

# Dr. Jan Dreiser

## Full Publication List

Swiss Light Source  
Paul Scherrer Institut  
WSLA/106  
CH-5232 Villigen PSI  
Phone: +41 56 310 5895  
Email: [jan.dreiser@psi.ch](mailto:jan.dreiser@psi.ch)  
ORCID: 0000-0001-7480-1271

05 February 2024

### Bibliographic Figures

Times cited: 5062 / 7072; h-index: 34 / 40 ; average citations per item: 51.65 / - (source: first number: ISI web of knowledge / second number: google scholar )

Five most important publication marked in red color.

### Peer-reviewed journal articles (click on title will open article URL in browser)

#### **97 – Delving into Fe-content effects on surface reconstruction of $\text{Ba}_{0.50}\text{Sr}_{0.50}\text{Co}_{1-x}\text{Fe}_x\text{O}_{3-\delta}$ for the oxygen evolution reaction**

D. Aegerter, E. Fabbri, M. Borlaf, N. Sena Yüzbası, N. Diklić, A. H. Clark, V. Romankov, C. Piamonteze, J. Dreiser, T. Huthwelker, T. Graule, T. J. Schmidt, *accepted for publication in J. Mater. Chem. A* (2024).

#### **96 – $\text{Co}_{1-x}\text{Fe}_x\text{O}_y$ Oxygen Evolution Nanocatalysts: On the Way To Resolve (Electro)Chemically Triggered Surface-Bulk Discrepancy**

D. Aegerter, E. Fabbri, N. S. Yüzbası, N. Diklić, A. H. Clark, M. Nachtegaal, C. Piamonteze, J. Dreiser, T. Huthwelker, T. Graule, T. J. Schmidt, *ACS Catal.* **13**, 15899 (2023).

#### **95 – Charge Transfer and Orbital Reconstruction at an Organic–Oxide Interface**

M. Caputo, M. Studniarek, E. B. Guedes, L. Schio, K. Baiseitov, N. Daffé, N. Bachellier, A. Chikina, G. Di Santo, A. Verdini, A. Goldoni, M. Muntwiler, C. Piamonteze, L. Floreano, M. Radovic, J. Dreiser, *Nano Lett.* **23**, 11211 (2023).

#### **94 – Extended $\pi$ -Conjugation: A Key to Magnetic Anisotropy Preservation in Highly Reactive Porphyrins**

I. Cojocariu, S. Carlotto, D. Baranowski, M. Jugovac, J. Dreiser, L. Schio, L. Floreano, M. Casarin, V. Feyer, C. M. Schneider, *J. Mater. Chem. C* **11**, 15521 (2023).

#### **93 – Surface-Mediated Spin Locking and Thermal Unlocking in a 2D Molecular Array**

I. Cojocariu, A. Windischbacher, D. Baranowski, M. Jugovac, R. C. de C. Ferreira, J. Doležal, M. Švec, J. M. Zamalloa-Serrano, M. Tormen, L. Schio, L. Floreano, J. Dreiser, P. Puschnig, V. Feyer, C. M. Schneider, *Adv. Sci.* **10**, 2300223 (2023).

#### **92 – Tailoring Magnetic Anisotropy by Graphene-Induced Selective Skyhook Effect on 4f-Metals**

A. Herman, S. Kraus, S. Tsukamoto, L. Spieker, V. Caciuc, T. Lojewski, D. Günzing, J. Dreiser, B. Delley, K. Ollefs, T. Michely, N. Atodiresei, H. Wende, *Nanoscale* **14**, 7682 (2022).

- 91 – Cyclooctatetraenide-Based Single-Ion Magnets Featuring Bulky Cyclopentadienyl Ligand**  
M. D. Korzyński, M. Bernhardt, V. Romankov, J. Dreiser, G. Matmon, F. Pointillart, B. Le Guennic, O. Cador, C. Copéret, *Chem. Sci.* **13**, 10574 (2022).
- 90 – Metamagnetic Transition and a Loss of Magnetic Hysteresis Caused by Electron Trapping in Monolayers of Single-Molecule Magnet Tb<sub>2</sub>@C<sub>79</sub>N**  
E. Koutsouflakis, D. Krylov, N. Bachellier, D. Sostina, V. Dubrovin, F. Liu, L. Spree, G. Velkos, S. Schimmel, Y. Wang, B. Büchner, R. Westerström, C. Bulbucan, K. Kirkpatrick, M. Muntwiler, J. Dreiser, T. Greber, S. M. Avdoshenko, H. Dorn, A. A. Popov, *Nanoscale* **14**, 9877 (2022).
- 89 – Orienting Dilute Thin Films of Non-Planar Spin-1/2 Vanadyl–Phthalocyanine Complexes**  
Z. Xu, V. Romankov, A. Doll, J. Dreiser, *Mater. Adv.* **3**, 4938 (2022).
- 88 – Uniaxially Aligned 1D Sandwich-Molecular Wires: Electronic Structure and Magnetism**  
S. Kraus, A. Herman, F. Huttmann, M. Bianchi, R.-M. Stan, A.J. Holt, S. Tsukamoto, N. Rothenbach, K. Ollefs, J. Dreiser, K. Bischof, H. Wende, P. Hofmann, N. Atodiresei, T. Michely, *J. Phys. Chem. C.* **126**, 3140–3150, (2022).
- 87 – Noncollinear Magnetic Order in Two-Dimensional NiBr<sub>2</sub> Films Grown on Au(111)**  
D. Bikaljević, C. González-Orellana, M. Peña-Díaz, D. Steiner, J. Dreiser, P. Gargiani, M. Foerster, M.Á. Niño, L. Aballe, S. Ruiz-Gomez, N. Friedrich, J. Hieulle, L. Jingcheng, M. Ilyn, C. Rogero, J.I. Pascual, *ACS Nano.* **15**, 14985–14995 (2021).
- 86 – Robust Single Molecule Magnet Monolayers on Graphene and Graphite with Magnetic Hysteresis up to 28 K**  
L. Spree, F. Liu, V. Neu, M. Rosenkranz, G. Velkos, Y. Wang, S. Schiemenz, J. Dreiser, P. Gargiani, M. Valvidares, C. Chen, B. Büchner, S.M. Avdoshenko, A.A. Popov, *Adv. Funct. Mater.* 2105516 (2021).
- 85 – Magnetic Hysteresis at 10 K in Single Molecule Magnet Self-Assembled on Gold**  
C. Chen, L. Spree, E. Koutsouflakis, D.S. Krylov, F. Liu, A. Brandenburg, G. Velkos, S. Schimmel, S.M. Avdoshenko, A. Fedorov, E. Weschke, F. Choueikani, P. Ohresser, J. Dreiser, B. Büchner, A.A. Popov, *Adv. Sci.* **8**, 2000777 (2021).
- 84 – Amyloid-beta–copper interaction studied by simultaneous nitrogen K and copper L<sub>2,3</sub>-edge soft X-ray absorption spectroscopy**  
J. Luo, H. Wang, J. Wu, V. Romankov, N. Daffé, J. Dreiser, *iScience.* **24**, 103465 (2021).
- 83 – Correlation between Electronic Configuration and Magnetic Stability in Dysprosium Single Atom Magnets**  
F. Donati, M. Pivetta, C. Wolf, A. Singha, C. Wäckerlin, R. Baltic, E. Fernandes, J.-G. de Groot, S.L. Ahmed, L. Persichetti, C. Nistor, J. Dreiser, A. Barla, P. Gambardella, H. Brune, S. Rusponi, *Nano Lett.* **21**, 8266–8273 (2021).
- 82 – High-temperature superconductivity and its robustness against magnetic polarization in monolayer FeSe on EuTiO<sub>3</sub>**  
C. Liu, H. Shin, A. Doll, H.-H. Kung, R.P. Day, B.A. Davidson, J. Dreiser, G. Levy, A. Damascelli, C. Piamonteze, K. Zou, *npj Quantum Mater.* **6**, 85 (2021).
- 81 – Morphology of ultrathin lithium fluoride deposited on Ag(100): Dendrites versus islands**  
V. Romankov, J. Dreiser, *Phys. Rev. B.* **104**, 195401 (2021)
- 80 – Precise measurement of angles between two magnetic moments and their configurational stability in single-molecule magnets**  
R. Westerström, V. Dubrovin, K. Junghans, C. Schlesier, B. Büchner, S.M. Avdoshenko, A.A. Popov, A. Kostanyan, J. Dreiser, T. Greber, *Phys. Rev. B.* **104**, 224401 (2021).

**79 – Exceptionally High Blocking Temperature of 17 K in a Surface-Supported Molecular Magnet**

F. Paschke, T. Birk, V. Enenkel, F. Liu, V. Romankov, J. Dreiser, A. A. Popov, M. Fonin, *Adv. Mater.* 2102844 (2021).

**78 – Self-Assembly and Magnetic Order of Bi-Molecular 2D Spin Lattices of M(II,III) Phthalocyanines on Au(111)**

M. Baljzović, X. Liu, O. Popova, J. Girovsky, J. Nowakowski, H. Rossmann, T. Nijs, M. Moradi, S. F. Mousavi, N. C. Plumb, M. Radović, N. Ballav, J. Dreiser, S. Decurtins, I. A. Pašti, N. V. Skorodumova, S.-X. Liu, T. A. Jung, *Magnetochemistry* 7, 8 (2021).

**77 – Heterometallic Co–Dy SMMs Grafted on Iron Oxide Nanoparticles**

L. R. Piquer, J. Dreiser, E. C. Sañudo, *Dalton Trans.* 50, 9589 (2021).

**76 – Island Formation of Er(Trensol) Single-Ion Magnets on Graphene Observed on the Micrometer Scale**

J. Dreiser, C. Wäckerlin, M. Buzzi, K. S. Pedersen, J. Bendix, *RSC Advances* 11, 9421 (2021).

**75 – Magnetic Hysteresis at 10 K in Single Molecule Magnet Self-Assembled on Gold**

C. Chen, L. Spree, E. Koutsouflakis, D. S. Krylov, F. Liu, A. Brandenburg, G. Velkos, S. Schimmel, S. M. Avdoshenko, A. Fedorov, E. Weschke, F. Choueikani, P. Ohresser, J. Dreiser, B. Büchner, A. A. Popov, *Adv. Sci.* 8, 2000777 (2021).

**74 – Magnetic Field Dependent Cycloidal Rotation in Pristine and Ge-Doped CoCr<sub>2</sub>O<sub>4</sub>**

N. Ortiz Hernández, S. Parchenko, J. R. L. Mardegan, M. Porer, E. Schierle, E. Weschke, M. Ramakrishnan, M. Radovic, J. A. Heuver, B. Noheda, N. Daffé, J. Dreiser, H. Ueda, U. Staub, *Phys. Rev. B* 103, 085123 (2021).

**73 – Gadolinium as an Accelerator for Reaching Thermal Equilibrium and Its Influence on the Ground State of Dy<sub>2</sub>GdN@C<sub>80</sub> Single-Molecule Magnets**

A. Kostanyan, C. Schlesier, R. Westerström, J. Dreiser, F. Fritz, B. Büchner, A. A. Popov, C. Piamonteze, T. Greber, *Phys. Rev. B* 103, 014404 (2021).

**72 – Unconventional Spin Relaxation Involving Localized Vibrational Modes in Ho Single-Atom Magnets**

F. Donati, S. Rusponi, S. Stepanow, L. Persichetti, A. Singha, D. M. Juraschek, C. Wäckerlin, R. Baltic, M. Pivetta, K. Diller, C. Nistor, J. Dreiser, K. Kummer, E. Velez-Fort, N. A. Spaldin, H. Brune, P. Gambardella, *Phys. Rev. Lett.* 124, 077204 (2020).

**71 – Substrate-Independent Magnetic Bistability in Monolayers of the Single-Molecule Magnet Dy<sub>2</sub>ScN@C<sub>80</sub> on Metals and Insulators**

D. S. Krylov, S. Schimmel, V. Dubrovin, F. Liu, T. T. N. Nguyen, L. Spree, C.-H. Chen, G. Velkos, C. Bulbucan, R. Westerström, M. Studniarek, J. Dreiser, C. Hess, B. Büchner, S. M. Avdoshenko, A. A. Popov, *Angew. Ch. Int. Ed.* 59, 5756 (2020).

**70 – Understanding the Superior Stability of Single-Molecule Magnets on an Oxide Film**

M. Studniarek, C. Wäckerlin, A. Singha, R. Baltic, K. Diller, F. Donati, S. Rusponi, H. Brune, Y. Lan, S. Klyatskaya, M. Ruben, A.P. Seitsonen, J. Dreiser, *Adv. Sci.* 6, 1901736 (2019).

**69 – Magnetic Properties of On-Surface Synthesized Single-Ion Molecular Magnets**

K. Diller, A. Singha, M. Pivetta, C. Wäckerlin, R. Hellwig, A. Verdini, A. Cossaro, L. Floreano, E. Vélez-Fort, J. Dreiser, S. Rusponi, H. Brune, *RSC Advances* 9, 34421 (2019).

- 68 – Multimodeling Approach to Ferromagnetic Spin-Wave Excitations in the High-Spin Cluster Mn<sub>18</sub>Sr Observed by Inelastic Neutron Scattering**  
S. Nekuruh, J. Nehr Korn, K. Prsa, J. Dreiser, A. M. Ako, C. E. Anson, T. Unruh, A. K. Powell, O. Waldmann, *Inorg. Chem.* **58**, 11256 (2019).
- 67 – Large Effect of Metal Substrate on Magnetic Anisotropy of Co on Hexagonal Boron Nitride**  
I. Gallardo, A. Arnau, F. Delgado, R. Baltic, A. Singha, F. Donati, C. Wäckerlin, J. Dreiser, S. Rusponi, H. Brune, *New J. Phys.* **21**, 073053 (2019).
- 66 – Direct Observation of Charge Transfer and Magnetism in Fe<sub>4</sub>Co<sub>4</sub> Cyanide-Bridged Molecular Cubes**  
N. Daffé, J.-R. Jiménez, M. Studniarek, A. Benchohra, M.-A. Arrio, R. Lescouëzec, J. Dreiser, *Journal of Physical Chemistry Letters* **10**, 1799 (2019).
- 65 – Non-Empirical Calculation of X-ray Magnetic Circular Dichroism in Lanthanide Compounds**  
H. Ramanantoanina, M. Studniarek, N. Daffé, J. Dreiser, *Chem. Commun.* **55**, 2988 (2019).
- 64 – Hysteresis Enhancement on a Hybrid Dy(III) Single Molecule Magnet/Iron Oxide Nanoparticle System**  
L. R. Piquer, M. Escoda-Torroella, M. L. Gairaud, S. Carneros, N. Daffé, M. Studniarek, J. Dreiser, W. Wernsdorfer, E. Carolina Sañudo, *Inorganic Chemistry Frontiers* **6**, 705 (2019).
- 63 – Stability of Metallo-Porphyrin Networks Under Oxygen Reduction and Evolution Conditions in Alkaline Media**  
D. Hötger, M. Etzkorn, C. Morchutt, B. Wurster, J. Dreiser, S. Stepanow, D. Grumelli, R. Gutzler, K. Kern, *Phys. Chem. Chem. Phys.* **21**, 2587 (2019).
- 62 – Circular Dichroism and Angular Deviation in X-ray Absorption Spectra of Dy<sub>2</sub>ScN@C<sub>80</sub> Single-Molecule Magnets on *h*-BN/Rh(111)**  
T. Greber, A. P. Seitsonen, A. Hemmi, J. Dreiser, R. Stania, F. Matsui, M. Muntwiler, A. A. Popov, R. Westerström, *Phys. Rev. Materials* **3**, 014409 (2019).
- 61 – On-Surface Transmetalation of Metalloporphyrins**  
D. Hötger, P. Abufager, C. Morchutt, P. Alexa, D. Grumelli, J. Dreiser, S. Stepanow, P. Gambardella, H. F. Busnengo, M. Etzkorn, R. Gutzler, K. Kern, *Nanoscale* **10**, 21116 (2018).
- 60 – Partial Magnetic Ordering in One-Dimensional Arrays of Endofullerene Single-Molecule Magnet Peapods**  
S. M. Avdoshenko, F. Fritz, C. Schlesier, A. Kostanyan, J. Dreiser, M. Luysberg, A. A. Popov, C. Meyer, R. Westerström, *Nanoscale* **10**, 18153 (2018).
- 59 – Magnetic Properties of Single Rare Earth Atoms on Graphene/Ir(111)**  
R. Baltic, F. Donati, A. Singha, C. Wäckerlin, J. Dreiser, B. Delley, M. Pivetta, S. Rusponi, H. Brune, *Phys. Rev. B* **98**, 024412 (2018).
- 58 – Magnetic Hysteresis in Self-Assembled Monolayers of Dy-Fullerene Single Molecule Magnets on Gold**  
C.-H. Chen, D. S. Krylov, S. M. Avdoshenko, F. Liu, L. Spree, R. Westerstrom, C. Bulbucan, M. Studniarek, J. Dreiser, A. Wolter, B. Büchner, A. A. Popov, *Nanoscale* **10**, 11287 (2018).
- 57 – Excited Spin-State Trapping in Spin Crossover Complexes on Ferroelectric Substrates**  
C. Wäckerlin, F. Donati, A. Singha, R. Baltic, S. Decurtins, S.-X. Liu, S. Rusponi, J. Dreiser, *J. Phys. Chem. C* **122**, 8202 (2018).

- 56 – Study of Magneto-Electric Coupling Between Ultra-Thin Fe Films and PMN-PT Using X-ray Magnetic Circular Dichroism**  
S.R.V. Avula, J. Heidler, J. Dreiser, J. Vijayakumar, L. Howald, F. Nolting, C. Piamonteze, *J. Appl. Phys.* **123**, 064103 (2018).
- 55 – Engineering On-Surface Spin Crossover: Spin-State Switching in a Self-Assembled Film of Vacuum Sublimable Functional Molecule**  
K.S. Kumar, M. Studniarek, B. Heinrich, J. Arabski, G. Schmerber, M. Bowen, S. Boukari, E. Beaurepaire, J. Dreiser, M. Ruben, *Advanced Materials*, **30**, 1705416 (2018)
- 54 – 4f Occupancy and Magnetism of Rare-Earth Atoms Adsorbed on Metal Substrates**  
A. Singha, R. Baltic, F. Donati, C. Wäckerlin, J. Dreiser, L. Persichetti, S. Stepanow, P. Gambardella, S. Rusponi, H. Brune, *Phys. Rev. B* **96**, 224418 (2017).
- 53 – Interplay of Fe and Tm Moments Through the Spin-Reorientation Transition in TmFeO<sub>3</sub>**  
U. Staub, L. Rettig, E. M. Bothschafter, Y. W. Windsor, M. Ramakrishnan, S.R.V. Avula, J. Dreiser, C. Piamonteze, V. Scagnoli, S. Mukherjee, C. Niedermayer, M. Medarde, E. Pomjakushina, *Phys. Rev. B* **96**, 174408 (2017).
- 52 – Nanoscale X-Ray Investigation of Magnetic Metallofullerene Peapods**  
F. Fritz, R. Westerström, A. Kostanyan, C. Schlesier, J. Dreiser, B. Watts, L. Houben, M. Luysberg, S. M. Avdoshenko, A.A. Popov, C.M. Schneider, C. Meyer, *Nanotechnology* **28**, 435703 (2017).
- 51 – Sum Rule Distortions in Fluorescence-Yield X-Ray Magnetic Circular Dichroism**  
B. Liu, C. Piamonteze, M. U. Delgado-Jaime, R.-P. Wang, J. Heidler, J. Dreiser, R. Chopdekar, F. Nolting, F. M. F. de Groot, *Phys. Rev. B* **96**, 054446 (2017).
- 50 – Long-Range Ferrimagnetic Order in a Two-Dimensional Supramolecular Kondo Lattice**  
J. Girovsky, J. Nowakowski, M. E. Ali, M. Baljovic, H. R. Rossmann, T. Nijs, E. A. Aebly, S. Nowakowska, D. Siewert, G. Srivastava, C. Wäckerlin, J. Dreiser, S. Decurtins, S.-X. Liu, P. M. Oppeneer, T. A. Jung, N. Ballav, *Nature Commun.* **8**, 15388 (2017).
- 49 – Magnetic Memory from Site Isolated Dy(III) on Silica Materials**  
F. Allouche, G. Lapadula, G. Siddiqi, W. W. Lukens, O. Maury, B. Le Guennic, F. Pointillart, J. Dreiser, V. Mougél, O. Cador, C. Copéret, *ACS Cent. Sci.* **3**, 244 (2017).
- 48 – Superlattice of Single Atom Magnets on Graphene**  
R. Baltic, M. Pivetta, F. Donati, C. Wäckerlin, A. Singha, J. Dreiser, S. Rusponi, H. Brune, *Nano Lett.* **16**, 7610 (2016).
- 47 – Magnetoelastic Control of Magnetism in an Artificial Multiferroic**  
J. Heidler, M. Fechner, R. V. Chopdekar, C. Piamonteze, J. Dreiser, C. A. Jenkins, E. Arenholz, S. Rusponi, H. Brune, N. A. Spaldin, F. Nolting, *Phys. Rev. B* **94**, 14401 (2016).
- 46 – Magnetic Hysteresis in Er trimers on Cu(111)**  
A. Singha, F. Donati, C. Wäckerlin, R. Baltic, J. Dreiser, M. Pivetta, S. Rusponi, H. Brune, *Nano Lett.* **16**, 3475-3481 (2016).
- 45 – Giant Hysteresis of Single-Molecule Magnets Adsorbed on a Nonmagnetic Insulator**  
C. Wäckerlin, F. Donati, A. Singha, R. Baltic, S. Rusponi, K. Diller, F. Patthey, M. Pivetta, Y. Lan, S. Klyatskaya, M. Ruben, H. Brune, J. Dreiser, *Adv. Mat.* **28**, 5195-5199 (2016).

#### 44 – Magnetic Remanence in Single Atoms

F. Donati, S. Rusponi, S. Stepanow, C. Wäckerlin, A. Singha, L. Persichetti, R. Baltic, K. Diller, F. Patthey, E. Fernandes, J. Dreiser, Z. Sljivancanin, K. Kummer, C. Nistor, P. Gambardella, H. Brune, *Science* **352**, 318-321 (2016).

#### 43 – Out-of-Plane Alignment of Er(trensal) Easy Magnetization Axes Using Graphene

J. Dreiser, G.E. Pacchioni, F. Donati, L. Gragnaniello, A. Cavallin, K.S. Pedersen, J. Bendix, B. Delley, M. Pivetta, S. Rusponi, H. Brune, *ACS Nano* **10**, 2887-2892 (2016).

#### 42 – Origin of Perpendicular Magnetic Anisotropy and Large Orbital Moment in Fe Atoms on MgO

S. Baumann, F. Donati, S. Stepanow, S. Rusponi, W. Paul, S. Gangopadhyay, I.G. Rau, G.E. Pacchioni, L. Gragnaniello, M. Pivetta, J. Dreiser, C. Piamonteze, C.P. Lutz, R.M. Macfarlane, B.A. Jones, P. Gambardella, A.J. Heinrich, H. Brune, *Phys. Rev. Lett.* **115**, 237202 (2015).

#### 41 – Cyanide Single-Molecule Magnets Exhibiting Solvent Dependent Reversible “On” and “Off” Exchange Bias Behavior

D. Pinkowicz, H.I. Southerland, C. Avendano, A. Prosvirin, C. Sanders, W. Wernsdorfer, K.S. Pedersen, J. Dreiser, R. Clerac, J. Nehr Korn, G.G. Simeoni, A. Schnegg, K. Holldack, K.R. Dunbar, *J. Am. Chem. Soc.* **137**, 14406-14422 (2015).

#### 40 – Design of Single-Molecule Magnets: Insufficiency of the Anisotropy Barrier as the Sole Criterion

K. S. Pedersen, J. Dreiser, H. Weihe, R. Sibille, H. V. Johannesen, M. A. Sørensen, B. E. Nielsen, M. Sigrist, H. Mutka, S. Rols, J. Bendix, S. Piligkos, *Inorg. Chem.* **54**, 7600–7606 (2015).

#### 39 – Strong Antiferromagnetic Exchange Between Manganese Phthalocyanine and Ferromagnetic Europium Oxide

C. Wäckerlin, F. Donati, A. Singha, R. Baltic, A.-C. Uldry, B. Delley, S. Rusponi, J. Dreiser, *Chem. Commun.* **51**, 12958–12961 (2015).

#### 38 – Interfacial Properties of LaMnO<sub>3</sub>/LaNiO<sub>3</sub> Superlattices Grown Along (001) and (111) Orientation

C. Piamonteze, M. Gibert, J. Heidler, J. Dreiser, S. Rusponi, H. Brune, J.-M. Triscone, F. Nolting, U. Staub, *Phys. Rev. B* **92**, 014426 (2015).

#### 37 – Molecular Lanthanide Single-Ion Magnets: From Bulk to Submonolayers

J. Dreiser, *J. Phys.: Condens. Matter* **27**, 183203 (2015).

#### 36 – Surface Aligned Magnetic Moments and Hysteresis of an Endohedral Single-Molecule Magnet on a Metal

R. Westerström, A.-C. Uldry, R. Stania, J. Dreiser, C. Piamonteze, M. Muntwiler, F. Matsui, S. Rusponi, H. Brune, S. Yang, A. Popov, B. Büchner, B. Delley, T. Greber, *Phys. Rev. Lett.* **114**, 087201 (2015).

#### 35 – Reduction of Mn<sub>19</sub> Coordination Clusters on a Gold Surface

J. Dreiser, A. M. Ako, C. Wäckerlin, J. Heidler, C. E. Anson, A. K. Powell, C. Piamonteze, F. Nolting, S. Rusponi, H. Brune, *J. Phys. Chem. C* **119**, 3550 (2015).

#### 34 – Magnetism of Ho and Er Atoms on Close-Packed Metal Surfaces

F. Donati, A. Singha, S. Stepanow, C. Wäckerlin, J. Dreiser, P. Gambardella, S. Rusponi, and H. Brune, *Phys. Rev. Lett.* **113**, 237201 (2014).

- 33 – Tailoring the Magnetism of Co Atoms on Graphene Through Substrate Hybridization**  
F. Donati, L. Gragnaniello, A. Cavallin, F. D. Natterer, Q. Dubout, M. Pivetta, F. Patthey, J. Dreiser, C. Piamonteze, S. Rusponi, H. Brune, *Phys. Rev. Lett.* **113**, 177201 (2014).
- 32 – The Metallofullerene Field-Induced Single-Ion Magnet HoSc<sub>2</sub>N@C<sub>80</sub>**  
J. Dreiser, R. Westerström, Y. Zhang, A. A. Popov, L. Dunsch, K. Krämer, S.-X. Liu, S. Decurtins, T. Greber, *Chem. Eur. J.* **20**, 13536 (2014).
- 31 – X-ray Induced Demagnetization of Single-Molecule Magnets**  
J. Dreiser, R. Westerström, C. Piamonteze, F. Nolting, S. Rusponi, H. Brune, S. Yang, A. Popov, L. Dunsch, T. Greber, *Appl. Phys. Lett.* **105**, 032411 (2014).
- 30 – Cluster-Size Dependent Internal Dynamics and Magnetic Anisotropy of Ho Ions in HoM<sub>2</sub>N@C<sub>80</sub> and Ho<sub>2</sub>MN@C<sub>80</sub> Families (M = Sc, Lu, Y)**  
Y. Zhang, D. Krylov, S. Schiemenz, M. Rosenkranz, R. Westerström, J. Dreiser, C. Piamonteze, T. Greber, A. A. Popov, *Nanoscale* **6**, 11431 (2014).
- 29 – Interlayer Exchange Coupling in Ordered Fe Nanocluster Arrays Grown on Al<sub>2</sub>O<sub>3</sub>/Ni<sub>3</sub>Al(111)**  
S. Vlaic, L. Gragnaniello, S. Rusponi, A. Cavallin, F. Donati, Q. Dubout, C. Piamonteze, J. Dreiser, F. Nolting, H. Brune, *Phys. Rev. B* **89**, 245402 (2014).
- 28 – Reaching the Magnetic Anisotropy Limit of a 3d Metal Atom**  
I. G. Rau, S. Baumann, S. Rusponi, F. Donati, S. Stepanow, L. Gragnaniello, J. Dreiser, C. Piamonteze, F. Nolting, S. Gangopadhyay, O. R. Albertini, R. M. Macfarlane, C. P. Lutz, B. A. Jones, P. Gambardella, A. J. Heinrich, H. Brune, *Science* **344**, 988 (2014).
- 27 – Exchange Interaction of Strongly Anisotropic Tripodal Erbium Single-Ion Magnets with Metallic Surfaces**  
J. Dreiser, C. Wäckerlin, Md. E. Ali, C. Piamonteze, F. Donati, A. Singha, K. S. Pedersen, S. Rusponi, J. Bendix, P. M. Oppeneer, T. A. Jung, H. Brune, *ACS Nano* **8**, 4662 (2014).
- 26 – Tunneling, Remanence, and Frustration in Dysprosium-Based Endohedral Single-Molecule Magnets**  
R. Westerström, J. Dreiser, C. Piamonteze, M. Muntwiler, S. Weyeneth, K. Krämer, S.-X. Liu, S. Decurtins, A. Popov, S. Yang, L. Dunsch, T. Greber, *Phys. Rev. B* **89**, 060406(R) (2014).
- 25 – Modifying the Properties of 4f Single-Ion Magnets by Peripheral Ligand Functionalisation**  
K. S. Pedersen, L. Ungur, M. Sigrist, A. Sundt, M. Schau-Magnussen, V. Vieru, H. Mutka, S. Rols, H. Weihe, O. Waldmann, L. F. Chibotaru, J. Bendix, J. Dreiser, *Chem. Sci.* **5**, 1650 (2014), open access.
- 24 – Low Temperature Ferromagnetism in Chemically Ordered FeRh Nanocrystals**  
A. Hillion, A. Cavallin, S. Vlaic, A. Tamion, F. Tournus, G. Khadra, J. Dreiser, C. Piamonteze, F. Nolting, S. Rusponi, K. Sato, T. J. Konno, O. Proux, V. Dupuis, H. Brune, *Phys. Rev. Lett.* **110**, 087207 (2013).
- 23 – Three-Axis Anisotropic Exchange Coupling in the Single-Molecule Magnets (NEt<sub>4</sub>)[Mn<sup>III</sup><sub>2</sub>(5-Brsalen)<sub>2</sub>(MeOH)<sub>2</sub>M<sup>III</sup>(CN)<sub>6</sub>], M = Ru, Os**  
J. Dreiser, K. S. Pedersen, A. Schnegg, K. Holldack, J. Nehr Korn, M. Sigrist, P. Tregenna-Piggott, H. Mutka, H. Weihe, V. S. Mironov, J. Bendix, O. Waldmann, *Chem. Eur. J.* **19**, 3693 (2013).
- 22 – An Oxide-Bridged Dy-Re(V)-Dy Single-Molecule Magnet**  
K. S. Pedersen, J. Dreiser, M. Schau-Magnussen, C. A. Thuesen, H. Weihe, J. Bendix, *Polyhedron* **46**, 47 (2012).

**21 – Mn<sup>III</sup> Zero-Field Splitting Parameters and Weak Exchange Interactions in a Cyanide-Bridged {Mn<sup>III</sup>–Ir<sup>III</sup>–Mn<sup>III</sup>} Cluster**

K. S. Pedersen, M. Sigrist, H. Weihe, P. Tregenna-Piggott, M. Schau-Magnussen, J. Dreiser, H. Mutka, A. L. Barra, J. Bendix, *Inorg. Chem. Commun.* **24**, 24 (2012).

**20 – XMCD Study of a Methoxide-Bridged Dy<sup>III</sup>–Cr<sup>III</sup> Cluster Obtained by Fluoride Abstraction from cis-[Cr<sup>III</sup>F<sub>2</sub>(phen)<sub>2</sub>]<sup>+</sup>**

J. Dreiser, K. S. Pedersen, T. Birk, M. Schau-Magnussen, C. Piamonteze, S. Rusponi, Th. Weyhermüller, H. Brune, F. Nolting, J. Bendix, *J. Phys. Chem. A* **116**, 7842 (2012).

**19 – X-Treme Beamline at SLS: X-ray Magnetic Circular and Linear Dichroism at High Field and Low Temperature**

C. Piamonteze, U. Flechsig, S. Rusponi, J. Dreiser, J. Heidler, M. Schmidt, R. Wetter, M. Calvi, T. Schmidt, H. Pruchova, J. Krempasky, C. Quitmann, H. Brune, F. Nolting, *J. Synchrotron Rad.* **19**, 661 (2012).

**18 – An Endohedral Single-Molecule Magnet with Long Relaxation Times: DySc<sub>2</sub>N@C<sub>80</sub>**

R. Westerström, J. Dreiser, C. Piamonteze, M. Muntwiler, S. Weyeneth, H. Brune, S. Rusponi, F. Nolting, A. Popov, S. Yang, L. Dunsch, T. Greber, *J. Am. Chem. Soc.* **134**, 9840 (2012).

**17 – Direct Observation of a Ferri-to-Ferromagnetic Transition in a Fluoride-Bridged 3d-4f Molecular Cluster**

J. Dreiser, K. S. Pedersen, C. Piamonteze, S. Rusponi, Z. Salman, Md. E. Ali, M. Schau-Magnussen, C. Aa. Thuesen, S. Piligkos, H. Weihe, H. Mutka, O. Waldmann, P. Oppeneer, J. Bendix, F. Nolting, H. Brune, *Chem. Sci.* **3**, 1024 (2012).

**16 – Inelastic Neutron Scattering on an Mn<sub>10</sub> Supertetrahedron: Assessment of Exchange Coupling Constants, Ferromagnetic Spin Waves and an Analogy to the Hückel Method**

S. Stuibler, G. Wu, J. Nehr Korn, J. Dreiser, Y. Lan, G. Novitchi, C. E. Anson, T. Unruh, A. K. Powell, O. Waldmann, *Chem. Eur. J.* **17**, 9094 (2011).

**15 – A Linear Single-Molecule Magnet Based on [Ru<sup>III</sup>(CN)<sub>6</sub>]<sup>3-</sup>**

K. S. Pedersen, J. Dreiser, J. Nehr Korn, M. Gysler, M. Schau-Magnussen, A. Schnegg, K. Holldack, R. Bittl, S. Piligkos, H. Weihe, P. Tregenna-Piggott, O. Waldmann, J. Bendix, *Chem. Commun.* **47**, 6918 (2011).

**14 – Frequency-Domain Fourier-Transform Terahertz Spectroscopy of the Single-Molecule Magnet (NEt<sub>4</sub>)[Mn<sub>2</sub>(5-Brsalen)<sub>2</sub>(MeOH)<sub>2</sub>Cr(CN)<sub>6</sub>]**

J. Dreiser, A. Schnegg, K. Holldack, K. S. Pedersen, M. Schau-Magnussen, J. Nehr Korn, P. Tregenna-Piggott, H. Mutka, H. Weihe, J. Bendix, O. Waldmann, *Chem. Eur. J.* **17**, 7492 (2011).

**13 – High-Frequency Electron-Spin-Resonance Study of the Octanuclear Ferric Wheel CsFe<sub>8</sub>**

J. Dreiser, O. Waldmann, G. Carver, C. Dobe, H. U. Güdel, A. L. Barra, *Inorg. Chem.* **49**, 8729 (2010).

**12 – Combined Magnetic Susceptibility Measurements and <sup>57</sup>Fe Mössbauer Spectroscopy on a Ferromagnetic {Fe<sup>III</sup><sub>4</sub>Dy<sub>4</sub>} Ring**

D. Schray, G. Abbas, Y. Lan, V. Mereacre, A. Sundt, J. Dreiser, O. Waldmann, G. E. Kostakis, C. E. Anson, A. K. Powell, *Angew. Ch. Int. Ed.* **49**, 5185 (2010).

**11 – Quantized Antiferromagnetic Spin Waves in the Molecular Heisenberg Ring CsFe<sub>8</sub>**

J. Dreiser, O. Waldmann, C. Dobe, G. Carver, S. T. Ochsenbein, A. Sieber, H. U. Güdel, J. van Duijn, J. Taylor, A. Podlesnyak, *Phys. Rev. B* **81**, 024408 (2010).



## **10 – Confluence of Resonant Laser Excitation and Bidirectional Quantum-Dot Nuclear-Spin Polarization**

C. Latta, A. Högele, Y. Zhao, A. N. Vamivakas, P. Maletinsky, M. Kroner, J. Dreiser, I. Carusotto, A. Badolato, D. Schuh, W. Wegscheider, M. Atatüre, A. Imamoglu, *Nat. Phys.* **5**, 758 (2009).

## **9 – Optical Investigations of Quantum Dot Spin Dynamics**

J. Dreiser, M. Atatüre, C. Galland, T. Müller, A. Badolato, A. Imamoglu, *Phys. Rev. B* **77**, 075317 (2008).

## **8 – Strong Extinction of a Far-Field Laser Beam by a Single Quantum Dot**

A. N. Vamivakas, M. Atatüre, J. Dreiser, S. T. Yilmaz, A. Badolato, A. K. Swan, B. B. Goldberg, A. Imamoglu, S. Ünlü, *Nano Lett.* **7**, 2892 (2007).

## **7 – Coupling Quantum Dot Spins to a Photonic Crystal Nanocavity**

A. Imamoglu, S. Fält, J. Dreiser, G. Fernandez, M. Atatüre, K. Hennessy, A. Badolato, D. Gerace, *J. Appl. Phys.* **101**, 081602 (2007).

## **6 – Observation of Faraday Rotation from a Single Confined Spin**

M. Atatüre, J. Dreiser (Equal contribution with M. Atatüre), A. Badolato, A. Imamoglu, *Nat. Phys.* **3**, 101 (2007).

## **5 – Quantum-Dot Spin-State Preparation with Near-Unity Fidelity**

M. Atatüre, J. Dreiser, A. Badolato, A. Högele, K. Karrai, A. Imamoglu, *Science* **312**, 551 (2006).

## **4 – Tuning Photonic Crystal Nanocavity Modes by Wet Chemical Digital Etching**

K. Hennessy, A. Badolato, A. Tamboli, P. M. Petroff, E. Hu, M. Atatüre, J. Dreiser, A. Imamoglu, *Appl. Phys. Lett.* **87**, 021108 (2005).

## **3 – Deterministic Coupling of Single Quantum Dots to Single Nanocavity Modes**

A. Badolato, K. Hennessy, M. Atatüre, J. Dreiser, E. Hu, P. M. Petroff, A. Imamoglu, *Science* **308**, 1158 (2005).

## **2 – Spin-Selective Optical Absorption of Singly Charged Excitons in a Quantum Dot**

A. Högele, M. Kroner, S. Seidl, K. Karrai, M. Atatüre, J. Dreiser, A. Imamoglu, R. J. Warburton, A. Badolato, B. D. Gerardot, P. M. Petroff, *Appl. Phys. Lett.* **86**, 221905 (2005).

## **1 – Voltage-Controlled Electron-Hole Interaction in a Single Quantum Dot**

A. Högele, S. Seidl, M. Kroner, K. Karrai, J. Warburton, M. Atatüre, J. Dreiser, A. Imamoglu, B. D. Gerardot, P. M. Petroff, *J. Supercond. Novel Magn.* **18**, 245 (2005).

## **Book chapters**

### **B1 – Optical Control of Quantum Dot-Spin States (Book Chapter)**

M. Atatüre, J. Dreiser, A. Badolato, A. Imamoglu, Semiconductor Quantum Bits, Edited by O. Benson and F. Henneberger, World Scientific Publishing Co. (2008).

## **Conference proceedings**

### **C1 – XMCD Study of the Magnetic Exchange Coupling in a Fluoride-Bridged DyCr Molecular Cluster**

J. Dreiser, C. Piamonteze, F. Nolting, K. S. Pedersen, J. Bendix, S. Rusponi, H. Brune, *J. Korean Phys. Soc. (Conf. Proc. of ICM 2012)*, **62**, 1368 (2013).