December 2011

NEWS

Press Release (Florence, 16 November 2011)

The European Institute of Molecular Magnetism, the chairman and the members of the Olivier Kahn Award International Jury are pleased to announce that the laureate of the third Olivier Kahn International Award is Professor Stefano Carretta of the University of Parma.

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Photos from the 2011 OKIA Award Ceremony

Paris 23 November 2011
Photo from the ECMM Paris 2011

HIGHLIGHTS

Anisotropic dysprosium

Dante Gatteschi
Nature Chemistry 3, 830 (2011) doi:10.1038/nchem.1157
Double Switching of a Magnetic Coordination Framework through Intraskeletal Molecular Rearrangement

Dawid Pinkowicz, Robert Podgajny, Bartłomiej Gawel, Wojciech Nitek, Wiesław Łasocha, Marcin Oszajca, Mariusz Czapla, Magdalena Makarewicz, Maria Balanda, Barbara Sieklucka


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Although the editor will make every effort to surf journals for recent publications we would like to take this opportunity to remind all EIMM members to send their references highlights and news to: lythgoe@unizar.es It is in the interest of all of us to spread and diffuse EIMM results in molecular magnetism and make the newsletter an important information reference point. The conditions for an important reference to be entitled as a highlight are the relevance of the contribution and a suggestion coming from an author explaining the contribution value, a brief description and a related image.

OTHER PUBLICATIONS

A Symmetry-Breaking Spin-State Transition in Iron(III)
Dr. Michael Griffin, Stephen Shakespeare, Dr. Helena J. Shepherd, Dr. Charles J. Harding, Dr. Jean-François Létard, Dr. Cédric Desplanches, Dr. Andrés E. Goeta, Prof. Judith A. K. Howard, Prof. Dr. Annie K. Powell, Dr. Valeriu Moreacre, Prof. Dr. Yann Garcia, Dr. Anil D. Naik, Dr. Helge Müller-Bunz1, Dr. Grace G. Morgan

Surface Plasmons Reveal Spin Crossover in Nanometric Layers
Gautier Félix, Khaldoun Abdul-Kader, Tarik Mahfoud, Il’ya A. Guralskiy, William Nicolazz, Lionel Salmon, Gábor Molnár, and Azzedine Bousseksou
Strong Axiality and Ising Exchange Interaction Suppress Zero-Field Tunneling of Magnetization of an Asymmetric Dy2 Single-Molecule Magnet
Yun-Nan Guo, Gong-Feng Xu, Wolfgang Wernsdorfer, Liviu Ungur, Yang Guo, Jinkui Tang, Hong-Jie Zhang, Liviu F. Chibotaru, and Annie K. Powell

High Proton Conduction in a Chiral Ferromagnetic Metal-Organic Quartz-like Framework
Pardo, E; Train, C; Gontard, G; Boubekeur, K; Fabelo, O; Liu, HB; Dkhil, B; Lloret, F; Nakagawa, K; Tokoro, H; Ohkoshi, S; Verdaguer, M

Water-Dispersible Sugar-Coated Iron Oxide Nanoparticles. An Evaluation of their Relaxometric and Magnetic Hyperthermia Properties
Lartigue, L; Innocenti, C; Kalaivani, T; Awwad, A; Duque, MDS; Guari, Y; Larionova, J; Guerin, C; Montero, JLG; Barragan-Montero, V; Arosio, P; Lascialfari, A; Gatteschi, D; Sangregorio, C

Preparation, Crystal Structures, and Magnetic Features for a Series of Dinuclear [Ni(II)Ln(III)] Schiff-Base Complexes: Evidence for Slow Relaxation of the Magnetization for the Dy(III) Derivative
Pasatoiu, TD (Pasatoiu, Traian D.)2; Sutter, JP (Sutter, Jean-Pascal)1,3; Madalan, AM (Madalan, Augustin M.)2; Fellah, FZC (Fellah, Fatima Zohra Chiboub)1,3,4; Duhayon, C (Duhayon, Carine)1,3; Andruh, M (Andruh, Marius)2
INORGANIC CHEMISTRY Volume: 50 Issue: 13 Pages: 5890-5898 DOI: 10.1021/ic2004276 Published: JUL 4 2011

Microwave-Assisted Construction of Ferromagnetic Coordination Polymers of [W(V)(CN)(8)](3-) with Cu(II)-pyrazole Synthons
Stefanczyk, O; Korzeniak, T; Nitek, W; Rams, M; Sieklucka, B
INORGANIC CHEMISTRY Volume: 50 Issue: 18 Pages: 8808-8816 DOI: 10.1021/ic200689a Published: SEP 19 2011

Low-Spin -> High-Spin Relaxation Dynamics in the Highly Diluted Spin-Crossover System [Fe(x)Zn(1-x)(bbtr)(3)][ClO(4)](2)
Krivokapic, I; Chakraborty, P; Enachescu, C; Bronisz, R; Hauser, A
INORGANIC CHEMISTRY Volume: 50 Issue: 5 Pages: 1856-1861 DOI:

Multifunctional Magnetic Materials Obtained by Insertion of Spin-Crossover FeIII Complexes into Chiral 3D Bimetallic Oxalate-Based Ferromagnets (Miguel Clemente-Leon, Eugenio Coronado, Maurici Lopez-Jorda, and Joao C. Waerenborgh INORGANIC CHEMISTRY Volume: 50 (18), pp 9122–9130)

Utilizing the Adaptive Polyoxometalate [As(2)W(19)O(67)(H(2)O)](14-) To Support a Polynuclear Lanthanoid-Based Single-Molecule Magnet (Ritchie, C; Speldrich, M; Gable, RW; Sorace, L; Kogerler, P; Boskovic, C INORGANIC CHEMISTRY Volume: 50 (15), pp 7004–7014)

ST = 22 [Mn10] Supertetrahedral Building-Block to Design Extended Magnetic Networks (Gang Wu, Jian Huang, Linlin Sun, Jiaquan Bai, Guanghua Li, Eduard Cremades, Eliseo Ruiz, Rodolphe Clerac, and Shilun Qiu† INORGANIC CHEMISTRY Volume: 50 (17), pp 8580–8587)

Self-Assembled Monolayer of Cr(7)Ni Molecular Nanomagnets by Sublimation (Ghirri, A; Corradini, V; Bellini, V; Biagi, R; del Pennino, U; De Renzi, V; Cezar, JC; Muryn, CA; Timco, GA; Winpenny, REP; Affronte, M ACS NANO Volume: 5 Issue: 9 Pages: 7090-7099 DOI: 10.1021/nn201800e Published: SEP 2011)

Humidity-Driven Reversible Transformation and Guest Inclusion in a Two-Dimensional Coordination Framework Tailored by Organic Polyamine Cation (Podgajny, R; Chorazy, S; Nitek, W; Budziak, A; Rams, M; Gomez-Garcia, CJ; Oszajca, M; Lasocha, W; Sieklucka, B CRYSTAL GROWTH & DESIGN Volume: 11 Issue: 9 Pages: 3866-3876 DOI:
Majorana Edge States in Interacting One-Dimensional Systems
Gangadharaiah, S; Braunecker, B; Simon, P; Loss, D
PHYSICAL REVIEW LETTERS Volume: 107 Issue: 3 Article Number: 036801 DOI: 10.1103/PhysRevLett.107.036801 Published: JUL 11 2011

Absence of Spontaneous Magnetic Order of Lattice Spins Coupled to Itinerant Interacting Electrons in One and Two Dimensions
Loss, D; Pedrocchi, FL; Leggett, AJ
PHYSICAL REVIEW LETTERS Volume: 107 Issue: 10 Article Number: 107201 DOI: 10.1103/PhysRevLett.107.107201 Published: SEP 1 2011

Efficient Measurement of Quantum Dynamics via Compressive Sensing
A. Shabani, R. L. Kosut, M. Mohseni, H. Rabitz, M. A. Broome, M. P. Almeida, A. Fedrizzi, and A. G. White
PHYSICAL REVIEW LETTERS Volume: 106, 100401 (2011) [4 pages]

Tuning the Transition Temperature and Cooperativity of bapbpy-Based Mononuclear Spin-Crossover Compounds: Interplay between Molecular and Crystal Engineering.

Inelastic Neutron Scattering on an Mn10 Supertetrahedron: Assessment of Exchange Coupling Constants, Ferromagnetic Spin Waves and an Analogy to the Hückel Method
Stefan Stuiber1, Dr. Gang Wu, Joscha Nehrkorn, Dr. Jan Dreiser, Dr. Yanhua Lan, Dr. Ghenadie Novitchi, Dr. Christopher E. Anson, Dr. Tobias Unruh, Prof. Dr. Annie K. Powell, Prof. Dr. Oliver Waldmann,
Chemistry - A European Journal Volume 17, Issue 33, pages 9094–9106, August 8, 2011

Thiodiacetate-Manganese Chemistry with N ligands: Unique Control of the Supramolecular Arrangement over the Metal Coordination Mode
Grirrane, A; Pastor, A; Galindo, A; Alvarez, E; Mealli, C; Ienco, A; Orlandini, A; Rosa, P; Caneschi, A; Barra, AL; Sanz, JF
A tetrathiafulvalene-functionalized naphthalene diimide: synthesis, electrochemical and photophysical properties
Jaggi, M; Schmid, B; Liu, SX; Bhosale, SV ; Rivadehi, S; Langford, SJ ; Decurtins, S
Published: SEP 23 2011

[K2Mn5{Mo(CN)7} 3]: An Open Framework Magnet with Four Tc Conversions Orchestrated by Guests and Thermal History
J. Milon, P. Guionneau, C. Duhayon, J.-P. Sutter

Chromium chains as polydentate fluoride ligands for lanthanides
Chem. Commun., 2011, 47, 6251-6253

Linking heterometallic rings for quantum information processing and amusement
Grigore A. Timco, Thomas B. Faust, Floriana Tuna and Richard E. P. Winpenny

Alternating current magnetic susceptibility of a molecular magnet submonolayer directly patterned onto a micro superconducting quantum interference device

Hybrid Magnetic/Superconducting Materials Obtained by Insertion of a Single-Molecule Magnet into TaS2 Layers
Eugenio Coronado1, Carlos Martí-Gastaldo, Efrén Navarro-Moratalla, Enrique Burzurí, Agustín Camón, Fernando Luis

Role of molecular order and solid-state structure in organic field-effect transistors
Marta Mas-Torrent, Concepcion Rovira
Chemical Reviews (2011) Volume: 111, Issue: 8, Publisher: American Chemical Society,
Pages: 4833-56

Role of Deprotonation and Cu Adatom Migration in Determining the Reaction Pathways of Oxalic Acid Adsorption on Cu(111)

Lamello-Columnar Mesophase Formation in a Side-Chain Liquid Crystal π-Conjugated Polymer Architecture
Ibtissam Tahar-Djebbar, Fabien Nekelson, Benoît Heinrich, Bertrand Donnio, Daniel Guillon, David Kreher, Fabrice Mathevet, and André-Jean Attias
Chem. Mater., 2011, 23 (21), pp 4653–4656

Magnetotunable Hybrid Films of Stratified Iron Oxide Nanoparticles Assembled by the Layer-by-Layer Technique
Benoit P. Pichon, Pierric Louet, Olivier Felix, Marc Drillon, Sylvie Begin-Colin, and Gero Decher
Chem. Mater., 2011, 23 (16), pp 3668–3675

Focused Electron Beam Deposition of Nanowires from Cobalt Tricarbonyl Nitrosyl (Co(CO)(3)NO) Precursor
Gazzadi, GC; Mulders, H; Trompenaars, P; Ghirri, A; Affronte, M; Grillo, V; Frabboni, S

Molecular Prototypes for Spin-Based CNOT and SWAP Quantum Gates
Luis, F; Repolles, A; Martinez-Perez, MJ; Aguila, D; Roubeau, O; Zueco, D; Alonso, PJ; Evangelisti, M; Camon, A; Sese, J; Barrios, LA; Aromi, G

Uniaxial magnetic anisotropy in Co(2.25)Fe(0.75)O(2)BO(3) compared to Co(3)O(2)BO(3) and Fe(3)O(2)BO ludwigites
Lyubutin, I. S.

Interaction of magnetic field-dependent Peierls and spin-Peierls ground states in \((\text{Per})_2[\text{Pt(mnt)}_2]\)
Green, EL; Brooks, JS; Kuhns, PL; Reyes, AP; Lumata, LL; Almeida, M; Matos, MJ; Henriques, RT; Wright, JA; Brown, SE
Physical Review B, vol. 84, 121101(R) (2011)

Size-dependent magnetic ordering and spin dynamics in DyPO4 and GdPO4 nanoparticles
Evangelisti, Marco; Sorop, Tibi G.; Bakharev, Oleg N.; Visser, Dirk; Hillier, Adrian D.; Alonso, Juan J.; Haase, Markus; Boatner, Lynn A.; Jos de Jongh, L.
Physical Review B, vol. 84, Issue 9, id. 094408

Thermal hysteresis in spin-crossover compounds studied within the mechanoelastic model and its potential application to nanoparticles
Stoleriu, L; Chakraborty, P; Hauser, A; Stancu, A; Enachescu, C
PHYSICAL REVIEW B Volume: 84 Issue: 13 Article Number: 134102 DOI: 10.1103/PhysRevB.84.134102 Published: OCT 11 2011

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Measures of the hyperthermic effect in Florence, Italy.
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