

BOOK OF ABSTRACTS



yECMM

9th European Conference on
Molecular / Magnetism

14-19 JULY 2024 Krakow - Poland

MONDAY, July 15th, 2024

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| 16:00 | Registration |
| 18:00 | Opening |
| 18:45 | OKIA Award Lecture
Kasper Steen Pedersen |
| 19:30 | Welcome Party |
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TUESDAY, July 16th, 2024

SESSION S1 - July 16th

Chair: Eugenio Coronado (Universidad de Valencia, Spain)

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| 09:10 | P01 | Metal Boxes with Spins
Jonathan R. Nitschke
University of Cambridge, United Kingdom |
| 09:55 | IT01 | Molecular spin switches on surfaces
Manuel Gruber
University of Duisburg-Essen, Germany |
| 10:20 | C01 | Computer assisted design of novel Spin-Crossover systems: From Density Functional Methods to Machine Learning
Jordi Cirera
Universitat de Barcelona, Spain |
| 10:35 | C02 | Spin-State Switching in Dynamic Molecules and Chiral Cages
Sanjit Konar
Indian Institute of Science Education and Research Bhopal, India |
| 10:50 | | Coffee Break |

SESSION S2 - July 16th

Chair: Fabrice Pointillart (University of Rennes, France)

11:30	IT02	Electrical sensing of molecular spin states in an OFET device Gábor Molnár Laboratory of Coordination Chemistry of CNRS, France
11:55	IT03	Spin State Switching in Iron(III) Complexes – a Thermal and Optical Study Grace G. Morgan University College Dublin, Ireland
12:20	C03	Tunable magnetic phenomena in LnI ₂ (pyrazine) _x networks Maja A. Dunstan Technical University of Denmark, Denmark
12:35	C04	Increasing Electrical Conductivity of Metal-Organic Framework Displaying Spin Crossover by Oriented Synthesis of Polypyrrole in it Saioa Cobo Laboratory of Coordination Chemistry of CNRS, France
12:50	C05	An Apparently Simple Asymmetric Spin-Transition Reflects a Complicated Interplay of Crystal Phases Malcolm A. Halcrow University of Leeds, United Kingdom
13:05		Lunch

SESSION S3 - July 16th

Chair: Kasper Pedersen (Technical University of Denmark, Denmark)

14:30	P02	Light-driven ultrafast magnetism Dmytro Afanasiev Radboud University, Netherlands
15:15	IT04	Anisotropy of 4f States in 3d/4f Metallocrown Complexes Eva Rentschler Johannes Gutenberg Universität, Germany
15:40	C06	Exploring Molecular Magnets with Paramagnetic NMR Spectroscopy Valentin Novikov Universitat de Barcelona, Spain
15:55	C07	Magnetic dendrimers: Tackling the challenge of synthesis and characterization Valérie Marvaud Sorbonne University, France
16:10	C08	Metal-Radical Frameworks Dominique Luneau Université de Lyon, France
16:25		Coffee Break

SESSION S4 - July 16th

Chair: Gabor Molnár (Laboratory of Coordination Chemistry CNRS, France)

17:00	IT05	Hysteresis and Trapping Effects in Iron(II) and Iron(III) Spin Crossover Complexes Birgit Weber Friedrich-Schiller-Universität Jena, Germany
17:25	IT06	Design of photochromic ligands allowing 4f complexes photocontrol Lucie Norel Université de Rennes, France
17:50	IT07	Optimising the spin coherence properties of photogenerated quartet states Sabine Richert University of Freiburg, Germany
18:15	C09	Switchable polynuclear Co complexes based on a triphenylene bridging ligand: interplay between redox processes, light, and magnetism Nathalie Bridonneau Université Paris-Saclay, France
18:45		Poster Session 1

WEDNESDAY, July 17th, 2024

SESSION S5 - July 17th

Chair: Roberta Sessoli (University of Florence, Italy)

09:10	P03	The Awakening of On-Surface Synthesis David Écija IMDEA Nanoscience Institute, Spain
09:55	IT08	Wiring up Molecular Spin Qudits with Superconducting Circuits Fernando Luis Universidad de Zaragoza, Spain
10:20	C10	High-performance DyIII Single-Molecule Magnets with D6h symmetry Theocharis C. Stamatatos University of Patras, Greece
10:35	C11	Chemical tuning of the quantum spin-electric coupling in molecular nanomagnets Junjie Liu Queen Mary University of London, United Kingdom
10:50		Group Photo, Coffee Break

SESSION S6 - July 17th

Chair: José J. Baldoví (Universidad de Valencia, Spain)

11:30	IT09	Single molecule magnetic anisotropy switch on the surface Mauro Perfetti University of Florence, Italy
11:55	IT10	Optical readout of Single-Molecule Magnetic Memories with Unpolarized Light Matteo Atzori Université Grenoble Alpes, Université Toulouse III, France
12:20	C12	X-ray Magnetochiral Dichroism – an elements selective probe of magnetoelectric coupling Andrei Rogalev European Synchrotron Radiation Facility, France
12:35	C13	Electronic, magnetic and optical properties of pentacene on NiO(001): an ab initio study Elena Molteni Università degli Studi di Milano, Italy
12:50	C14	XANES study of Fe(II)- triazole spin crossover nanoparticles Magdalena Fitta Institute of Nuclear Physics Polish Academy of Sciences
13:05		Lunch Break

SESSION S7 - July 17th

Chair: Eva Rentschler (Johannes Gutenberg Universität, Germany)

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| 14:30 | IT11 | Engineering 2D magnetism in van der Waals materials
José J. Baldoví
Universidad de Valencia, Spain |
| 14:55 | IT12 | Chemistry, 2D materials and magnetism: Playground or nightmare?
Alicia Forment-Aliaga
Universidad de Valencia, Spain |
| 15:20 | IT13 | Rapid scan ESR: A Versatile Tool for the Spin Relaxation Studies at (sub)THz Frequencies
Petr Neugebauer
Central European Institute of Technology,
Brno University of Technology, Czechia |
| 15:45 | C15 | High-Field EPR and Magnetic Studies on a Hexanuclear Mn(III)/Mn(IV) Complex with a S=11 Ground State
Andrew Ozarowski
Florida State University, USA |
| 16:00 | C16 | High-Symmetry Ho(III) Complexes as Clock-Transition Qubits
Michael Shatruk
Florida State University, USA |
| 16:15 | | Coffee Break |

SESSION S8 - July 17th

Chair: Rodolphe Clérac (University of Bordeaux, France)

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| 16:50 | IT14 | A molecular perspective on two-dimensional molecular magnets: isolation and synergies
Samuel Mañas-Valero
Delft University of Technology, Netherlands |
| 17:15 | IT15 | Spin dynamics and coherent spin manipulation of a mononuclear lanthanide-based polyoxotungstate [online]
Itziar Oyarzabal
Basque Center for Materials, Applications and Nanostructures, Spain |
| 17:40 | C17 | Oxovanadium(IV)-platinum(II) lantern complexes as qubits
Andrea Cornia
University of Modena and Reggio Emilia, Italy |
| 17:55 | C18 | Quantum Sensing of Magnetic Fields with Molecular Spins
Claudio Bonizzoni
Università di Modena e Reggio Emilia, Italy |
| 18:10 | C19 | Glassy synaptic time dynamics in molecular La _{0.7} Sr _{0.3} MnO ₃ /Ga ₂ O ₃ /AlO _x /Co spintronic crossbar devices
Alberto Riminucci
Institute of Nanostructured Materials CNR, Italy |
| 18:45 | | Poster Session 2 |

THURSDAY, July 18th, 2024

SESSION S9 - July 18th

Chair: Mauro Perfetti (University of Florence, Italy)

09:10	P04	Structure-dependent spin couplings in molecular films: opportunities for photovoltaic and quantum applications Sandrine Heutz Imperial College London, United Kingdom
09:55	IT16	Computational Design of Magnetic Molecules 2.0 Alessandro Lunghi Trinity College Dublin, Ireland
10:20	C20	Electronic structure of mononuclear and radical-bridged dinuclear cobalt(II) single-molecule magnets Joris van Slageren University of Stuttgart, Germany
10:35	C21	Impact of the semi-coordination on electronic structure and magnetic properties in lanthanide complexes – theoretical study Radovan Herchel Palacký University Olomouc, Czechia
10:50		Coffee Break

SESSION S10 - July 18th

Chair: Michael Shatruk (Florida State University, USA)

11:30	IT17	Circularly Polarized Luminescence in Single-Molecule Magnet Fabrice Pointillart University of Rennes, France
11:55	IT18	Towards linear lanthanide single-molecule magnet David P. Mills The University of Manchester, United Kingdom
12:20	C22	Exotic spin structures in coordination clusters incorporating 4f ions Annie Powell Karlsruhe Institute of Technology, Germany
12:35	C23	Coupled-Cluster Treatment of Large and Complex Molecular Magnets Maristella Alessio Katholieke Universiteit Leuven, Belgium
12:50	C24	Accurate and Efficient Spin–Phonon Coupling and Spin Dynamics Calculations for Molecular Solids Nicholas F. Chilton The Australian National University / The University of Manchester, Australia / United Kingdom
13:05		Lunch

SESSION S11 - July 18th

Chair: Birgit Weber (Friedrich-Schiller-Universität Jena, Germany)

14:30	IT19	Magnetic and optical properties of lanthanide-based supramolecular nanotubes of SCM Kevin Bernot Institut des Sciences Chimiques de Rennes, France
14:55	C25	Haloarene adducts of axial dysprosium cyclopentadienyl SMMs Gemma K. Gransbury University of Manchester, United Kingdom
15:10	C26	Framework for Designing <i>p</i> -Block Single-Molecule Magnets Akseli Mansikkamäki University of Oulu, Finland
15:25	C27	Slow magnetic relaxation in layered lanthanoid-anilato lattices Carlos J. Gómez-García University of Valencia, Spain
15:40		Coffee Break

SESSION S12 - July 18th

Chair: Kevin Bernot (Institut des Sciences Chimiques de Rennes, France)

16:15	IT20	Exploring light and chirality to control molecular spin qubits Roberta Sessoli University of Florence, Italy
16:40	ERC01	Organometallic titanium(III) QuBit on Pb(111) surface unveils the mechanism of molecular spin-superconductor Matteo Briganti University of Florence, Italy
16:50	ERC02	Revealing hidden phases in an Fe(II) metal-organic framework showing spin crossover phenomena F. Javier Valverde-Muñoz Université de Rennes, France
17:00	ERC03	The role of electronic excited states in spin-lattice relaxation of molecular qubits A. Lorenzo Mariano Trinity College Dublin, Ireland
17:30	ERC04	Tb(III) SMMs Showing Self-Monitoring of Temperature by Luminescence Junhao Wang University of Tsukuba, Japan
17:20	ERC05	Cation induced structural distortion in $A_xMn[Fe(CN)_6]$ for enhanced Metal-to-Metal Interaction Ramon Torres-Cavanillas Oxford University, United Kingdom
17:30		Closing
20:30		Conference dinner