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.

Invited talk: *Cyclotron resonance in the layered perovskite superconductor Sr_2RuO_4*, S. Hill, J. S. Brooks, Z. Q. Mao and Y. Maeno, presented at the March 2000 Meeting of the American Physical Society, in Minneapolis, MN (March 2000).

Invited talk: *Millimeter-wave magnetoelectrodynamics of organic conductors and superconductors*, S. Hill, M. Mola, J. S. Brooks, J. S. Qualls, M. Tokumoto, N. Kinoshita, T. Kinoshita and Y. Tanaka, presented as invited talk at ISCOM '99, Oxford, England (September 1999).

Invited talk: *Cyclotron resonance and effective mass renormalizations in Sr_2RuO_4*, S. Hill, J. S. Brooks, Z. Q. Mao and Y. Maeno, presented as invited talk at LT22, Helsinki, FI (August 1999).

Invited talk: *Fermi surface spectroscopy: a magnetic resonance approach*, J. M. Schrama*, S. O. Hill, J. Singleton, A. Ardavan, E. Rzepniewski and R. Edwards, presented as invited talk at LT22, Helsinki, FI (August 1999).

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.

Invited talk, *Millimeter-wave spectroscopy in high magnetic fields*, at Physical Phenomena in High Magnetic Fields (PPHMF-III), Tallahassee, FL, October 24-27 1998.

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.

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.

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)

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).

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).

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).

Contributed talks

(in reverse chronological order)
Presented by S. Hill unless indicated otherwise by *

Contributed Talk: *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.

Contributed Talk: *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.

Contributed Talk: *Pressure tuning of anisotropy barrier in Fe_8 SMMs probed using high frequency EPR*, K. Thirunavukkuarasu*, C. C. Beedle, S. Tozer, and S. Hill, presented at the March 2014 APS meeting, Denver, CO, March 3-7, 2014.

Contributed Talk: *High-Frequency Electron Paramagnetic Resonance (HFEPR) Studies of Supramolecular Aggregates of Exchange-Biased Single-Molecule Magnets*, M. Shiddiq, T. N. Nguyen, T. Ghosh, K. A. Abboud, G. Christou, S. Hill, presented at the March 2014 APS meeting, Denver, CO, March 3-7, 2014.

Contributed talk: *EPR Studies on the Kagomé System $Pr_3Ga_5SiO_{14}$*, 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.

Contributed talk: *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, presented at the 58th Annual Conference on Magnetism and Magnetic Materials (MMM), Denver, CO, November 4-8, 2013.

Contributed talk: *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).

Contributed talk: *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).

Contributed talk: *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).

Contributed talk: *EPR studies of pressure induced Jahn-Teller reorientation in the coordination polymer: $[CuF_2(H_2O)_2(pyz)]$*, 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).

Contributed talk: *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, presented at the March 2013 APS meeting, Baltimore, MD, March 18-22, 2013.

Contributed talk: *High Field Electron Paramagnetic Resonance (HFEPR) study on a Mn(IV) monomer*, A. Amjad*, E. del Barco, S. Hill, J. van Tol, A. Ozarowski, M. Ali, presented at the March 2013 APS meeting, Baltimore, MD, March 18-22, 2013.

Contributed talk: *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, presented at the March 2013 APS meeting, Baltimore, MD, March 18-22, 2013.

Contributed talk: *Detection of low energy spin loop excitations in rare earth kagomé systems*, M. Hoch*, S. Ghosh, S. Datta, H. Zhou, C. Wiebe, S. Hill, presented at the March 2013 APS meeting, Baltimore, MD, March 18-22, 2013.

Contributed talk: *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, presented at the March 2013 APS meeting, Baltimore, MD, March 18-22, 2013.

Contributed talk: *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, presented at the 79th Annual Meeting of the APS Southeastern Section, Tallahassee, FL, November 14–17 (2012).

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

Contributed talk: *High-field EPR studies of molecular magneto−structural correlations under pressure,* Stephen Hill, Presented at the joint Southeastern Meeting of the American Chemical Society and the 41st Southeastern Magnetic Resonance Conference (SEMRC), Raleigh, North Carolina, Nov. 14-17, 2012.

Tutorial: *Single-Molecule Magnets and EPR Spectroscopy*, Stephen Hill, presented at the First Undergraduate School on Magnetism and Magnetic Materials, Florida State University, Tallahassee, FL, July 30 – August 8, 2012.

Contributed talk: *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, presented at the High-Pressure EPR Meetings, University of Edinburgh, Scotland, June 19, 2012.

Contributed talk: *EPR Studies of Organic Radical Ferromagnets Under Pressure*, Stephen Hill, presented at the High-Pressure EPR Meetings, University of Edinburgh, Scotland, June 19, 2012.

Contributed talk: *Interplay between Anisotropy and Exchange in Dinuclear Molecular Magnets*, Junjie Liu*, Jerzy Kryzstek, James Walsh, Guillem Aromì, Eric McInnes and Stephen Hill, presented at the High-Pressure EPR Meetings, University of Edinburgh, Scotland, June 19, 2012.

Tutorial: *Electron Magnetic Resonance at the Magnet Lab*, Stephen Hill, presented at the Magnet Lab Magnet Lab User Summer School, NHMFL, Tallahassee, May 14-18, 2012.

Tutorial: *High-Field Electron Paramagnetic Resonance at the Florida Magnet Lab*, Stephen Hill, presented at the First Magnetostructural Correlations Workshop, NHMFL, Tallahassee, April 23-26, 2012.

Contributed talk: *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, presented at the First Magnetostructural Correlations Workshop, NHMFL, Tallahassee, April 23-26, 2012.

Contributed talk: *Interplay between Exchange and Anisotropy in Dinuclear Molecular Magnets*, Junjie Liu,* Jerzy Krzystek, Ross Inglis, Guillem Aromi, Euan K. Brechin, Stephen Hill, presented at the First Magnetostructural Correlations Workshop, NHMFL, Tallahassee, April 23-26, 2012.

Contributed talk: *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, presented at the First Magnetostructural Correlations Workshop, NHMFL, Tallahassee, April 23-26, 2012.

Contributed talk: *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, presented at the 243rd ACS National Meeting, March 25-29, 2012, San Diego, CA.

Contributed talk: *FMR Study of the Field Dependence of the Ferromagnetic Transition in an Organic Magnet*, Alexey Kovalev*, Stephen Winter, Stephen Hill, Richard Oakley, presented at the March 2012 APS meeting, Boston, MA (Feb/Mar 2012).

Contributed talk: *Quantum Tunneling of the Magnetization in Trigonal Single-Molecule Magnets*, Junjie Liu*, Enrique del Barco, Stephen Hill, presented at the March 2012 APS meeting, Boston, MA (Feb/Mar 2012).

Contributed talk: *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, presented at the March 2012 APS meeting, Boston, MA (Feb/Mar 2012).

Contributed talk: *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, presented at the March 2012 APS meeting, Boston, MA (Feb/Mar 2012).

Contributed talk: *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, presented at the 40th Southeastern Magnetic Resonance Conference (SEMRC), Atlanta, GA, Nov. 4-6, 2011.

Contributed talk: *High-Field EPR Studies of a $[ReCl_4(CN)_2]^{2-}$ Molecular Building Block: A New Strategy for Designing Single-Chain Magnets*, J. Liu*, X. Feng, T. D. Harris, R. R. Long and S. Hill, presented at the 40th Southeastern Magnetic Resonance Conference (SEMRC), Atlanta, GA, Nov. 4-6, 2011.

Contributed talk: *Probing Collective Coupling of Single-Molecule Magnets in a Resonant Cavity*, Muhandis Shiddiq*, C. C. Beedle, S. Hill, presented at the Florida Inorganic Mini-Symposium (FIMS), Gainesville, October 7-8 (2011).

Contributed talk: *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, presented at the Rocky Mountain Conference on Analytical Chemistry EPR Symposium, Snowmass, CO, July 24-28 (2011).

Contributed talk: *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, presented at the March 2011 APS meeting, Dallas, TX (March 2011).

Contributed talk: *High-field EPR study of a $ReCl_4(CN)_2$ molecular magnet building block*, Junji Liu*, T. David Harris, Jeffrey Long, and Stephen Hill, presented at the March 2011 APS meeting, Dallas, TX (March 2011).

Contributed talk: *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, presented at the March 2011 APS meeting, Dallas, TX (March 2011).

Contributed talk: *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, presented at the 55th Annual Conference on Magnetism and Magnetic Materials, Atlanta, GA, November 14-18 (2010).

Contributed talk: *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, presented at the Florida Inorganic Mini-Symposium (FIMS), Gainesville, October 1-2 (2010).

Contributed talk: *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, presented at the 3rd Workshop on Current Trends in Nanoscale and Molecular Magnetism, Orlando, FL, June 20-25, 2010.

Contributed talk: *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, presented at the March 2010 APS meeting, Portland, OR (March 2010).

Contributed talk: *Comparison of Magnetization Tunneling in the Giant-Spin and Multi-Spin Descriptions of Single-Molecule Magnets*, J. Liu*, E. del Barco and S. Hill, presented at the March 2010 APS meeting, Portland, OR (March 2010).

Contributed talk: *Relieving Frustration: the Case of Antiferromagnetic Triangular Mn_3 Complexes*, C. Koo, J. Liu, P. Feng, D. N. Henderson, J. J. Henderson, E. del Barco and S. Hill, presented at the March 2010 APS meeting, Portland, OR (March 2010).

Contributed talk: Angle-Swept High-Field EPR: Application to Studies of Single Crystal Samples Containing Low-Symmetry Magnetic Species, Stephen Hill, Muralee Murugesu and George Christou, presented at the Southeastern Magnetic Resonance Conference, Vanderbilt University, Nashville, TN, Nov. 4-6 (2009).

Contributed talk: *Anisotropic exchange in a tetranuclear Co complex*, Junjie Liu*, Saiti Datta, Erica Bolin, Jon Lawrence, Christopher C.Beedle, David N. Hendrickson and Stephen Hill, presented at the Florida Inorganic Mini-Symposium (FIMS), Gainesville, October 2-3 (2009).

Contributed talk: *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*, presented at the IEEE International Solid-State Circuits Conference, San Fransisco, CA (February 2009).

Contributed talk: *High-Frequency EPR Studies of the Antiferromagnetic Spin Dimer Compound $Ba_3Mn_2O_8$*, Changhyun Koo*, Stephen Hill, Eric Samulon, Ian R. Fisher, presented at the March 2009 APS meeting, Pittsburgh, PA (March 2009).

Contributed talk: *Magnetization studies of a new single molecule magnet $[Net_4]_3[Mn_3Zn_2(salox)_3O(N_3)_6Br_2]$*, John Henderson*, Enrique del Barco, Changhyun Koo, Stephen Hill, Patrick Feng, David N. Hendrickson, Motohiro Nakano, presented at the March 2009 APS meeting, Pittsburgh, PA (March 2009).

Contributed talk: *Anisotropic exchange in tetranuclear Co^{II} complexes*, Saiti Datta*, Junjie Liu, Jon Lawrence, Christopher C. Beedle, David N. Hendrickson, Stephen Hill, presented at the March 2009 APS meeting, Pittsburgh, PA (March 2009).

Contributed talk: *Magnetization barrier reduction in Mn_{12} single-molecule magnets*, Gage Redler*, Changhyun Koo, Saiti Datta, Christos Lampropoulos, Theocharis C. Stamatatos, George Christou, Stephen Hill, presented at the March 2009 APS meeting, Pittsburgh, PA (March 2009).

Contributed talk: *The effective barrier to magnetization reversal in single-molecule magnets*, Stephen Hill, Gage Redler, Saiti Datta, Changhyun Koo, Chris Lampropoulos and George Christou, presented at the 53rd Conference on Magnetism and Magnetic Materials (MMM), Austin, TX, November 10-14, 2008.

Contributed talk: *High-frequency EPR studies of $[MN_{12}(ADEA)_8(CH_3COO)_{14}]\cdot 7CH_3CN$*, Stephen Hill, Sonali J. Shah, Christopher C. Beedle, Enrique del Barco, David N. Hendrickson, presented at the 11th International Conference on Molecule-based Magnets, Florence, Italy, 2008.

Contributed talk: *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, presented at the Southeastern Magnetic Resonance Conference, 2008, Tallahassee, FL.

Contributed talk: *High Frequency Electron Paramagnetic Resonance Study of Heterometallic Analogues of Mn_4 Cubane SMMs*, Changhyun Koo*, Patrick L. Feng, Christopher C. Beedle, David N. Hendrickson and Stephen Hill, presented at the Florida Inorganic Mini-Symposium (FIMS), Gainesville, September 13th (2008).

Contributed talk: *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, presented at the March 2008 APS meeting, New Orleans, LA (March 2008).

Contributed talk: *Looking for higher anisotropy barriers in single-molecule magnets*, Saiti Datta, Constantinos Milios, Euan Brechin and Stephen Hill, presented at the March 2008 APS meeting, New Orleans, LA (March 2008).

Contributed talk: *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, presented at the March 2008 APS meeting, New Orleans, LA (March 2008).

Contributed talk: *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, presented at the March 2008 APS meeting, New Orleans, LA (March 2008).

Contributed talk: *An antiferromagnetic supramolecular grid: a high frequency EPR overview*, Saiti Datta*, Oliver Waldmann, Andrew Kent, Victoria Milway, Laurie Thompson, Stephen Hill, presented at the Florida Inorganic Mini-Symposium (FIMS), Gainesville, September 22nd (2007).

Contributed talk: *HFEPR studies of new manganese-based single-molecule magnets*, Saiti Datta*, Constantinos J. Milios, Euan Brechin, and Stephen Hill, presented at the 52nd Magnetism and Magnetic Materials (MMM) Conference, November 5-9 (2007), Tampa, FL.

Contributed talk: *Temperature dependent behavior of the high frequency EPR linewidth and determination of the memory function in the spin gap system: $BaCuSi_2O_6$*, Sung Su Kim, S. E. Sebastian, I. R. Fisher, S. Hill*, presented at the 52nd Magnetism and Magnetic Materials (MMM) Conference, November 5-9 (2007), Tampa, FL.

Contributed talk: *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, presented at the March 2007 APS meeting, Denver, CO (March 2007).

Contributed talk: *High Frequency EPR studies of an antiferromagnetic supramolecular grid*, S. Datta, S. Hill, O. Waldmann, V. Milway, and L. Thompson, presented at the March 2007 APS meeting, Denver, CO (March 2007).

Contributed talk: *High Frequency Electron Paramagnetic Resonance Studies of $NiCl_2$-4SC$(NH_2)_2$*, S. Kim, S. Hill, P. Sengupta, V. S. Zapf, R. McDonald, M. Jaime, C. D. Batista, and S. Tozer, presented at the March 2007 APS meeting, Denver, CO (March 2007).

Contributed talk: *Behind the Giant Spin Approximation: the View from EPR*, A. Wilson*, J. Lawrence, E.-C. Yang, D. N. Hendrickson and S. Hill, presented at the Florida Inorganic Mini-Symposium (FIMS), Gainesville, October 14th (2006).

Contributed talk: *Pressure-dependence of the zero-field splittings for the Fe_8 single-molecule magnet*, S. Takahashi, E. Thompson, S. Hill*, S. W. Tozer, A. G. Harter and N. S. Dalal, presented at the March 2006 APS meeting, Baltimore, MD (March 2006).

Contributed talk: *Numerical Analysis of the EPR Spectrum of a Ni_4 Single-Molecule Magnet through Direct Diagonalization of the Four-Spin Hamiltonian*, A. Wilson* and S. Hill, presented at the March 2006 APS meeting, Baltimore, MD (March 2006).

Contributed talk: *Magnetic Quantum Tunneling in a Mn_{12} Single-Molecule Magnet Measured With High Frequency Electron Paramagnetic Resonance*, J. Lawrence*, S. Kim, S. Hill, M. Murugesu, G. Christou, presented at the March 2006 APS meeting, Baltimore, MD (March 2006).

Contributed talk: *Entanglement of Exchange-Coupled Dimers of Single Molecule Magnets*, S. Hill, A. Wilson, R. S. Edwards, N. Aliaga-Alcalde, G. Christou, presented at the 24th International Conference on Low Temperature Physics (LT24), August 10-17, 2005, Orlando, FL.

Contributed talk: *High Frequency EPR study of a Ni_4 Single Molecule Magnets*, J. Lawrence*, S. Hill, E.-C. Yang and D. N. Hendrickson, presented at the Florida Inorganic Mini-Symposium (FIMS), Gainesville, September 25th (2005).

Contributed talk: *Study of the Fermi velocity and scattering time by periodic orbit resonance in the quasi-one-dimensional conductor $(TMTSF)_2ClO_4$*, S. Takahashi*, S. Hill, S. Takasaki, J. Yamada, H. Anzai, presented at the March 2005 APS meeting, Los Angeles, CA (March 2005).

Contributed talk: *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, presented at the March 2005 APS meeting, Los Angeles, CA (March 2005).

Contributed talk: *Origin of the fast magnetization tunneling in $[Ni(hmp)(tBuEtOH)Cl]_4$*, Jon Lawrence*, Cem Kirman, Stephen Hill, En-Che Yang, David Hendrickson, presented at the March 2005 APS meeting, Los Angeles, CA (March 2005).

Contributed talk: *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, presented at the 49th Annual Conference on Magnetism and Magnetic Materials, Jacksonville, FL, November 7-11, 2004.

Contributed talk: *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, presented at the 49th Annual Conference on Magnetism and Magnetic Materials, Jacksonville, FL, November 7-11, 2004.

Contributed talk: *Angle-Resolved Mapping of the Fermi Velocity in Quasi-Two-Dimensional Conductors and Superconductors: Probing Quasiparticles in Nodal Superconductors*, S. Takahashi and S. Hill, presented at the 49th Annual Conference on Magnetism and Magnetic Materials, Jacksonville, FL, November 7-11, 2004.

Contributed talk: *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.

Contributed talk: 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, presented at SemiMag 16, Tallahassee, FL, August 2nd to 6th, 2004.

Contributed talk: *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.

Contributed talk: *Characterization of the S = 9 excited state in Mn12-bromoacetate by electron paramagnetic resonance*, K. Petukhov*, S. Hill, N. Chakov and G. Christou, presented at the March 2004 APS meeting, Montreal, Canada (March 2004).

Contributed talk: *Probing the Fermi surfaces of quasi-2D κ-$(ET)_2I_3$ 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, presented at the March 2004 APS meeting, Montreal, Canada (March 2004).

Contributed talk: *High field high frequency EPR techniques, and their application to single molecule magnets*, R.S. Edwards*, S. Hill, P. Goy and R. Wylde, presented at the VIIth International Symposium on Research in High Magnetic Fields (RHMF 2003), Toulouse, July 2003.

Contributed talk: *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, presented at the XIIth International Workshop on Atomic and Molecular Tunneling in Solids (QAMTS), University of Florida, Gainesville, June 22 to 25, 2003.

Contributed talk: *Microwave studies of the organic conductor λ-$(BETS)_2Fe_xGa_{1-x}Cl_4$ (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, presented at the March 2003 APS meeting, Austin, TX (March 2003).

Contributed talk: *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, presented at the March 2003 APS meeting, Austin, TX (March 2003).

Contributed talk: *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, presented at the March 2003 APS meeting, Austin, TX (March 2003).

Contributed talk: *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.

Contributed talk: *Periodic orbit resonance in $(TMTSF)_2ClO_4$*, A. Kovalev*, S. Hill; S. Takahashi, J. Yamada, and H. Anzai, presented at 47th Annual Conference on Magnetism and Magnetic Materials, Tampa, FL. Nov. 11-15, 2002.

Contributed talk: *Josephson plasma resonance in κ-(BEDT-TTF)$_2$Cu(NCS)$_2$ for close to in-plane magnetic fields,* A. E. Kovalev, S. Hill, J.S. Qualls, at International conference on the science and technology of synthetic metals (ICSM '02), Shanghai, China (July 2002).

Contributed talk: *Instrumentation for angle dependent high-field millimeter-wave spectroscopic investigations of low-dimensional magnetic and conducting systems*, Alexey Kovalev, Stephen Hill, presented at the March 2002 APS meeting, Indianapolis (March 2002).

Contributed talk: *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, presented at the March 2002 APS meeting, Indianapolis (March 2002).

Contributed talk: *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, presented at MMM, Seattle, Nov. 2001.

Oral presentation: *Single crystal EPR determination of the quantum energy level structure for Fe8 molecular clusters*, S. Maccagnano*, S. Hill, E. Negusse, A. Lussier, M.M. Mola, R. Achey, N.S. Dalal, presented at the Northwest Section Meeting of the American Physical Society, Seattle WA, May 25 to 26, 2001.

Contributed talk: *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, presented at the March 2001 Meeting of the American Physical Society, in Seattle, WA (March 2001).

Contributed talk: *Melting of the quasi-two-dimensional vortex lattice in κ-(ET)$_2$Cu(NCS)$_2$*, Stephen Hill, Monty Mola, James Brooks, and Jeremy Qualls, presented at the March 2001 Meeting of the American Physical Society, in Seattle, WA (March 2001).

Contributed talk: *Instrumentation for millimeter-wave magnetoelectrodynamic investigations of low dimensional conductors and superconductors*, Monty Mola*, and Stephen Hill, presented at the March 2001 Meeting of the American Physical Society, in Seattle, WA (March 2001).

Contributed talk: *Magneto-thermal instabilities in an organic superconductor*, M. M. Mola*, S. Hill, J. S. Brooks, and J. S. Qualls, presented at the 48th Annual Midwest Solid State Conference and Solid State Theory Symposium, Grand Forks, ND (October 2000).

Oral presentation: *Flux jumps and melting of the vortex lattice in κ-(ET)$_2$Cu(NCS)$_2$*, M.M. Mola, S. Hill, J. S. Qualls, J. S. Brooks, at International conference on the science and technology of synthetic metals, Bad Gastein, Austria (July 2000).

Oral presentation: *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, presented at the March 2000 Meeting of the American Physical Society, in Minneapolis, MN (March 2000).

Contributed talk: *Cyclotron Resonance in the Layered Perovskite Superconductor Sr$_2$RuO$_4$*, presented at the Fall meeting of the Japanese Physical Society (Sep. 24-28, 1999) - Authors: S. Hill, J. S. Brooks, Z. Q. Mao and Y. Maeno*.

Oral presentation: *Millimeter-wave Spectroscopy in High Magnetic Fields,* Stephen Hill and Monty Mola, March meeting of the American Physical Society, Atlanta (March 1999).

Oral presentation: *High sensitivity EPR of Mn$_{12}$-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).

Oral presentation: *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).

Oral presentation: *A semiclassical description of cyclotron resonance in highly anisotropic molecular metals,* S. Hill, March meeting of the American Physical Society, Kansas City MO (1997).

Oral presentation: *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).

Oral presentation: *A comparison of the high field quantum oscillations observed by electrodynamic and d.c. transport techniques in the organic superconductor* κ *-(BEDT-TTF)$_2$Cu(NCS)$_2$,* International conference on the science and technology of synthetic metals, Snowbird, UT (July 1996).

Oral presentation: *High magnetic field groundstate in the molecular conductor* η *-Mo$_4$O$_{11}$,* International conference on the science and technology of synthetic metals, Snowbird, UT (July 1996).

Oral presentation: *High frequency, high magnetic field, studies of the complex conductivity in the organic superconductor* κ *-(BEDT-TTF)$_2$Cu(NCS)$_2$,* S. O. Hill, J.S. Brooks and L. D. Seger, March meeting of the American Physical Society, St. Louis MO (1996).

Oral presentation: *High Magnetic Field SdH Oscillation and Phase Transition in a Low Dimensional Conductor* η*-Mo$_4$O$_{11}$*, 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).

Oral presentation: *Low Magnetic Field SdH Oscillation and Fermi Surface in a Low Dimensional Conductor* η*-Mo$_4$O$_{11}$,* S. Uji*, T. Terashima, H. Aoki, J.S. Brooks, S. Valfells, S. Hill, T. Sarrao, Z. Fisk, J. Goettee, P. Sandhu.

Departmental seminars and colloquia

(in reverse chronological order)

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*, Stephen Hill, 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*, Stephen Hill, Department of Chemical, University of North Florida, February 17th, 2012.

Departmental seminar: *Single-Molecule Magnets*, Stephen Hill, 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*, Stephen Hill, Department of Chemistry, North Carolina State University, September 25th, 2009.

Seminar: *Beyond the giant spin approximation: the view from EPR*, Stephen Hill, 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*, S. Hill*, presented Feb. 10th at the Advanced Materials and Process Engineering Laboratory (AMPEL), University of British Columbia, Vancouver, Canada.

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

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

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

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

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

Seminar: Magnetoelectrodynamic and thermodynamic studies of the vortex state in κ-(BEDT-TTF)$_2$Cu(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.

Posters

(in reverse chronological order)
Presented by S. Hill unless indicated otherwise by *

High-frequency EPR Studies of Supramolecular Aggregates of Mn_3, 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 ^{57}Fe 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. Hennrich, 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 Fe_8 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 $Pr_3Ga_5SiO_{14}$, 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: [$CuF_2(H_2O)_2$(pyrazine)], C. C. Beedle,* C. Morien, A. Prescimone, S. Tozer, J. Manson, J. A. Schlueter, E. K. Brechin, S. Hill, presented at the 55th Annual Rocky Mountain Conference on Magnetic Resonance, July 28 to August 1, 2013, Denver, CO.

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, presented at the 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 Fe_8, M. Shiddiq, J. Liu, C. C. Beedle, S. Hill, presented at the 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, Orlando, FL, October 7-11, 2012.

Cavity Perturbation Technique: The Effects of Crystal Size on the EPR Spectra of Fe_8, M. Shiddiq,* J. Liu, C. C. Beedle, S. Hill, presented at the 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, presented at the 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 Hil, presented at the 13th International Conference on Molecule-based Magnets, Orlando, FL, October 7-11, 2012.

EPR studies of CN bridged $Fe_2^{III}Ni^{II}$ complexes and their Fe^{III} mononuclear building-blocks, C.C. Beedle,* A. E. Kovalev, Y.-Z. Zhang, S. M. Holmes, S. Hill, presented at the 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, presented at the 13th International Conference on Molecule-based Magnets, Orlando, FL, October 7-11, 2012.

High-Frequency EPR Studies of the Coordination-Polymer [$CuF_2(H_20)_2$(pyrizine) Under Pressure, C. C. Beedle,* C. Morien, A. Prescimone, S. Tozer, J. Manson, J. A. Schlueter, E. K. Brechin, S. Hill, presented at the 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, presented at the 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, presented at the 243rd ACS National Meeting, March 25-29, 2012, San Diego, CA.

Locating the Hard Plane of Fe_8 Using a 9/5/1 Superconducting Vector Magnet, Eugene Miltsheyn*, J. Liu, C. C. Beedle and S. Hill, presented at the 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, presented at the Florida Inorganic Mini-Symposium (FIMS), Gainesville, October 7-8 (2011).

Decoherence in a Fe-based Magnetic Cluster, Z. Wang*, S. Datta, C. Papatriantafylopoulou, G. Christou, N. S. Dalal, J. van Tol, and S. Hill, presented at the 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, presented at the 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 $ReCl_4(CN)_2$ molecular magnet building block, J. Liu*, T. D. Harris, J. R. Long, and S. Hill, presented at the International Symposium and School on Multifunctional Molecule-based Materials (ISSMMM), Argonne National Lab, Chicago, IL, March 13-18, 2011.

EPR study of $CuF_2(pyz)(H_2O)_2$ Under Pressure, C. Morien*, S. Hill, S. Tozer, and J. Schlueter, presented at the International Symposium and School on Multifunctional Molecule-based Materials (ISSMMM), Argonne National Lab, Chicago, IL, March 13-18, 2011.

Role of Non-Collinear Zero-Field Splitting Tensors on the Quantum Tunneling of Magnetization in Single-Molecule Magnets, E. del Barco*, H. M. Quddusi, J. J. Henderson, J. Liu, K. Heroux, P. L. Feng, D. N. Hendrickson, and S. Hill, presented at the International Conference on Molecule-Based Magnetism (ICMM XII), Beijing, China, October 8-12, 2010.

Spin Decoherence in an Fe Based Magnetic Cluster, Z. Wang*, S. Datta, C. Papatriantafyllopoulou, G. Christou, N. S. Dalal, J. van Tol, and S. Hill, presented at the International Conference on Molecule-Based Magnetism (ICMM XII), Beijing, China, October 8-12, 2010.

Multi-Spin Analysis of the EPR Spectra of Mixed-Valent $Mn(II)_2Mn(III)_3$ Dicubane Single-Molecule Magnets, J. Liu*, C. C. Beedle, H. M. Quddusi, E. del Barco, K. Heroux, D. N. Hendrickson, and S. Hill, presented at the International Conference on Molecule-Based Magnetism (ICMM XII), Beijing, China, October 8-12, 2010.

Relieving Frustration: the Case of Antiferromagnetic Triangular Mn_3 Complexes, C. Koo, J. Liu*, P. Feng, D. N. Hendrickson, A. Amjad, E. del Barco and S. Hill, presented at the International Conference on Molecule-Based Magnetism (ICMM XII), Beijing, China, October 8-12, 2010.

Magnetic Studies of an Antiferromagnetic Triangular Mn_3 SMM, A. Amjad*, C. Koo, J. Liu, P. L. Feng, E.-S. Choi, E. del Barco, D. N. Hendrickson, and S. Hill, presented at the Florida Inorganic Mini-Symposium (FIMS), Gainesville, October 1-2 (2010).

Probing the Possibility of Vacuum Rabi Oscillations in the Fe_8 SMM, M. Muhandis*, J. Liu, and S. Hill, presented at the Florida Inorganic Mini-Symposium (FIMS), Gainesville, October 1-2 (2010).

High Frequency EPR Measurement of an Antiferromagnetically Coupled Mn Dimer Molecule, J. Liu*, J. Krzystek, G. Aromi, and S. Hill, presented at the Florida Inorganic Mini-Symposium (FIMS), Gainesville, October 1-2 (2010).

Relieving Frustration: the Case of Antiferromagnetic Triangular Mn_3 Complexes, C. Koo*, J. Liu, A. Amjad, P. L. Feng, E.-S. Choi, E. del Barco, D. N. Hendrickson, and S. Hill, presented at the Florida Inorganic Mini-Symposium (FIMS), Gainesville, October 1-2 (2010).

Magnetic Anisotropy in Radical Ferromagnet, Stephen Winter, Richard T. Oakley, Saiti Datta and Stephen Hill, presented at the Canadian Society of Chemistry conference (CSC2010), Toronto, Canada, May 29 to June 2, 2010.

Synthesis, Crystal Structure, Torque and EPR Measurements of Rb_2NaCrO_8 (S=1/2);New Candidate for Quantum Critical Phenomenon, M. Pati, J.-H. Park, S. Datta, R. J. Clark, S. Hill, and N. S. Dalal, presented at Florida ACS meeting, Orlando, FL, May 13-14, 2010.

BigLight: Discovery Science in the Terahertz to Infrared (THIR) Regime, G. Boebinger, S. Hill and J. Singleton, presented at a Symposium sponsored by the DoE Office of Science on Accelerators for America's Future, Washington, DC, Oct. 26th, 2009.

High frequency electron paramagnetic resonance investigation of modulated Mn_3Zn_2 single-molecule magnets, C. Koo, P. L. Feng, J. J. Henderson, E. del Barco, D. N. Hendrickson and S. Hill, presented at the Florida Inorganic Mini-Symposium (FIMS), Gainesville, October 2-3 (2009).

Magnetic Anisotropy of Prussian Blue Analog Films, D. M. Pajerowski, M. J. Andrus, J. E. Gardner, S. Datta, A. Ozarowski, S. Hill, D. R. Talham and M. W. Meisel, presented at the International Conference on Magnetism (ICM2009), July 26-31, 2009, Karlsruhe, Germany.

Chemistry and Biology at the National High Magnetic Field Laboratory, Arthur S. Edison, Timothy A. Cross, Joanna R. Long, Glenn A. Walter, Stephen Hill, Alan G. Marshall, presented at the 50th Experimental Nuclear Magnetic Resonance Conference (ENC), Alisomar, CA (March/April 2009).

Absorption spectrum of the single molecule magnet $[Ni(dbm)(MeOH)Cl]_4$, Daniel J. Arenas, Dimitrios Koukis, Saiti Datta, Chao Cao, Hai-Ping Cheng, David B. Tanner, Stephen Hill, Christopher C. Beedle, David N. Hendrickson, presented at the March 2009 APS meeting, Pittsburgh, PA (March 2009).

A new Mn_{12} single-molecule magnet with tetragonal (axial) symmetry: magnetic characterization, and single-crystal spectroscopy studies using ^{55}Mn NMR and high-field EPR (HFEPR), C. Lampropoulos, J. Lawrence, A. Harter, W. Wernsdorfer, K. A. Abboud, N. Dalal, S. Hill and G. Christou, presented at Southeastern Magnetic Resonance Conference, October 17-19, 2008, Tallahassee, FL.

A comparative EPR study of high- and low-spin Mn_6 single molecule magnets, Saiti Datta*, Erica Bolin, Constantinos J. Milios, Euan K. Brechin, and Stephen Hill, presented at the 11th International Conference on Molecule-based Magnets, Florence, Italy, 2008.

Spin dynamics in molecular magnets: fast detection of spin population within fixed energy levels, F. Macia,* S. Datta, S. Hill, J. M. Hernandez and J. Tejada, presented at the 11th International Conference on Molecule-based Magnets, Florence, Italy, 2008.

Anisotropic exchange in a tetranuclear CoII complex, Junjie Liu, Saiti Datta*, Erica Bolin, Jon Lawrence, Christopher C. Beedle, En-Che Yang, Philippe Goy, David N. Hendrickson and Stephen Hill, presented at the 11th International Conference on Molecule-based Magnets, Florence, Italy, 2008.

High-frequency EPR studies of $[MN_{12}(ADEA)_8(CH_3COO)_{14}]\cdot 7CH_3CN$, Gage Redler*, Saiti Datta, Stephen Hill, Sonali J. Shah, Christopher C. Beedle, Enrique del Barco, David N. Hendrickson, presented at the Florida Inorganic Mini-Symposium (FIMS), Gainesville, September 13th (2008).

High-frequency EPR studies of $[MN_{12}(ADEA)_8(CH_3COO)_{14}]\cdot 7CH_3CN$, Gage Redler*, Saiti Datta, Stephen Hill, Sonali J. Shah, Christopher C. Beedle, Enrique del Barco, David N. Hendrickson, presented at Southeastern Magnetic Resonance Conference, October 17-19, 2008, Tallahassee, FL.

Multi-high frequency electron paramagnetic resonance study of a Mn_3Ni series of single-molecule magnets, Changhyun Koo*, Patrick L. Feng, Christopher C. Beedle, David N. Hendrickson and Stephen Hill, presented at Southeastern Magnetic Resonance Conference, October 17-19, 2008, Tallahassee, FL.

Anisotropic exchange in tetranuclear Co(II) complexes, Junjie Liu*, Saiti Datta, Erica Bolin, Jon Lawrence, Christopher C. Beedle, En-Che Yang, Philippe Goy, David N. Hendrickson and Stephen Hill, presented at Southeastern Magnetic Resonance Conference, October 17-19, 2008, Tallahassee, FL.

Reducing Time to Degree and Improving Efficiency: Seven Years Later, S. Hill and M. W. Meisel, presented at the joint AAPT/APS conference on Graduate Education in Physics, American Center for Physics, College Park, MD, Jan 31 – Feb. 2, 2008.

High Frequency Electron Paramagnetic Resonance studies of a Mn_5 Single-Molecule Magnet with a Large Anisotropy Barrier, Changhyun Koo*, Chen-I Yang, Hui-Lien Tsai, and Stephen Hill, presented at the Florida Inorganic Mini-Symposium (FIMS), Gainesville, October 22nd (2007).

Electron Paramagnetic Resonance Studies of $NiCl_2$-$4SC(NH_2)_2$, Sung Su Kim*, Stephen Hill, V. S. Zapf, R. McDonald, M. Jaime, C.D. Batista S. Tozer, A. Paduan-Filho, presented at the Florida Inorganic Mini-Symposium (FIMS), Gainesville, October 22nd (2007).

High Frequency EPR studies of a Mn(II)-[3 x 3] grid, Saiti Datta, Stephen Hill, Oliver Waldmann, V. Milway and L.K.Thompson, Southeastern Magnetic Resonance Conference, November 3-5, 2006, Gainesville, FL.

Electron Paramagnetic Resonance studies of $NiCl_2$-$4SC(NH_2)_2$, S. Kim, S. Hill, V. S. Zapf, R. McDonald, M. Jaime, C. D. Batista, S. Tozer and A. Paduan-Filho, Southeastern Magnetic Resonance Conference, November 3-5, 2006, Gainesville, FL.

High Frequency Electron Paramagnetic Resonance Studies of High Spin Co(II) Complexes, Jon Lawrence, Stephen Hill, Chris Beedle, En-Che Yang, James Ma, David Hendrickson, Southeastern Magnetic Resonance Conference, November 3-5, 2006, Gainesville, FL.

EPR study on the spin dimer compound $BaCuSi_2O_6$, Sung Su Kim*, S.-C. Lee, A. Wilson, S.E. Sebastian, P. Tanedo, I.R. Fisher, P.A. Goddard, S. Cox, R.D.McDonald, N. Harrison, C.D. Batista and Stephen Hill, presented at the Florida Inorganic Mini-Symposium (FIMS), Gainesville, October 14th (2006).

EPR Characterization of Half-Integer-Spin Iron Molecule-Based Magnets, Saiti Datta*, Amalia Betancur-Rodriguez, Sheng-Chiang Lee, Stephen Hill, Dolos Foguet-Albiol, Rashmi Bagai and George Christou, presented at the Florida Inorganic Mini-Symposium (FIMS), Gainesville, October 14th (2006).

High-Frequency Electron Paramagnetic Resonance (HFEPR) Studies of High Spin Co (II) Complexes, J. Lawrence*, S.Hill, C. Beedle, E.-C. Yang, J. Ma, D. N. Hendrickson, presented at the Florida Inorganic Mini-Symposium (FIMS), Gainesville, October 14th (2006).

EPR Characterization of Half-Integer-Spin Iron Molecule-Based Magnets, Saiti Datta, Amalia Betancur-Rodriguez, Sheng-Chiang Lee, Stephen Hill, Dolos Foguet-Albiol, Rashmi Bagai and George Christou, presented at the International Conference on Molecule-based Magnets (ICMM 2006), August 13-17, 2006, Victoria, Canada.

High Frequency Electron Paramagnetic Resonance Study of a High Spin Co(II) Complex, Jon Lawrence, Chris Beedle, James Ma, Stephen Hill and David N. Hendrickson, presented at the International Conference on Molecule-based Magnets (ICMM 2006), August 13-17, 2006, Victoria, Canada.

High-Frequency EPR Characterization of a Triangular Mn_3 Single-Molecule Magnet, Sheng-Chiang Lee, Theocharis C. Stamatatos, Stephen Hill, Spyros P. Perlepes and George Christou, presented at the International Conference on Molecule-based Magnets (ICMM 2006), August 13-17, 2006, Victoria, Canada.

Pressure-dependent high-frequency EPR studies of single-molecule magnets, Emmitt Thompson, Susumu Takahashi, Andrew Harter, Stan Tozer, Stephen Hill and Naresh Dalal, presented at the International Conference on Molecule-based Magnets (ICMM 2006), August 13-17, 2006, Victoria, Canada.

A new Mn_{12} complex with Tetragonal (Axial) Symmetry: $[Mn_{12}O_{12}(O_2CCH_2Bu^t)_{16}(CH_3OH)_4]CH_3OH$, M. Murugesu*, W. Wernsdorfer, S. Hill and G. Christou, presented at the International Conference on Molecule-based Magnets (ICMM 2006), August 13-17, 2006, Victoria, Canada.

Development of ultra-high frequency microwave instrumentation for low-loss magnetic resonance spectroscopy at high magnetic fields, S-S. Kim*, S-C. Lee, A. Wilson, S. Takahashi, S. Hill, Southeastern Section of the American Physical Society meeting (SESAPS2005), November 10-12, 2005, Gainesville, FL.

High Frequency Electron Paramagnetic Resonance Studies of Single Molecule Magnets, Saiti Datta*, Amalia Betancur-Rodriguez, Jon Lawrence, Sung-Su Kim, Stephen Hill, Southeastern Section of the American Physical Society meeting (SESAPS2005), November 10-12, 2005, Gainesville, FL.

Magnetic Quantum Tunneling in a Mn_{12} Single Molecule Magnet, J. Lawrence, S.-C. Lee, S. Kim, S. Hill, N. Anderson, M. Murugesu and G. Christou, presented at the Florida Inorganic Mini-Symposium (FIMS), Gainesville, September 25th (2005).

Exchange coupling in Single Molecule Magnets, A. Wilson, S. Hill, R. S. Edwards, N. Aliaga-Alcalde and G. Christou, presented at the Florida Inorganic Mini-Symposium (FIMS), Gainesville, September 25th (2005).

Organic Superconductors, Emmitt Thompson*, S. Takahashi, S. Hill, 6th International Conference on Crystalline Organic Metals, Superconductors and Ferromagnets (ISCOM 2005), September 11-16, 2005, Key West, FL.

Entanglement of Exchange-Coupled Dimers of Single Molecule Magnets, S. Hill, A. Wilson*, R. S. Edwards, N. Aliaga-Alcalde, G. Christou, presented at the 24th International Conference on Low Temperature Physics (LT24), August 10-17, 2005, Orlando, FL.

Magnetic Quantum Tunneling in Mn12 Single Molecule Magnets Measured With High Frequency Electron Paramagnetic Resonance, J. Lawrence*, N. Anderson, A. Wilson, S. Hill, M. Murugesu, presented at the 24th International Conference on Low Temperature Physics (LT24), August 10-17, 2005, Orlando, FL.

Study of Periodic Orbit Resonance in $(TMTSF)_2ClO_4$, S. Takahashi, S. Hill, S. Takasaki, J. Yamada, and H. Anzai, presented at the 24th International Conference on Low Temperature Physics (LT24), August 10-17, 2005, Orlando, FL.

Development of ultra-high frequency microwave instrumentation for low-loss magnetic resonance spectroscopy at high magnetic fields, S. Takahashi*, S. C. Lee, A. Wilson, S. Hill, R. Wylde, P. Goy, presented at the 5th International Conference on Physical Phenomena at High Magnetic Fields (PPHMF-V), August 5-9, 2005, Tallahassee, FL.

Origin of the fast magnetization tunneling in the single-molecule magnet $[Ni(hmp)(tBuEtOH)Cl]_4$, C. Kirman, J. Lawrence*, S. Hill, E-C. Yang, and D. N. Hendrickson, presented at the 49th Annual Conference on Magnetism and Magnetic Materials, Jacksonville, FL, November 7-11, 2004.

Origin of the Fast Magnetization Tunneling in Tetranuclear Nickel Single-Molecule Magnets, D. N. Hendrickson, 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 Conference on Molecule-Based Magnets (ICMM 2004), Oct. 4-8, Tsukuba, Japan.

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, International Conference on Molecule-Based Magnets (ICMM 2004), Oct. 4-8, Tsukuba, Japan.

Fast Tunneling Jahn-Teller Isomer of the $[Mn_{12}O_{12}(O_2CC_6H_4\text{-}2\text{-}CH_3)_{16}(H_2O)_4] \cdot S$ Single-molecule Magnet, E. M. Rumberger, E. del Barco, J. Lawrence, S. Hill, A. D. Kent, L. N. Zakharov, A. L. Rheingold, D. N. Hendrickson, International Conference on Molecule-Based Magnets (ICMM 2004), Oct. 4-8, Tsukuba, Japan.

A method to study angle dependent high-field EPR/EMR using a cavity perturbation technique, Susumu Takahashi, Stephen Hill, Jon Lawrence, Micah North, and Naresh Dalal, presented at the Florida Inorganic Mini-Symposium, Gainesville, FL (Oct. 25, 2003).

Multi-spin Behavior in the Single Molecule Magnet Fe_8Br_8, David Zipse, J. Micah North, Naresh Dalal, Stephen Hill and Rachel Edwards, presented at the 33rd Southeastern Magnetic Resonance Conference (SEMRC), Tallahassee, FL (Oct. 17-19, 2003).

A method to study angle dependent high-field EPR/EMR using a cavity perturbation technique, Susumu Takahashi, Stephen Hill, Jon Lawrence, Micah North, and Naresh Dalal, presented at the 33rd Southeastern Magnetic Resonance Conference (SEMRC), Tallahassee, FL (Oct. 17-19, 2003).

High frequency electron paramagnetic resonance investigations of tetranuclear nickel-based single molecule magnets, R.S. Edwards*, S. Maccagnano, E-C. Yang, S. Hill, W. Wernsdorfer, D. Hendrickson, and G. Christou, presented at 47th Annual Conference on Magnetism and Magnetic Materials, Tampa, FL. Nov. 11-15, 2002.

On the origin of anomalous EPR peaks observed in Mn_{12}-Ac, S. Hill, R. S. Edwards, J. M. North, S. Maccagnano, N. S. Dalal, presented at International Conference on Molecule-based Magnets 2002 (ICMM, 2002), in Valencia, Spain, October 6th to 10th 2002.

Environmental factors influencing EPR in Mn_{12}-Ac and Fe_8Br, S. Hill, R. S. Edwards, J. M. North, K. Park, N. S. Dalal, presented at International Conference on Molecule-based Magnets 2002 (ICMM, 2002), in Valencia, Spain, October 6th to 10th 2002.

A comparative high frequency EPR study of monomeric and dimeric Mn_4 single molecule magnets, R. S. Edwards, S. Hill, S. Bhaduri, N. Aliaga-Alcade, E. Bolin, S. Maccagnano, G. Christou, and D. N. Hendrickson, presented at International Conference on Molecule-based Magnets 2002 (ICMM, 2002), in Valencia, Spain, October 6th to 10th 2002.

The search for new iron single-molecule magnets, Evan Rumberger, Stephen O. Hill, Rachel S. Edwards, Wolfgang Wernsdorfer, Lev N. Zakharov, Arnold L. Rheingold, George Christou, David N. Hendrickson, presented at International Conference on Molecule-based Magnets 2002 (ICMM, 2002), in Valencia, Spain, October 6th to 10th 2002.

Magnetooptical determination of the Fermi velocity in quasi-one-dimensional organic conductors, A. E. Kovalev, S. Hill, J.S. Qualls, at International conference on the science and technology of synthetic metals (ICSM '02), Shanghai, China (July 2002).

Electron magnetic resonance Fermi surface imaging: applications to organic conductors and Sr_2RuO_4, S. Hill, A. Kovalev, M. M. Mola, C. Palassis, Z. Q. Mao, Y. Maeno, and J. S. Qualls, presented at *Physical Phenomena in High Magnetic Fields - IV*, Santa Fe, NM, October 19 to 25, 2001.

D-strain, g-strain, and dipolar interactions in the Fe_8 and Mn_{12} single molecule magnets: an EPR lineshape analysis, Stephen Hill, Sara Maccagnano, Naresh Dalal, Randall Achey and Kyungwha Park, submitted to proc. *Physical Phenomena in High Magnetic Fields - IV*, presented at *Physical Phenomena in High Magnetic Fields - IV*, Santa Fe, NM, October 19 to 25, 2001.

Interlayer electrodynamics of the vortex state in κ-$(BEDT\text{-}TTF)_2Cu(NCS)_2$, M. M. Mola, S. Hill, J. S. Qualls, presented at the International Symposium on Crystalline Organic Metals, Superconductors and Ferromagnets (ISCOM '01), Hokkaido, Japan, September 10-14, 2001.

The critical state in κ-$(BEDT\text{-}TTF)_2Cu(NCS)_2$, S. Hill, M. M. Mola, J. S. Qualls, and J. S. Brooks, presented at the International Symposium on Crystalline Organic Metals, Superconductors and Ferromagnets (ISCOM '01), Hokkaido, Japan, September 10-14, 2001.

Single crystal EPR determination of the spin Hamiltonian parameters for Fe_8 molecular clusters, E. Negusse*, S. Maccagnano, R. Achey, A. Lussier, M.M. Mola, S. Hill, and N.S. Dalal, National Conference of Black Physics Students (NCBPS), Stanford University, CA, March 28 – April 1, 2001.

Single crystal EPR determination of the spin Hamiltonian parameters for Fe_8 molecular clusters, S. Maccagnano, R. Achey, E. Negusse, A. Lussier, M.M. Mola, S. Hill, and N.S. Dalal, VII International Conference on Molecule Based Magnets (ICMM2000), San Antonio, TX, September 16–21, 2000.

Determination of the vortex structure in κ-$(ET)_2Cu(NCS)_2$ by Josephson plasma resonance, M.M. Mola*, S. Hill, J. S. Qualls, J. S. Brooks, International Conference on the Science and Technology of Synthetic Metals (ICSM '98), Gastein, Austria, July 15-21 2000.

Periodic Orbit Resonances in κ-$(ET)_2I_3$, C. Palassis, M. Mola, J. Tritz, S. Hill, S. Uji, K. Kawano, M. Tamura, T. Naito, H. Kobayashi, International Conference on the Science and Technology of Synthetic Metals (ICSM '98), Gastein, Austria, July 15-21 2000.

Vortex Structure and Dynamics in κ-$(ET)_2Cu(NCS)_2$, M.M. Mola, S. Hill, J. S. Qualls, J. S. Brooks*, presented at the Sixth International Symposium on Research in High Magnetic Fields (RHMF2000), Porto, Portugal, 30 July - 3 August, 2000.

Dipole-dipole coupling in Mn_{12}-acetate, J. A. A. J. Perenboom, M. R. Schaapman, S. O. Hill, J. S. Brooks and N. S. Dalal, to appear in *Proc. "Physical Phenomena in High Magnetic Fields III"* (PPHMF-III), Tallahassee, FL, Oct 24-27 1998, edited by Z. Fisk, L. P. Gor'kov and J. R. Schrieffer (World Scientific, Singapore 1999).

The quantum hall effect in quasi-3D conductors, S. Hill, J. S. Brooks, J. S. Qualls, Z. Fisk, S. Uji and J. Sarrao, to appear in *Proc. "Physical Phenomena in High Magnetic Fields III"* (PPHMF-III), Tallahassee, FL, Oct 24-27 1998, edited by Z. Fisk, L. P. Gor'kov and J. R. Schrieffer (World Scientific, Singapore 1999).

High-sensitivity EPR of Mn_{12}-acetate, N. S. Dalal, B. Cage, T. Hathaway, S. Hill, T. Stalcup and J. S. Brooks, presented at 40th Rocky Mountain Conference, 21st EPR Symposium, Denver, CO - July 26th to 30th, 1998.

The phase diagram of alpha-(ET)2MHg(SCN)4 [M = K & Tl]: An Electrodynamic Investigation, S. Hill; J.S. Brooks; J.S. Qualls; B.W. Fravel; L.K. Montgomery, International Conference on the Science and Technology of Synthetic Metals (ICSM '98), Montpellier, France, July 12-18 1998.

Cyclotron Resonance in Low-Dimensional Molecular Metals, S. Hill, International Conference on the Science and Technology of Synthetic Metals (ICSM '98), Montpellier, France, July 12-18 1998.

High-Field Electrodynamic Investigation of $(TMTSF)_2ClO_4$, S. Hill; J.S. Brooks; S. Takasaki; J. Yamada; H. Anzai, International Conference on the Science and Technology of Synthetic Metals (ICSM '98), Montpellier, France, July 12-18 1998.

A multi frequency, resonator based system for high sensitivity high-field EPR investigations of small single crystals, S. Hill, N. S. Dalal and J. S. Brooks, High field EPR workshop, University of Illinois - Urbana, March 1 and 2, 1998.

High-sensitivity EPR of Mn12-Acetate, S. Hill, presented at Gordon Research Conference on "Magnetic Nanostructures" in Ventura, CA, 24th-29th Jan.

Single Crystal EPR of Mn_{12}-Acetate Clusters, S. Hill, J. A. A. J. Perenboom, T. Stalcup, N. S. Dalal, T. Hathaway and J. S. Brooks, presented at the Fifth International Symposium on Research in High Magnetic Fields (RHMF '97), Sydney, 4-6 August 1997.

Quantum tunneling of magnetization in Mn_{12}-acetate clusters, J. A. A. J. Perenboom, J. S. Brooks, S. O. Hill, T. Hathaway and N. S. Dalal, presented at the Fifth International Symposium on Research in High Magnetic Fields (RHMF '97), Sydney, 4-6 August 1997.

Cyclotron resonance studies of $(DMe\text{-}DCNQI)_2Cu$, S. Hill, P. S Sandhu, M. Boonman, S. Uji, J. A. A. J. Perenboom, A. Wittlin, J. S. Brooks, R. Kato, H. Sawa and S. Aonuma, presented at the International Conference on the Science and Technology of Synthetic Metals, Snowbird, Utah, July 1996; Synth. Met. **86**, 2113 (1997).

Effective mass and combination frequencies of de Haas-van Alphen oscillations in κ-$(ET)_2Cu(NCS)_2$, S. Uji, M. Chaparalla, S. Hill, P. S Sandhu, J. Qualls, L. Seger and J. S. Brooks, presented at the International Conference on the Science and Technology of Synthetic Metals, Snowbird, Utah, July 1996; Synth. Met. **85**, 1573 (1997).

Millimeter Wave Magneto-Optical Studies of Low-Dimensional Organic Conductors, S. Hill, M. Boonman, S. Uji, J. A. A. J. Perenboom, J. Singleton, A. Wittlin, J. S. Brooks, R. Kato, H. Sawa, S. Aonuma, M. Kurmoo and P. Day, presented at the International Conference on the Electronic Properties of Two Dimensional Systems, August 1995.

Effective mass anisotropy and many body effects in 2D GaAs/AlGaAs hole gases observed in very high magnetic fields: Comparison of theory and experiment, B. E. Cole, S. O. Hill, Y. Imanaka, Y. Shimamoto, W. Batty, J. Singleton, J. M. Chamberlain, N. Miura, M. Henini and T. Cheng, presented at the International Conference on the Electronic Properties of Two Dimensional Systems, August 1995, and Surf. Sci. **361-362**, 464 (Elsevier 1996).

Cyclotron resonance studies of the molecular conductor $(DMe\text{-}DCNQI)_2Cu$, S. Hill, M. Boonman, S. Uji, J. A. A. J. Perenboom, A. Wittlin, J. S. Brooks, R. Kato, H. Sawa and S. Aonuma, presented at *"Physical Phenomena in High Magnetic Fields II"* (PPHMF-II), Tallahassee, FL, May 6-9 1995.

Cyclotron resonance studies of electron dynamics in ET charge transfer salts, S. Hill, A. Wittlin, J. van-Bentum, J. Singleton, W. Hayes, J. A. A. J. Perenboom, M. Kurmoo and P. Day, presented at the International Conference on the Science and Technology of Synthetic Metals, Seoul, Korea, July 1994.

High magnetic field millimeter and submillimeter spectroscopy of ultra-high mobility 2D Hole Systems, S. Hill, B. E. Cole, P. J. Rodgers, T. J. B. M. Janssen, J. Singleton, J. M. Chamberlain, B. L. Gallagher, G. Hill and M. Henini, presented at the Fourth International Symposium on Research in High Magnetic Fields (RHMF '94), Nijmegen, 29-31 August 1994.

Cyclotron resonance studies of effective masses in BEDT-TTF salts, S. O. Hill, J. Singleton, F. L. Pratt, M. Doporto, W. Hayes, T. J. B. M. Janssen, J. A. A. J. Perenboom, M. Kurmoo and P. Day, presented at the International Conference on the Science and Technology of Synthetic Metals, Göteborg, Sweden, August 1992, and Synth. Met. **56**, 2566 (1993).