

CURRICULUM VITAE

Dr. Tatiana Guidi

Present position:

Permanent Senior Research Scientist at the ISIS Neutron Spallation Source - Excitation group (2008 – to date). I am the first responsible of the MARI inelastic neutron spectrometer at ISIS. I manage the scientific program and the instrument upgrades. I have been the scientific lead of a major upgrade project for MARI successfully completed in February 2019. I have been previously co-responsible of two different spectrometers at ISIS, MERLIN and LET.

I run my own research activity that is focused on molecular magnetism and low dimensional magnetism. I have a wide and long standing experience in neutron techniques applied to the study of magnetic properties of molecular magnets, low dimensional magnets, superconductors, quantum magnets. I specialize in the use of Large Scale Facilities instrumentations to investigate the magnetic structure and spin dynamics in molecular magnets. I use a variety of different techniques (inelastic neutron scattering, diffraction, polarized neutron diffraction) to investigate the microscopic magnetic properties of molecular nanomagnets and I am the neutron scientist expert in a network of many collaborators.

I currently hold an Hirsch index factor of 28 (according to the ISI Web of Science) and my papers have been cited more than 2870 times (2750 without self citations).

Education and titles:

- From November 2017 - Visiting Senior Lecturer at the School of Chemistry, Manchester University
- 11/12/2013 “**Abilitazione Scientifica Nazionale**” da **Professore II Fascia**, settore scientifico disciplinare 02/B1 (Fisica Sperimentale della Materia)- Italian Associate Professorship Habilitation.
- 14/01/2005: **PhD in Material Science**, in the Department of Ingegneria dei Materiali, delle Acque e dei Terreni Università Politecnica delle Marche. Title of the thesis: “*Spin excitations and magnetic properties of Molecular Nanomagnets*” (English). Advisor: Prof. Roberto Caciuffo.
- 21/02/2001: **Laurea in Fisica (MS)**, specialization in Condensed Matter Physics, Università degli Studi di Camerino, mark **110/110 cum laude**, title of the thesis: “*Dinamica solitonica in catene unidimensionali*” (Italian). Advisor: Prof. Fabio Marchesoni.

Past work experience:

- Aug.2006-
Jan. 2008 **Post Doc** at Hahn-Meitner-Institut, Berlin, Germany – Prof. Bella Lake research group - Department of magnetism and Superconductivity of quantum systems, 3 year contract with the subject “Neutron Scattering Studies of Molecular Magnets”
- Sept.2005-
July 2006 **Guest Researcher** at “Center for Neutron Research - National Institute of Standard and Technology”, Gaithersburg, Maryland (USA) 11 month contract for scientific collaboration.
- 2004-2006 **PostDoc** (“22 months Assegno di ricerca”) at the Dipartimento di Fisica ed Ingegneria dei Materiali e del Territorio, Facoltà di Ingegneria Università Politecnica delle Marche (Ancona) “*Effetti quantistici in nanomagnetici molecolari: nuove proprietà fisiche e applicazioni. Dinamica e struttura di Nanomagnetici Molecolari. Studi sperimentali*”

mediante scattering anelastico di neutroni, diffrazione neutronica e diffrazione di radiazione di sincrotrone”

14/01/2005 **PhD in Material Science Engineering**, Università Politecnica delle Marche (Italy)
Spin excitations and magnetic properties of Molecular Nanomagnets (English)
Supervisor: Prof. Roberto Caciuffo

July-October 2001 **Fellowship** from Department of Physics of DIBIAGA, Università Politecnica delle Marche (Italy) “*Calcolo dello scattering multiplo di neutroni in campioni di acqua leggera a temperatura ambiente in funzione della geometria del campione.*”

21-02-2001 **Degree of Physics** with full-honours mark, Università degli Studi di Camerino thesis dissertation:
Title: Soliton dynamics in one-dimensional discrete chains (Italian)
Supervisor: Prof. Fabio Marchesoni.

Awards:

- Award for the best PhD thesis in Neutron Spectroscopy (2008) SISN (Società Italiana di Spettroscopia Neutronica)
- Award for best for young researchers, ICMM2014 St. Petersburg, Russia (2014).
- ISIS Team award for the successful commissioning of MERLIN spectrometer (2009) and MARI (2019)

Foreign Languages:

English, fluent written and spoken.

Italian, mother-tongue.

Computer knowledge:

OS: Windows, Unix, Linux, MacOS and related software

Languages and programs: Python, Fortran77, Mathematica, Matlab

Affiliations and other activities:

Member of SISN (Società Italiana di Spettroscopia Neutronica)

Member of IOP Neutron Scattering Group (years 2012-2015)

Secretary and Treasurer for the IOP Neutron Scattering Group (years 2012-2015)

Reviewer for proposals of NIST and ORNL (USA)

Member of the proposal selection panel of college 4 - ILL (Grenoble, France) (2013-2016)

Reviewer for Physical Review B, Physical Review Letter, Chemical Physics, Review of Modern Physics, Europhysics Letter, Nature Communications.

Editorial experience:

Member of the editorial team of *Notiziario Neutroni e Luce di Sincrotrone* (CNR) as ISIS correspondent

Member of the ISIS production team for the ISIS Annual Review (years 2010-2012)

Teaching experiences:

2002-2005: Exercises Instructor of General Physics and Electromagnetism for Mechanical and Electronic Engineering courses at University Politecnica delle Marche (*Fisica Generale II* (Corso

di Ingegneria Elettronica V. O.), *Fisica Sperimentale II* (Ingegneria Meccanica), *Fisica Generale I* (Ingegneria Logistica e della Produzione, Informatica e Telecomunicazioni), *Fisica* (Corso di Costruzioni Edili e Recupero).

27-29 June 2005: Tutorial on “Spin Excitations in Molecular Nanomagnets” at the school: “Neutroni e magnetismo: dalle interazioni fondamentali alle applicazioni innovative” (SISN congress).

2013: Tutor at the SISN Summer School 22-27 September 2013, S. Giovanni, Valle Aurina: “Scattering anelastico e magnetismo”

2012-to date: Tutor at the ISIS Neutron School – “Inelastic neutron scattering and Magnetism”, “Neutron Interactions”, “Inelastic Scattering from Single Crystals”, “Inelastic scattering from polycrystals”, “Single crystal alignment”.

2017: Tutor at the Giornate Didattiche SISN 2017 Introduzione alle tecniche neutroniche per lo studio microscopico della materia, con applicazioni alla Fisica, Chimica, Biologia, Geologia e Beni Culturali 16-25 Settembre 2017 “Scattering anelastico e magnetismo”.

2018: Tutor at the Giornate Didattiche SISN 2018 Introduzione alle tecniche neutroniche per lo studio microscopico della materia, con applicazioni alla Fisica, Chimica, Biologia, Geologia e Beni Culturali 14-24 Settembre 2018, Torino – Pracatinat, Torino “Introduzione allo scattering magnetico”

2019: Tutor at the Giornate Didattiche SISN 2019 Introduzione alle tecniche neutroniche per lo studio microscopico della materia, con applicazioni alla Fisica, Chimica, Biologia, Geologia e Beni Culturali 13-24 Settembre 2019, Grenoble, France “Introduzione allo scattering magnetico”

From 2017- to date:

Visiting Senior Lecturer at the University of Manchester, Course of “Neutron Scattering” - School of Chemistry, University of Manchester.

Organizations of conferences/schools:

- *PNSXM (Polarised Neutrons and Synchrotron X-rays for Magnetsim) congress*, Venezia, 4-7 August 2003. Member of Local Organizing Committee.
- Organizer of the Neutron Spectroscopy session at Condensed Matter and Material Physics conference CMMP11 (Manchester, 13th December 2011)
- Serve on the Program Committee for the 2018 International Conference on Magnetism, **ICM2018** (<http://icm2018sf.org>) for the subtopic 2.02 Molecular magnetism.
- Organizing committee of the TEMM Theoretical and Experimental Magnetism Meeting (2013, 2014, 2017)
- Director of the advanced school: “Neutrons and Muons for Magnetism” The 2019 edition of the SISN Advanced School 2-6 September 2019, Ispra (Varese) Italy. I have been granted 5K euro funding within the SINE2020 training funding program to support the school organization.

Students/Post Doc supervision:

- Supervised a Post Doc, Elena Garlatti, visiting scientist at ISIS for 10 months (January-October 2018) after winning funding from the Della Riccia Foundation. I have supervised her projects on phonon

studies on single-ion magnets for data storage and qubit applications and in the context of density functional theory (DFT) calculations.

- Supervised Tatiana Renzi, master thesis (Laurea Specialistica) student from University of Florence (June 2014 – September 2015). Thesis: “Magnetic properties of the $Mn_3O(Et-sao)_3$ molecular magnet”. (September 2015) Supervisor: Dr. Tatiana Guidi. Co-supervisor: Prof. Alessandro Cuccoli.
- Supervised Davide Albertini, master thesis (Laurea Specialistica) student from University of Parma (placement student from Feb. -March 2017). Supervisor: Prof. Stefano Carretta. Co-supervisor: Dr. Tatiana Guidi.
- Supervised Riaz Hussein, PhD student supervised by Dr. Giuseppe Allodi , for a 3 month visit at ISIS (March-June 2017).
- Appointed as Opponent of the Examining Committee at the public defence of PhD student Ursula Bengård Hansen, at Niels Bohr Institute, University of Copenhagen, Denmark (supervisor Prof. Kim Lefmann) - August 2017.
- Supervisor of 1 Placement student Arianna Rocchetti (3 months) Università di Trento, Italy for “Laurea Magistrale”. Thesis: “Low Energy Transfer: Flux and Resolution” An implementation for the MantidProject software for the neutron spectrometer LET. (December 2013). Thesis advisor Prof. Aldo Fontana.
- Supervised visiting students from collaborators at University of Manchester, ILL and University of Parma (Mike Baker, Simon Ansbro).

External positions:

Visiting scientist at the Department of Physics, Parma University, invited by Prof. Giuseppe Amoretti and Prof. Stefano Carretta – October-December 2014, June-July 2016.

International collaborations:

- Prof. R. Winpenny group, Department of Chemistry, University of Manchester, Manchester, United Kingdom
- Prof. Stefano Carretta, Prof. Paolo Santini, Prof. Giuseppe Amoretti, Dipartimento di Fisica, Università di Parma
- Dr. Nick Chilton, Department of Chemistry, University of Manchester, Manchester, United Kingdom
- Prof. Roberta Sessoli, Dipartimento di Chimica, Università di Firenze
- Prof. R. Caciuffo, ITU Karlsruhe
- Dr H. Mutka, Dr S. Mason, Dr A. Stuneaut, Institute Laue-Langevin, Grenoble, France
- Dr B. Gillon, Laboratoire Leon Brillouin, Saclay, France
- Prof. B. Lake, Hahn-Meitner Institut, Berlino, Germany
- Prof. E. Brechin, University of Edinburgh
- Prof. M. Murrie, University of Glasgow
- Dr F. Pratt, Dr P. Manuel, ISIS, Rutherford Appleton Laboratory

- Prof. Joris van Slageren – University of Stuttgart
- Dr Marco Evangelisti – Zaragoza University

Projects involvement and co-ordination of scientific projects:

I have contributed to the following projects:

- Progetto PAIS “Magnetic correlations in low dimensional systems” (INFM).
- Progetto PRA “Mesoscopic Scale Magnetism in Molecular Clusters” (INFM)
- Progetto FIRB “Nanoorganizzazione di molecole ibride con proprietà a magnetiche e ottiche” (MIUR).
- Research Training Network *Quantum Effects in Molecular Nanomagnets Materials (VI programma quadro UE)*.
- Network of Excellence *Molecular Approach to Nanomagnets and Multifunctional Materials (VI programma quadro UE)*.
- Progetto FIRB 2012 “*New challenges in molecular nanomagnetism: from spin dynamics to quantum-information processing*”

I have co-ordinated the following internally financed projects on various instruments at ISIS:

- Installation of a cryopump in the MERLIN spectrometer
- Purchase of a new ³He insert, special heliox VT5 for LET
- MARI guide upgrade
- MARI detector electronics upgrade

I have been Proposer and Principal Investigator for 11 Scientific Proposals (60 days of total beam time) assigned after a peer-review process at ILL and co-investigator of 23 Scientific Proposals at ILL (116 days of total beam time).

I have been Proposer and Principal Investigator for 5 Scientific Proposals (15 days of total beam time) assigned after a peer-review process at ISIS and co-investigator of 20 Scientific Proposals at ISIS (106 days of total beam time) .

I have been Proposer and Principal Investigator for 13 successful Scientific Proposals at NCNR NIST (USA).

I have been Proposer and Principal Investigator for many other (more than 10) successful Scientific Proposals at LLB (France) , HMI (Germany), FRMII (Germany).

Seminars and invited talks:

- SISN (Società Italiana Spettroscopia Neutronica, Genova (Italy), 26-27 June 2003) conference:
Title: Spin Excitations in Molecular Nanomagnets.
- Incontro Nazionale sulla Fisica dei Magneti Molecolari, Modena (Italy), 21 December 2004 Centro Nazionale di Ricerca S 3 – INFN
Title: Spin excitations in magnetic molecular clusters probed by Inelastic Neutron Scattering
- SISN (Società Italiana Spettroscopia Neutronica, Ancona (Italy) 30 June –1 July 2005) conference:
Title: Dynamics of heterometallic Cr₇M (M= Zn, Mn, Ni) rings probed by inelastic neutron scattering
- NCNR seminar, NIST, Gaithersburg (Maryland, USA), 20 October 2005
Title: Spin dynamics of antiferromagnetic molecular rings probed by inelastic neutron scattering
- QUEMOLNA meeting 23–24 April 2006, Colegio Mayor Rector Peset - Valencia – Spain
Title: Inelastic neutron scattering study of the spin dynamics and quantum fluctuations in antiferromagnetic molecular rings
- **Invited talk:** Argonne National Laboratory, IL (USA), 23 June 2006 (invited)
Title: Spin dynamics of antiferromagnetic molecular rings probed by Inelastic Neutron Scattering
- Meeting of the Priority Programme “Molecular Magnetism” in Bad Dürkheim, Germany, May 6th – 9th, 2007
Title: Inelastic neutron scattering study of hexanuclear Mn(III)-based clusters with high anisotropy barrier
- BENSC users’ meeting, 23-24 May 2007, HMI Berlin, Germany
Title: Inelastic Neutron Scattering study of hexanuclear Mn(III)-based single molecule magnets.
- 4th European Conference on Neutron Scattering, 25-29 June 2007 Lund, Sweden
Title: Quantum oscillations of the total spin in a heterometallic antiferromagnetic ring: Evidence from neutron spectroscopy
- Seminar at BESSY, 27 August 2007, Berlin, Germany
Title: Inelastic Neutron Scattering study of spin dynamics in Molecular Nanomagnets
- **Invited talk** at ORNL Users Week, October 8-11, 2007, Oak Ridge, TN (USA)
Title: Inelastic Neutron Scattering study of spin excitations in molecular nanomagnets.
- ISIS seminar, June 24, 2008, Rutherford Appleton Laboratory, Didcot (UK)
Title: Quantum effects in the spin dynamics of molecular nanomagnets probed by inelastic neutron scattering
- SISN (Società Italiana Spettroscopia Neutronica) conference, Ancona (Italy) 30 June –1 July 2008
Invited talk: SISN prize for the best PhD thesis on neutron scattering
Title: Spin excitations and magnetic properties of molecular nanomagnets
- **Invited Seminar** at Department of Physics, University of Oxford, Clarendon Laboratory, Oxford (UK), November 6, 2008
Spin excitations and quantum effects in Molecular nanomagnets probed by neutron scattering
- Contemporary Science talk to the “Living in a Materials World teacher development weekend”, ISIS, June 26th, 2009
Molecular Nanomagnets
- Oral presentation in the Oliver Kahn Session – European Conference of Molecular Magnets, Wroclaw (Poland) 4-7 October 2009
Title: Spin Dynamics and spin density distribution in antiferromagnetic molecular rings
- Magnet '09, I convegno nazionale di magnetismo, Rome, 27-29 October 2009.
Title: Spin Dynamics and Spin Density Distribution in Antiferromagnetic Molecular Rings
- **Invited Seminar** at Department of Physics, University of Birmingham, Condensed Matter Group, Birmingham (UK), March 27, 2009 Spin excitations and quantum effects in molecular nanomagnets
- Oral presentation in the Oliver Kahn Session – European Conference of Molecular Magnets, Wroclaw (Poland) 4-7 October 2009 Title: Spin Dynamics and spin density distribution in antiferromagnetic molecular rings
- Magnet '09, I convegno nazionale di magnetismo, Rome, 27-29 October 2009. Title: Spin Dynamics and Spin Density Distribution in Antiferromagnetic Molecular Rings
- Contemporary Science talk at “Living in a Materials World teacher development weekend”, ISIS, 17th July 2010 Title: "Molecular Nanomagnets"
- **Invited talk** at TEM meeting, RAL (UK) 16-17 June 2011 Title: Direct Access to the Spin Correlations within Zero Dimensional Spin systems
- Talk at the 12th International Conference on Molecule-Based Magnets, Beijing, China, October 8-12, 2010
Title: "A Spectroscopic Study of Mn₆ Clusters"

- Seminar at the Laboratoire Léon Brillouin, 11th January 2011: Title: "Direct Access to the Spin Correlations within Zero Dimensional Spin Systems"
- Talk and poster at JEMS 2012 (Parma, 13 September 2012)
- **Invited talk at FLIPPER 2013 (Grenoble, 23 to 25 January 2013)**
- **Invited talk at the Workshop: Development of Functionalized Molecule-based Magnetic Materials (Tohoku University – Japan, 19- 21 February, 2013)**
- **Invited talk at the workshop: Functionalized molecule-based magnetic materials. Title: Mapping of spin correlations with neutron scattering (ZiF- Bielefeld, Germany, 24 – 27 November 2014)**
Title: "Mapping of spin correlations with neutron scattering"
- **Invited seminar at Department of Physics, Universtiy of Tor Vergata (Rome), Title: "Correlazioni dinamiche nei magneti molecolari" 25 February 2015.**
- General talk on neutron scattering at the UCL students visiting ISIS (20th January 2015)
- **Invited talk at the Theoretical and Experimental Magnetism Meeting 2015: 'Finite size effects in a chain of antiferromagnetically coupled spins 3/2'**
- ISIS Away day - 'MARI upgrade' (2016)
- Excitation group away day talk: 'INS study of single and entangled rings',_the Elephant Hotel, Pangbourne, 21-22 January 2016.
- SISN 2016 – Ancona, Italy; **invited talk: *Direct observation of finite size effects in chains of antiferromagnetically coupled spins***
- NMUM 2016 – Warwick University. **Invited talk: *Direct observation of finite size effects in chains of antiferromagnetically coupled spins***
- JCNS and FLIPPER 2016 – Tutzling, Germany; **Invited talk: Antiferromagnetic molecular rings: spin density and dynamics**
- Sixth Annual Niels Bohr International Academy Workshop on ESS Science 7-8 November 2016, ESS Lund, **Invited talk: INS study of single and entangled rings**
- Excitation group away day talk: Mn12 single molecule magnet: 20 years after', Eynsham Hall, 26-27 January 2017
- Superstipes, Ischia 4-10 June 2017, **invited talk: *INS study of single and entangles rings***
- **Invited talk at the Bielefeld MolMag workshop November 6-8, 2017, Bielefeld, Germany (ZiF- Bielefeld, Germany, November 6-8, 2017)**
- **Invited talk at the 43rd International Conference on Coordination Chemistry, Sendai, Japan (30th July – 4th of August 2018)**
- **Invited talk, Keynote Lecture at the International Conference on Molecule-based Magnets – ICMM2018, Rio de Janeiro, Brazil, 1-5 September 2018**
- **Invited talk at Nordita, Sweden, 20 November 2018.**
- **Plenary talk at the European Conference on Neutron Scattering: "Neutron scattering techniques for molecular magnetism", VII European Conference on Neutron Scattering 2019 Saint-Petersburg, Russia, 30 June-5th July 2019.**
- **Invited talk at the APS March meeting, Boston (MA, USA), March 4-8, 2019.**
- **Invited talk at the Multiscale phenomena in molecular matter, Kraków (Poland) 1-4 July 2019.**
- **Invited talk at Superstipes, Ischia (Italy) 23-29 June 2019.**
- **Invited Seminar at UCL, London, Department of Physics, 8 May 2019.**
- **Invited Seminar at Universidad de Zaragoza, Department of Physics, 8 Novemebr 2019.**
- **Invited talk at the MRS Fall Meeting, Boston, 1-6 December 2019**

Publications:

Books:

Book chapter:

T. Guidi: *Neutron Spectroscopy of Molecular Nanomagnets* in the book: “Molecular Cluster Magnets” – World Scientific Series in Nanoscience and Nanotechnology. vol. 3 - Editor: R.E.P. Winpenny -ISBN: 978-981-4322-94-2

Scientific papers:

1) C.Cattuto, G.Costantini, T.Guidi, and F.Marchesoni,
Elastic strings in solids:Discrete kink diffusion,
Phys. Rev. B **63**, 094308 (2001).

2) C.Cattuto, G.Costantini, T. Guidi, and F.Marchesoni,
Driven kinks in discrete chains: Phonon damping,
Phys. Rev. E **63**, 046611 (2001).

3) S. Carretta, J. Van Slageren, T. Guidi, E. Livioti, C. Mondelli, D. Rovai, A. Cornia, A. L. Dearden, F. Carsughi, M. Affronte, C. D. Frost, R. E. P. Winpenny, D. Gatteschi, G. Amoretti, R. Caciuffo,
Microscopic spin Hamiltonian of a Cr₈ antiferromagnetic ring from inelastic neutron scattering,
Phys. Rev. B **67**, 094405 (2003).

4) J. Mira, F. Rivadulla, J. Rivas, A. Fondando, T.Guidi, R.Caciuffo, F.Carsughi, P. G. Radaelli, and J. B. Goodenough, *Structural transformation induced by magnetic field and colossal magnetoresistance response above 313 K in MnAs*,
Phys. Rev. Lett. **90**, 972031 (2003).

5) J. Mira, F. Rivadulla, J. Rivas, A Fondando, R. Caciuffo, F. Carsughi, T. Guidi, J.B. Goodenough.
MnAs: magnetic-field induced structural transformation and associated magnetoresistance.
Bulletin of the American Physical Society, Vol. **48**, No. 1, p. 283 (2003).

6) M. Affronte, T. Guidi, R. Caciuffo, S. Carretta, G. Amoretti, J. Hinderer, I. Sheikin, A. G. M. Jansen, A. A. Smith, R. E. P. Winpenny, J. van Slageren, D. Gatteschi,
Mixing of magnetic states in a Cr₈ molecular ring,
Phys. Rev. B **68**, 104403 (2003).

7) O. Waldmann, T. Guidi, S. Carretta, C. Mondelli, and A. L. Dearden,
Elementary excitations in the cyclic molecular nanomagnet Cr₈,
Phys. Rev. Lett. **91**, 237202 (2003).

8) S. Carretta, P. Santini, E. Livioti, N. Magnani, T. Guidi, R. Caciuffo, and G. Amoretti ,
Macroscopic evidence of quantum coherent oscillations of the total spin in Mn-[3x3],
Eur. Phys. J. B **36**, 169 (2003).

9) F. Carsughi, G. Baio, D. Rinaldi, T. Guidi, R. Caciuffo, D. Fiorani,
Interparticle magnetic correlation in a nanosized maghemite system,
J. Magn. Magn. Mater. **272–276**, e1173 (2004).

10) M. Affronte, T. Guidi, R. Caciuffo, S. Carretta, G. Amoretti, J. Hinderer, I. Sheikin, R.E.P. Winpenny, J. van Slageren, D. Gatteschi,
Heat capacity of Cr₈ molecular ring in magnetic field,
J. Magn. Magn. Mater. **272–276**, 1050 (2004).

11) T. Guidi, G. Amoretti, R. Caciuffo, S. Carretta, A. Cornia, C. D. Frost, E. Livioti,
Inter-multiplet transitions in the Fe₄ magnetic cluster,
J. Magn. Magn. Mater. **272–276**, e777 (2004).

- 12) T. Guidi, S. Carretta, P. Santini, E. Livioti, N. Magnani, C. Mondelli, O. Waldmann, L. K. Thompson, L. Zhao, C. D. Frost, G. Amoretti, and R. Caciuffo, *Inelastic neutron scattering study of the molecular grid nanomagnet Mn-[3x3]*
Phys. Rev. B **69**, 104432 (2004).
- 13) S. Carretta, P. Santini, E. Livioti, N. Magnani, T. Guidi, R. Caciuffo, G. Amoretti,
Quantum fluctuations of the total spin in molecular nanomagnets: Evidence from torque and specific heat,
J. Appl. Phys. **95**, 7348 (2004).
- 14) S. Carretta, P. Santini, G. Amoretti, T. Guidi, R. Caciuffo, A. Candini, A. Cornia, D. Gatteschi, M. Plazanet, J. A. Stride,
Intra- and inter-multiplet magnetic excitations in a tetrairon(III) molecular cluster.
Phys. Rev. B **70**, 214403 (2004).
- 15) R. Caciuffo, T. Guidi, G. Amoretti, S. Carretta, E. Livioti, P. Santini, C. Mondelli, G. Timco, C. A. Muryn, R. E. P. Winpenny
Spin dynamics of heterometallic Cr₇M wheels (M = Mn, Zn, Ni) probed by inelastic neutron scattering.
Phys. Rev. B **71**, 174407 (2005).
- 16) P. Santini, S. Carretta, G. Amoretti, T. Guidi, E. Livioti, R. Caciuffo, A. Caneschi, D. Rovai, Y. Qui, J. R. D. Copley
Spin dynamics and tunneling of the Néel vector in the Fe₁₀ magnetic wheel.
Phys. Rev. B **71**, 184405 (2005).
- 17) J. van Slageren, P. Rosa, A. Caneschi, R. Sessoli, H. Casellas, Y. V. Rakitin, L. Cianchi, F. Del Giallo, G. Spina, A. Bino, A.-L. Barra, T. Guidi, S. Carretta, R. Caciuffo
Static and Dynamic Magnetic Properties of an [Fe₁₃]cluster
Phys. Rev. B **73**, 014422 (2006).
- 18) R. Caciuffo, T. Guidi, G. Amoretti, S. Carretta, N. Magnani, P. Santini, C. Mondelli.
Spin dynamics of Molecular Nanomagnets
Physica B **385**, 301 (2006).
- 19) S. Carretta, P. Santini, G. Amoretti, T. Guidi, J. Dyson, R. Caciuffo, J.A. Stride, A. Caneschi, J.R.D. Copley,
Inelastic-neutron-scattering study of excited spin multiplets and low-energy phonons in the Fe-8 nanomagnet: Implications for relaxation,
Phys. Rev. B **73**, 144425 (2006).
- 20) T. Guidi, J. R. D. Copley, Y. Qiu, S. Carretta, P. Santini, G. Amoretti, G. Timco, R. E. P. Winpenny, C. L. Dennis, and R. Caciuffo, *Spin dynamics of Fe₇M (M=Zn, Mn) heterometallic rings probed by neutron spectroscopy*,
Phys. Rev. B **75**, 014408 (2007).
- 21) S. Carretta, P. Santini, G. Amoretti, T. Guidi, J. R. D. Copley, Y. Qiu, R. Caciuffo, G. Timco, R. E. P. Winpenny,
Quantum oscillations of the total spin in a heterometallic antiferromagnetic ring: Evidence from neutron spectroscopy,
Phys. Rev. Lett. **98**, 167401 (2007).
- 22) G. Amoretti, R. Caciuffo, S. Carretta, T. Guidi, N. Magnani, P. Santini, *Inelastic Neutron Scattering Investigations of Molecular Nanomagnets*,
Inorganica Chimica Acta **361**, 3771 (2008).
- 23) S. Carretta, T. Guidi, P. Santini, G. Amoretti, O. Pieper, B. Lake, J. van Slageren, F. El Hallak, W. Wernsdorfer, H. Mutka, M. Russina, C. J. Milios, and E. K. Brechin, *Breakdown of the Giant Spin Model in the Magnetic Relaxation of the Mn₆ Nanomagnets*,
Phys. Rev. Lett. **100**, 157203 (2008).
- 24) Songxue Chi, D. T. Adroja, T. Guidi, R. Bewley, Shiliang Li, Jun Zhao, J.W. Lynn, C. M. Brown, Y. Qiu, G. F. Chen, J. L. Lou, N. L. Wang, and Pengcheng Dai, *Crystalline Electric Field as a Probe for Long-Range Antiferromagnetic Order and Superconducting State of CeFeAsO_{1-x}F_x*,

Phys. Rev. Lett. **101**, 217002 (2008).

25) R. A. Ewings, T. G. Perring, R. I. Bewley, T. Guidi, M. J. Pitcher, D. R. Parker, S. J. Clarke, and A. T. Boothroyd, *High-energy spin excitations in BaFe₂As₂ observed by inelastic neutron scattering*, **Phys. Rev. B** **78**, 220501(R) (2008).

26) D. Christianson, E. A. Goremychkin, R. Osborn, S. Rosenkranz, M. D. Lumsden, C. D. Malliakas, I. S. Todorov, H. Claus, D. Y. Chung, M. G. Kanatzidis, R. I. Bewley, T. Guidi, *Unconventional superconductivity in Ba_{0.6}K_{0.4}Fe₂As₂ from inelastic neutron scattering*, **Nature**, **456**, 930 (2008).

27) M. Ishikado, R. Kajimoto, S. Shamoto, M. Arai, A. Iyo, K. Miyazawa, P. M. Shirage, H. Kito, H. Eisaki, S. Kim, H. Hosono, T. Guidi, R. Bewley, S. M. Bennington, *Two-Dimensional Spin Density Wave State in LaFeAsO*, **J. Phys. Soc. Jpn** **78**, 043705 (2009).

28) A. Bianchi, S. Carretta, P. Santini, G. Amoretti, T. Guidi, Y. Qiu, J. R. D. Copley, G. Timco, C. Muryn, and R. E. P. Winpenny, *Rotational bands in open antiferromagnetic rings: A neutron spectroscopy study of Cr₃Zn*, **Phys. Rev. B** **79**, 144422 (2009).

29) S. Carretta, T. Guidi, P. Santini, G. Amoretti, O. Pieper, B. Lake, J. van Slageren, F. El Hallak, W. Wernsdorfer, H. Mutka, M. Russina, C.J. Milios, E.K. Brechin, *Neutron spectroscopy and magnetic relaxation of the Mn₆ nanomagnets*,

Polyhedron **28**, 1940 (2009).

30) O. Pieper, T. Guidi, S. Carretta, J. van Slageren, F. El Hallak, B. Lake, P. Santini, G. Amoretti, H. Mutka, M. Koza, M. Russina, A. Schnegg, C.J. Milios, E.K. Brechin, A. Julia, and J. Tejada, *Inelastic neutron scattering and frequency domain magnetic resonance studies of S=4 and S=12 Mn₆ single-molecule magnets*, **Phys. Rev. B** **81** 174420 (2010);

31) D. L. Quintero-Castro, B. Lake, E. M. Wheeler, A. T. M. N. Islam, T. Guidi, K. C. Rule, Z. Izaola, M. Russina, K. Kiefer, and Y. Skourski, *Magnetic excitations of the gapped quantum spin dimer antiferromagnet Sr₃Cr₂O₈*, **Phys. Rev. B** **81**, 014415 (2010).

32) M. D. Lumsden, A. D. Christianson, E. A. Goremychkin, S. E. Nagler, H. A. Mook, M. B. Stone, D. L. Abernathy, T. Guidi, G. J. MacDougall, C. de la Cruz, A. S. Sefat, M. A. McGuire, B. C. Sales and D. Mandrus, *Evolution of spin excitations into the superconducting state in FeTe_{1-x}Se_x*, **Nature Physics** **6**, 182 - 186 (2010)

33) C. Tassel, J. Kang, C. Lee, O. Hernandez, Y. Qiu, W. Paulus, E. Collet, B. Lake, T. Guidi, M.-H. Whangbo, C. Ritter, H. Kageyama, and S.-H. Lee, *Ferromagnetically Coupled Shastry-Sutherland Quantum Spin Singlets in (CuCl)LaNb₂O₇*, **Physic. Rev. Lett.** **105**, 167205 (2010)

34) Elisa M. Wheeler, Bella Lake, A. T. M. Nazmul Islam, Manfred Reehuis, Paul Steffens, Tatiana Guidi, and Adrian H. Hill, *Spin and orbital order in the vanadium spinel MgV₂O₄*, **Phys. Rev. B** **82**, 140406 (2010)

35) IP Silverwood, NG Hamilton, A McFarlane, RM Ormerod, T Guidi, J Bones, et al (5) *Experimental arrangements suitable for the acquisition of inelastic neutron scattering spectra of heterogeneous catalysts*. **Review of Scientific Instruments** **82**, 034101 (2011).

36) T. Lancaster, J.S. Moeller, S.J. Blundell, F.L. Pratt, P.J. Baker, T. Guidi, G.A. Timco, R.E.P. Winpenny *Observation of a level crossing in a molecular nanomagnet using implanted muons*, **J. Phys.: Condens. Matter** **23**, 242201 (2011).

37) R Ewings, T Perring, J Gillett, S Das, S Sebastian, A Taylor, T Guidi, A Boothroyd, *Itinerant spin excitations in SrFe₂As₂ measured by inelastic neutron scattering*, **Phys Rev B** **83**, 214519 (2011)

- 38) Castellan JP, Rosenkranz S, Goremychkin EA, Chung DY, Todorov IS, Kanatzidis MG, Eremin I, Knolle J, Chubukov AV, Maiti S, Norman MR, Weber F, Claus H, Guidi T, Bewley RI, Osborn R. *Effect of Fermi Surface Nesting on Resonant Spin Excitations in Ba_{1-x}K_xFe₂As₂*. **PHYSICAL REVIEW LETTERS**, vol. **107**, 177003 (2011).
- 39) Toth S, Lake B, Hradil K, Guidi T, Rule KC, Stone MB, Islam ATMN. *Magnetic Soft Modes in the Distorted Triangular Antiferromagnet alpha-CaCr₂O₄*. **PHYSICAL REVIEW LETTERS**, vol. **109**, 127203 (2012).
- 40) Liu MS, Harriger LW, Luo HQ, Wang M, Ewings RA, Guidi T, Park H, Haule K, Kotliar G, Hayden SM, Dai PC. *Nature of magnetic excitations in superconducting BaFe_{1.9}Ni_{0.1}As₂*. **NATURE PHYSICS**, vol. **8**, p. 376-381(2012).
- 41) Jeong J, Goremychkin EA, Guidi T, Nakajima K, Jeon GS, Kim SA, Furukawa S, Kim YB, Lee S, Kiryukhin V, Cheong SW, Park JG. *Spin Wave Measurements over the Full Brillouin Zone of Multiferroic BiFeO₃*. **PHYSICAL REVIEW LETTERS**, vol. **108**, 077202 (2012).
- 42) Baker LM, Guidi T, Carretta S, Ollivier J, Mutka H, Güdel HU, Timco GA, McInnes EJJ, Amoretti G, Winpenny REP and Santini P. *Spin dynamics of molecular nanomagnets unravelled at atomic scale by four-dimensional inelastic neutron scattering*. **NATURE PHYSICS**, vol. 8, p 906 (2012).
See also **Nature Physics News and Views**: Molecular magnets: Lord of the rings, Christian Rüegg Nature Physics 8,(2012) doi:10.1038/nphys2461
- 43) Le MD, McEwen KA, Rotter M, Jensen J, Bewley RI, Guidi T, Fort D (2012). *Dispersive crystal field excitations and quadrupolar interactions in UPd₃*. **JOURNAL OF PHYSICS. CONDENSED MATTER**, vol. 24, 036002 (2012).
- 44) Baker ML, Timco GA, Piligkos S, Mathieson JS, Mutka H, Tuna F, Kozłowski P, Antkowiak M, Guidi T, Gupta T, Rath H, Woolfson RJ, Kamieniarz G, Pritchard RG, Weihe H, Cronin L, Rajaraman G, Collison D, McInnes EJJ, Winpenny REP. *A classification of spin frustration in molecular magnets from a physical study of large odd-numbered-metal, odd electron rings*. **PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA**, vol. 109 no. 47, 19113–19118 (2012).
- 45) S. Toth, B. Lake, K. Hradil, T. Guidi, K. C. Rule, M. B. Stone, and A. T. M. N. Islam *Magnetic Soft Modes in the Distorted Triangular Antiferromagnet alpha-CaCr₂O₄*. **Physical Review Letters** **109**,127203 (2012).
- 46) S Price, Y Su, Y Xiao, DT Adroja, T Guidi et al. *Evidence of Spin Resonance Signal in Oxygen Free Superconducting CaFe_{0.88}Co_{0.12}AsF: An Inelastic Neutron Scattering Study* **J Phys Soc Jpn** 82, no. **10** , 104716 (2013).
- 47) D Schmidiger, P Bouillot, T Guidi, R Bewley, C Kollath et al. *Spectrum of a Magnetized Strong-Leg Quantum Spin Ladder* **Phys Rev Lett** 111, no. **10**, 107202 (2013).
- 48) K Tomiyasu, T Yokobori, Y Kousaka, RI Bewley, T Guidi et al. *Emergence of Highly Degenerate Excited States in the Frustrated Magnet MgCr₂O₄* **Phys Rev Lett** **110**, no. 7, 077205 (2013).
- 49) K Fritsch, KA Ross, Y Qiu, JRD Copley, T Guidi et al. *Antiferromagnetic spin ice correlations at (1/2,1/2,1/2) in the ground state of the pyrochlore magnet Tb₂Ti₂O₇* **Phys Rev B** **87**, no. **9** 094410 (2013).
- 50) D Lennon, R Warringham, T Guidi, SF Parker *Characterisation of hydrocarbonaceous overlayers important in metal-catalysed selective hydrogenation reactions* **Chem Phys** **427**, 49-53 (2013).

- 51) M. Ramazanoglu, J. Lamsal, G. S. Tucker, J.-Q. Yan, S. Calder, T. Guidi, T. Perring, R. W. McCallum, T. A. Lograsso, A. Kreyssig, A. I. Goldman, and R. J. McQueeney *Two-dimensional magnetic interactions in LaFeAsO* **Phys Rev B** **87**, 140509 (2013).
- 52) E Colacio, J Ruiz, E Ruiz, E Cremades, J Krzystek, J. Krzystek, Stefano Carretta, Dr. Joan Cano, Tatiana Guidi, Wolfgang Wernsdorfer and Euan K. Brechin, *Slow Magnetic Relaxation in a Co-II-Y-III Single-Ion Magnet with Positive Axial Zero-Field Splitting* **Angew Chem Int Ed** **52**, no. 35 9130-9134 (2013).
- 53) A Aczel, P Baker, D Bugaris, J Yeon, H zur Loye, D. E. Bugaris, J. Yeon, H.-C. zur Loye, T. Guidi, and D. T. Adroja, *Exotic Magnetism on the Quasi-fcc Lattices of the d3 Double Perovskites La₂NaB'O₆ (B'=Ru, Os)* **Phys. Rev. Lett.** **112**, 117603 (2014).
- 54) I Cabrera, JD Thompson, R Coldea, D Prabhakaran, RI Bewley, T Guidi, JA Rodriguez-Rivera, C Stock, *Excitations in the quantum paramagnetic phase of the quasi-one-dimensional Ising magnet CoNb₂O₆ in a transverse field: Geometric frustration and quantum renormalization effects*, **Phys Rev B** **90**, 014418 (2014).
- 55) C. Balz, B. Lake, H. Luetkens, C. Baines, T. Guidi, M. Abdel-Hafiez, A. U. B. Wolter, B. Buchner, I. V. Morozov, E. B. Deeva, O. S. Volkova, and A. N. Vasiliev, *Quantum spin chain as a potential realization of the Nersesyan-Tsvetlik model*, **PHYSICAL REVIEW B** **90**, 060409(R) (2014).
- 56) E. Garlatti, M. A. Albring, M. L. Baker, R. J. Docherty, H. Mutka, T. Guidi, V. Garcia Sakai, G. F. S. Whitehead, R. G. Pritchard, G. A. Timco, F. Tuna, G. Amoretti, S. Carretta, P. Santini, G. Lorusso, M. Affronte, E. J. L. McInnes, D. Collison, and R. E. P. Winpenny, *A Detailed Study of the Magnetism of Chiral {Cr₇M} Rings: An Investigation into Parametrization and Transferability of Parameters*, **J. Am. Chem. Soc.**, 2014, *136* (27), pp 9763–9772
- 57) A Aczel, P Baker, D Bugaris, J Yeon, H zur Loye, D. E. Bugaris, J. Yeon, H.-C. zur Loye, T. Guidi, and D. T. Adroja, *Exotic Magnetism on the Quasi-fcc Lattices of the d3 Double Perovskites La₂NaB'O₆ (B'=Ru, Os)* **Phys. Rev. Lett.** **112**, 117603 (2014).
- 58) C. Lester, S. Ramos, R. S. Perry, T. P. Croft, R. I. Bewley, T. Guidi, P. Manuel, D. D. Khalyavin, E. M. Forgan and S. M. Hayden, *Field-tunable spin-density-wave phases in Sr₃Ru₂O₇*, **Nature Materials** **14**, 373–378 (2015).
- 59) T. Guidi, B. Gillon, S. Mason, E. Garlatti, S. Carretta, P. Santini, A. Stunault, R. Caciuffo, J. van Slageren, B. Klemke, A. Cousson, G. Timco, R. Winpenny, *Direct observation of finite size effects in chains of antiferromagnetically coupled spins*, **Nature Communications** (2015).
- 60) M Hälg, D Hüvonen, T Guidi, DL Quintero-Castro, M Boehm et al. *Finite-temperature scaling of spin correlations in an experimental realization of the one-dimensional Ising quantum critical point* **Phys Rev B** **92**, no. 1 (2015): 014412
- 61) ML Baker, T Lancaster, A Chiesa, G Amoretti, PJ Baker, C Barker, SJ Blundell, S Carretta, D Collison, HU Güdel, T Guidi et al, *Studies of a Large Odd-Numbered Odd-Electron Metal Ring: Inelastic Neutron Scattering and Muon Spin Relaxation Spectroscopy of Cr₈Mn* **Chem Eur J** **22**, no. 5 (2016): 1779-1788.
- 62) K Prša, J Nehr Korn, J Corbey, W Evans, S Demir, J Long, T Guidi, O Waldmann, *Perspectives on neutron scattering in lanthanide-based single-molecule magnets and a case study of the Tb₂ (μ-N₂) system*, **Magnetochemistry** **2**, no. 4 (2016): 45.
- 63) C Balz, B Lake, J Reuther, H Luetkens, R Schönemann, T Herrmannsdörfer, Y Singh, ATM Nazmul Islam, EM Wheeler, J Rodriguez-Rivera, T Guidi, G Simeoni, C Baines, H Ryll *Physical realization of a quantum spin liquid based on a complex frustration mechanism*

Nat Phys 12 (2016): 942-949.

64) D Schmidiger, K Povarov, S Galeski, N Reynolds, R Bewley, T Guidi, J Ollivier, A Zheludev
Emergent interacting spin islands in a depleted strong-leg Heisenberg ladder
Phys Rev Lett 116, no. 25 (2016): 257203.

65) RJ Woolfson, GA Timco, A Chiesa, IJ Vitorica-Yrezabal, F Tuna, T Guidi, E Pavarini, P Santini, S Carretta, REP
Winpenny
[CrF(O₂CtBu)₂]₉: Synthesis and characterization of a regular homometallic ring with an odd number of metal centers
and electrons,
Angew Chem Int Ed 55, no. 31 (2016): 8856-8859

66) A Biffin, C Rüegg, J Embs, T Guidi, D Cheptiakov, A Loidl, V Tsurkan, R Coldea,
Magnetic Field Dependence of Excitations Near Spin-Orbital Quantum Criticality
Phys Rev Lett 118, no. 6 (2017): 067205.

67) E Garlatti, T Guidi, S Ansbro, P Santini, G Amoretti, J Ollivier, H Mutka, G Timco, IJ Vitorica-Yrezabal, GFS
Whitehead, REP Winpenny, S Carretta
Portraying entanglement between molecular qubits with four-dimensional inelastic neutron scattering
Nat Commun 8 (2017): 14543.

68) Balz, C, Lake, B, Islam, ATMN, Singh, Y, Rodriguez-Rivera, JA, Guidi, T, Wheeler, EM, Simeoni, GG, Ryll, H.
Magnetic Hamiltonian and phase diagram of the quantum spin liquid Ca₁₀Cr₇O₂₈
Phys. Rev. B, **95**, 174414, (2017).

69) Ward, S, Mena, M, Bouillot, P, Kollath, C, Giamarchi, T, Schmidt, KP, Normand, B, Kramer, KW,
Biner, D, Bewley, R, Guidi, T, Boehm, M, McMorro, DF, Ruegg, C.
Phys. Rev. Lett. 118, 177202 (2017).

70) P. A. McClarty, F. Krüger, T. Guidi, S. F. Parker, K. Refson, A. W. Parker, D. Prabhakaran & R.
Coldea, Topological triplon modes and bound states in a Shastry–Sutherland magnet
Nature Physics 13 736-741 (2017).

71) J.D. Thompson, P.A. McClarty, D. Prabhakaran, I. Cabrera, T. Guidi, R. Coldea
Quasiparticle Breakdown and Spin Hamiltonian of the Frustrated Quantum Pyrochlore Yb₂Ti₂O₇ in
Magnetic Field
Phys. Rev. Lett. 119, 057203 (2017).

72) M. Klicpera, D. T. Adroja, K. Vlášková, M. Boehm, H. Mutk, B. Ouladdiaf, T. Guidi, and P. Javorský,
Magnetic Structure and Excitations in CeCuxAl_{4-x} System,
Inorg. Chem., 2017, 56 (21), pp 12839–12847

73) J. F. Gebbia, M. A. Ramos, D. Szewczyk, A. Jezowski, A. I. Krivchikov, Y. V. Horbatenko, T. Guidi,
F. J. Bermejo, and J. L. Tamarit,
Glassy Anomalies in the Low-Temperature Thermal Properties of a Minimally
Phys. Rev. Lett. **119**, 215506 (2017).

74) A. Chiesa, T. Guidi, S. Carretta, S. Ansbro, G. A. Timco, I. Vitorica-Yrezabal, E. Garlatti, G. Amoretti,
R. E. P. Winpenny and P. Santini
Magnetic Exchange Interactions in the Molecular Nanomagnet Mn₁₂
Phys. Rev. Lett. **119**, 217202 (2017) – Editor suggestion, Front Cover of the PRL Issue and article in
“This week in Physics” (November 27, 2017).

75) Giansiracusa, Marcus; Moreno Pineda, Eufemio; Hussain, Riaz; Marx, Raphael; Martínez Prada, María;
Neugebauer, Petr; Al-Badran, Susan; Collison, David; Tuna, Floriana; van Slageren, Joris; Carretta, Stefano;
Guidi, Tatiana; McInnes, Eric; Winpenny, Richard; Chilton, Nicholas,

Measurement of magnetic exchange in asymmetric lanthanide dimetallics: towards a transferable theoretical framework

J Am Chem Soc **140**, no. 7 (2018): 2504-2513.

76) E. S. Klyushina, B. Lake, A.T.M.N. Islam, J. T. Park, A. Schneidewind, T. Guidi, E. A. Goremychkin, B. Klemke, and M. Mansson,

Investigation of spin-1 honeycomb antiferromagnet BaNi₂V₂O₈ with easy-plane anisotropy

Phys. Rev. B **96**, 214428 (2017).

77) Harikrishnan S. Nair, Michael O. Ogunbunmi, S. K. Ghosh, D. T. Adroja, M. M. Koza, T. Guidi, A. M. Strydom, *Signatures of non-magnetic ground state in the quasi-skutterudite Pr₃Rh₄Sn₁₃ from specific heat and inelastic neutron scattering*

J. Phys.: Condens. Matter **30** 14560 (2018).

78) E. Garlatti, T. Guidi, A. Chiesa, S. Ansbro, M. Baker, J. Ollivier, H. Mutka, G. Timco, I. Vitorica-Yrezabal, E. Pavarini, P. Santini, G. Amoretti, R. Winpenny, S. Carretta,

Anisotropy of CoII transferred to the Cr₇Co polymetallic cluster via strong exchange interactions

Chem. Sci. **9**, 3555-3562 (2018).

79) Tanaka Y, Wawrzynczak R, Le MD, Guidi T, Okamoto Y, Yajima T, Hiroi Z, Takigawa M, Nilsen GJ (2018). *Inelastic Neutron Scattering Study of the Spin Dynamics in the Breathing Pyrochlore System LiGa_{0.95}In_{0.05}Cr₄O₈*.

JOURNAL OF THE PHYSICAL SOCIETY OF JAPAN, vol. 87, ISSN: 0031-9015, doi: 10.7566/JPSJ.87.073710

80) Giansiracusa MJ, Moreno-Pineda E, Hussain R, Marx R, Prada MM, Neugebauer P, Al-Badran S, Collison D, Tuna F, van Slageren J, Carretta S, Guidi T, McInnes EJJ, Winpenny REP, Chilton NF (2018). *Measurement of Magnetic Exchange in Asymmetric Lanthanide Dimetallics: Toward a Transferable Theoretical Framework*.

JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, vol. 140, p. 2504-2513, ISSN: 0002-7863, doi: 10.1021/jacs.7b10714 (2018).

81) Sarte PM, Arevalo-Lopez AM, Songvilay M, Le D, Guidi T, Garcia-Sakai V, Mukhopadhyay S, Capelli SC, Ratcliff WD, Hong KH, McNally GM, Pachoud E, Attfield JP, Stock C (2018). *Ordered magnetism in the intrinsically decorated $j(\text{eff})=1/2$ alpha-CoV₃O₈*.

PHYSICAL REVIEW. B, vol. 98, ISSN: 2469-9950, doi: 10.1103/PhysRevB.98.224410 (2018).

82) Lancon D, Ewings RA, Guidi T, Formisano F, Wildes AR (2018). *Magnetic exchange parameters and anisotropy of the quasi-two-dimensional antiferromagnet NiPS₃*.

PHYSICAL REVIEW. B, vol. 98, ISSN: 2469-9950, doi: 10.1103/PhysRevB.98.134414 (2018).

83) Xu J, Benton O, Anand VK, Islam ATMN, Guidi T, Ehlers G, Feng E, Su Y, Sakai A, Gegenwart P, Lake B (2019). *Anisotropic exchange Hamiltonian, magnetic phase diagram, and domain inversion of Nd₂Zr₂O₇*.

PHYSICAL REVIEW. B, vol. 99, ISSN: 2469-9950, doi: 10.1103/PhysRevB.99.144420 (2019).

84) Garlatti E, Chiesa A, Guidi T, Amoretti G, Santini P, Carretta S (2019). *Unravelling the Spin Dynamics of Molecular Nanomagnets with Four-Dimensional Inelastic Neutron Scattering*.

EUROPEAN JOURNAL OF INORGANIC CHEMISTRY, p. 1106-1118, ISSN: 1434-1948, doi: 10.1002/ejic.201801050 (2019).

Scientific highlights:

H1) S. Carretta, E. Livioti, G. Amoretti, J. van Slageren, R. Sessoli, D. Gatteschi, T. Guidi, F. Carsughi, R. Caciuffo, C. Mondelli,

Magnetic transitions in a Cr₈ antiferromagnetic ring.

ILL annual report, pp. 30-31 (2002) Institute Laue-Langevin, Grenoble, France.

H2) T. Guidi, R. Caciuffo, F. Carsughi, P. G Radaelli, M. Schmidt, J. Mira, F. Rivadulla, J. Rivas, A. Fondado, J. B. Goodenough,

Field-induced bond-breaking in MnAs.

ISIS annual report, pp. 9-10 (2003) ISIS Facility, Rutherford Appleton Laboratory, UK.

H3) T. Guidi, O. Pieper, B. Lake, S. Carretta, P. Santini, G. Amoretti, J. Van Slageren, M. Russina, A. Buchsteiner, C.J. Milios, E.K. Brechin

The role of excited S multiplets in the magnetic relaxation of the high anisotropy barrier Mn₆ Single Molecule Magnet.

Hahn-Meitner-Institut annual report–Selected results, pp. 56-57 (2006),

Hahn-Meitner-Institut, Berlin, Germany.

H4) T. Guidi, S. Carretta, P. Santini, G. Amoretti, R. Caciuffo, A. Hiess J.R.D. Copley, Y. Qiu, G. Timco, R.E.P. Winpenny

Quantum oscillations of the total spin in a heterometallic antiferromagnetic ring

ILL annual report, pp. 18-19 (2007) Institute Laue-Langevin, Grenoble, France.

H5) T. Guidi, S. Carretta, P. Santini, G. Amoretti, R. Caciuffo, A. Hiess J.R.D. Copley, Y. Qiu, G. Timco, R.E.P. Winpenny

Quantum oscillations of the total spin in a heterometallic antiferromagnetic ring

Notiziario Neutroni e Luce di Sincrotrone – Vol. 13 n. 2, pp 4-5 (2008)

H6) R.I. Bewley, T. Guidi and S. Bennington, *MERLIN: a high count rate chopper spectrometer at ISIS*,

Notiziario Neutroni e Luce di Sincrotrone – Vol. 14 n. 1, pp 22-27 (2009)

H7) D.L. Quintero-Castro, B. Lake, E.M. Wheeler, A.T.M.N. Islam, T. Guidi,

Merlin's magic reveals quantum magnet behaviour, ISIS Annual Report 2009.

H8) T. Guidi et al, *Finite size effects in chains of AF coupled rings*. ILL Highlight pp 32-33 (2015).

H9) C Lester, SM Hayden, TP Croft, S Ramos, EM Forgan, RS Perry, P Manuel, DD Khalyavin, RI Bewley, T Guidi, *High field spin-density-wave phases in a metal*, ISIS Annual Review (2016).

Date: January 2020