

EUGENIO CORONADO. Curriculum vitae (4 April 2014)

Academic education and Posts.

- PhD in Chemistry (Univ. Valencia 1985) and Physics (These d'Etat, Univ. L. Pasteur (Strasbourg 1990).
- Full Professor of Inorganic Chemistry (since 1993).
- *Director of the Instituto de Ciencia Molecular (ICMol) of the Valencia Univ.* (since its foundation in 2000).
- *Scientific Director of the European Institute of Molecular Magnetism* (since its foundation in 2008) and President (since 2014).
- *Director of the Spanish Center in Molecular Nanoscience ISIC-NANO* (since 2012).
- Director of the Spanish Master in Molecular Nanoscience and Nanotechnology (since its creation in 2008).
- Director of the Inter-University Spanish Doctoral Program in Nanoscience and Nanotechnology (since its creation in 2008).

Honors, Awards

- Member of the Spanish Academy of Exact, Physical and Natural Sciences, since 2010
- ERC Advanced Grant, 2009
- National Prize of Research in Chemical Science "ENRIQUE MOLES", 2009
- Member of the ACADEMIA EUROPAEA, since 2009
- National Prize of Research and Gold Medal of the REAL SOCIEDAD ESPAÑOLA DE QUIMICA (RSEQ), 2009
- Joint RSC-RSEQ European Lecturership Award in Chemical Science, 2009
- Fellow of the RSC, since 2004
- National Prize of Research "REY JAIME I" in New Technologies, 2003
- National Prize of Scientific Research "REY JUAN CARLOS I", 1997
- Invited professor at Univ. Utah (USA) (July-Sept. 1996 and 1997); Univ. Versailles, France (July 2001); Univ. Leiden, Holland ("Van Arkel" Chair) (July-Sept 2003); Tokyo Institute of Technology, Japan (Sept. 2004); Univ. Chile (Nov. 2007); North East Normal Univ., China (Sept. 2009), Univ. de Cagliari, Italy (April 2011); and Univ. Paris VI, France (July 2011)

Memberships

- International advisory board of *Inorganic Chemistry Frontiers* (since 2013) *Chemical Science* (since 2009), *ZAAC Zeitschrift für Anorganische und Allgemeine Chemie*, (since 2009), *Inorganic Chemistry* (2005-2009), *Polyhedron* (2002-2008) and *CrystEngCom.* (2000-2004).
- Editorial board of the *Journal of Materials Chemistry* (2003-2007)
- Governing board of the RSEQ (2003-2007), of the Spanish Magnetic Club (2006-2009) and of the European Network of Excellence MAGMANet, (2005-2009)
- High advisory board of the Generalidad Valenciana (since 2003)
- Advisory Scientific board of the Center for the Development of Nanoscience and Nanotechnology of Chile, CEDENNA (since 2009) and of the Labex NanoSaclay (French Lab. d'Excellence en Nanosciences et Nanotechnologies) (since 2013).

Current research interests

Molecular magnetism. Functional molecular materials (magnetic molecular materials, molecular conductors and superconductors, multifunctional materials). Polyoxometalate chemistry. Molecular nanoscience (nanomaterials, nanomagnetism, molecular spintronics).

Current European Research Grants

- **SPINMOL** ERC Advanced Grant "*Magnetic Molecules and Hybrid Materials for Molecular Spintronics*"
- **HINTS** FP7 NMP "*Next Generation of Hybrid Interfaces for Spintronic Applications*"
- **ELFOS** FP7 ICT "*Electric Field Control over Spin in Molecules*"
- **PoCHEMoN** COST Action 1203 "*Polyoxometalate Chemistry for Molecular Nanoscience*"

Chairman of Conferences and Scientific Meetings

NATO ASI *Molecular Magnetism. From Molecular Assemblies to the Devices* (Tenerife, 1995); NATO ASI *Polyoxometalate Molecular Science* (Tenerife, 2001); *VIIIth International Conference on Molecule-based Magnets* (Valencia, 2002); *VIIIth International Symposium on Crystalline Organic Metals, Superconductors and Magnets* (Peñíscola, 2007); *I European School in Molecular Nanoscience* (Gandia, 2008); *II European Conference on Molecular Magnetism* (Wroklaw, 2009); *Brainstorming meeting in Molecular Spintronics* (Paris, 2009); *II European School in Molecular Nanoscience* (Benidorm, 2009); *III European School in Molecular Nanoscience* (Miraflores de la Sierra, 2010); *European Conference on Molecular Electronics* (Barcelona, 2010); *IV European School in Molecular Nanoscience* (Peñíscola, 2011); *40 International Conference on Coordination Chemistry* (Valencia 2012); *II Symposium on Frontiers in Metal-Oxide Cluster Science* (Lanzarote, 2012); *I European Conference on Polyoxometalate Chemistry for Molecular Nanoscience (PoCheMoN 2013)* (Tenerife 2013)

Member of the Scientific Advisory Board

- NATO ARW *Organic and Inorganic Low Dimensional Crystalline Materials* (Menorca, 1987)
- *Magnetismo y Materiales Magnéticos. III Escuela Ibérica Física Materia Condensada* (Jaca, 1989)
- *Towards Europe: Italian-Portuguese-Spanish Meeting in Inorganic Chemistry* (Gandia, 1990)
- *Spanish Schools on Molecular Materials*, ENMM (since 1992)
- *International Conferences on Molecule-based Magnets*, ICMM (since 2000)
- *International Symposia on Crystalline Organic Metals, Superconductors and Magnets*, ISCOM (since 2003)

- *European Conferences on Molecular Magnetism*, ECMM (since 2006)
- *European Conferences on Molecular Electronics*, ECME (since 2007)
- Symposium E-MRS "*Design, characterization and modeling of molecule-based magnetic materials*" (Strasbourg 2007)
- *VIII Solid State Conference* (Bratislava, 2008)
- *International Soft Matter Conference*, ISMC2010 (Granada, 2010)
- *X International Conference on Nanostructured Materials* (Roma, 2010)
- *XVII International Sol-Gel Conference* (Madrid, 2013)

Invited and plenary lectures in 2012-2013

2012

- 2nd International Symposium on Creation of Functional Materials. Tsukuba-Tokyo (JAPAN) 07. – 11. February 2012
- PDSTM Phase transition and Dynamical Properties of Spin Transition Materials. Meudon (FRANCE) 22. – 25. May 2012
- SPSSM Symposium: 4th International Symposium on Structure-Property Relationships in Solid State Materials. Bordeaux (FRANCE) 24. – 29. June 2012
- International Symposium Chemistry Nowadays. Fundación Areces. Madrid (SPAIN) 07. – 08. June 2012
- MOLMAT 2012: 3rd. International Conference on Molecular Materials" Barcelona (SPAIN) 03. – 06. July 2012
- ICM2012: The 19th International Conference on Magnetism" Bexco; Busan (COREA) 08. – 13. July 2012
- QUIMICUBA2012: International Symposium New Concepts in Molecular, Macromolecular and Supramolecular Chemistry" La Habana (CUBA) 10. – 13. October 2012
- "ICMM 2012: The 13th International Conference on Molecule-based Magnets" Orlando; Florida (USA) 07. – 11. October 2012
- NANOCON 012: 2nd International Conference on Nanotechnology" BVU COE Pune (INDIA) 18. – 19. October 2012
- ESMOLNA 2012, 5th European School on Molecular Nanoscience. Cuenca (SPAIN) 28. October – 02 November 2012
- FMOCS2012, Frontiers in Metal Oxide Cluster Science 2012. Yaiza, Lanzarote (SPAIN) 18. – 22. November 2012

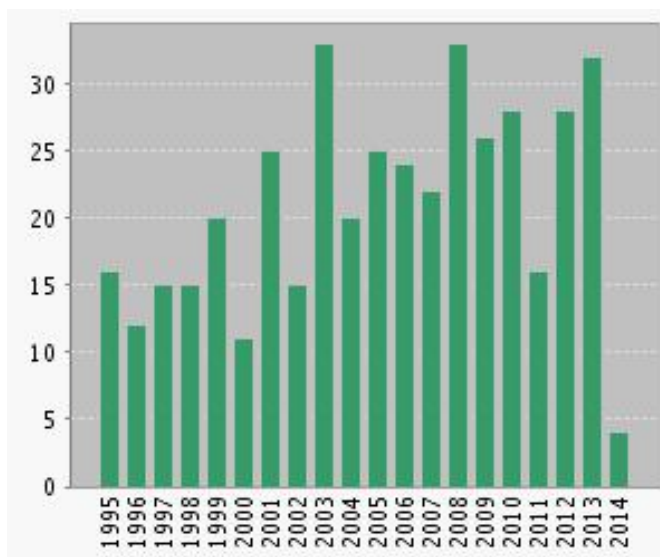
2013

- Chemical Nanoscience Syposium, 2013. New Castle (UNITED KINGDOM) 13. March 2013
- PoCHEMoN2013: 1st European Conference on Polyoxometalate Chemistry for Molecular Nanoscience. Tenerife (SPAIN) 16. -19. May 2013
- EINC2013: Easter Island Nanoscience Conference. Rapa Nui, Easter Island (CHILE) 04. -08. June 2013
- SolGel2013: XVIII International Sol-Gel Conference. Madrid (SPAIN) 25. -30. August 2013
- Frontiers in Molecular Magnetism in China. Nanning (CHINA) 17. -19. September 2013
- ECMM2013: 4th European Conference in Molecular Magnetism. Karlsruhe (GERMANY) 06. – 10. October 2013
- ESMOLNA 2013: 6th European School on Molecular Nanoscience. Cuenca (SPAIN) 27. – 13. October 2013
- ACCC4: 4th Asian Conference on Coordination Chemistry. Jeju (COREA) 04. – 09. November 2013

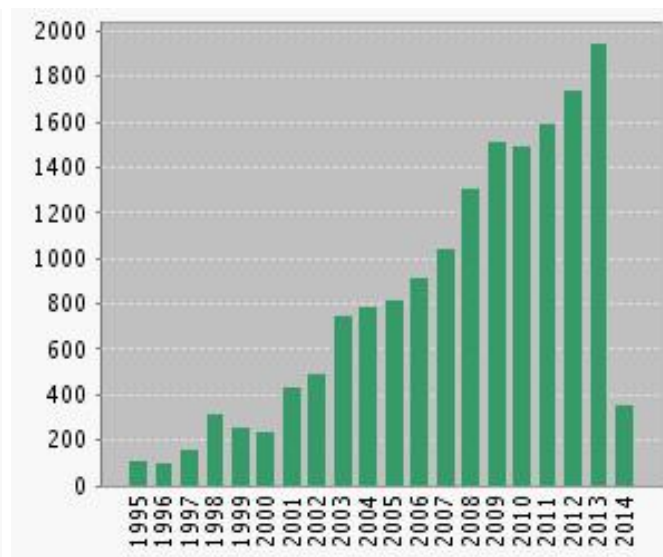
Publications

Number of ISI papers: 473; **Sum of the Times Cited:** 16.953; **H-index** : 65 (source ISI Web of Knowledge). He appears in the ranking of the **ISI Essential Science Indicators** as one of the most cited scientists in two areas: **CHEMISTRY** (position 372) and **MATERIALS SCIENCE** (position 1.284).

Number of papers



Number of citations



Top papers

- 1 E. Coronado, C.J. Gómez-García
"Polyoxometalate-based molecular materials"
Chem. Rev. **98**, 273 (1998). CITATIONS: 823
- 2 J.J. Borrás-Almenar, J. M. Clemente-Juan, E. Coronado, B. S. Tsukerblat
"High-nuclearity magnetic clusters: Generalized Spin Hamiltonian and its use for the calculation of the energy levels, magnetic properties and inelastic neutron scattering spectra"
Inorg. Chem. **38**, 6081 (1999). CITATIONS: 429
- 3 E. Coronado, J. R. Galán-Mascarós, C. J. Gómez-García, V. L. Lauhkin
"Coexistence of ferromagnetism and metallic conductivity in a molecule-based layered compound"
Nature **408**, 447 (2000). CITATIONS: 932
- 4 J.J. Borrás-Almenar, J.M. Clemente-Juan, E. Coronado, B.S. Tsukerblat
"Magpack: A package to calculate the energy levels, bulk magnetic properties, and inelastic neutron scattering spectra of high nuclearity spin clusters"
J. Computational Chem. **22**, 985-991 (2001). CITATIONS: 536
- 5 E. Coronado, P. Day
"Magnetic molecular conductors"
Chem. Rev. **104**, 5419 (2004). CITATIONS: 489
- 6 J. Lehmann, A. Gaita-Ariño, E. Coronado, D. Loss
"Spin qubits with electrically gated polyoxometalate molecules"
Nature Nano. **2**, 312 (2007). CITATIONS: 165
- 7 E. Coronado, J. R. Galán-Mascarós, M. Monrabal-Capilla, J. García-Martínez, P. Pardo-Ibanez
"Bistable Spin Crossover Nanoparticles Showing Thermal Hysteresis Near Room Temperature"
Adv. Mater. **1359** (2007). CITATIONS: 138
- 8 M. A. Aldamen, J.M. Clemente-Juan, E. Coronado, C. Martí-Gastaldo, A. Gaita-Ariño
"Mononuclear Lanthanide Single-Molecule Magnets Based on Polyoxometalates"
J. Am. Chem. Soc. **130**, 8874 (2008). CITATIONS: 308
- 9 M. A. Aldamen, S. Cardona-Serra, J.M. Clemente-Juan, E. Coronado, C. Martí-Gastaldo, A. Gaita-Ariño, C. Martí-Gastaldo, F. Luis, O. Montero
"Mononuclear Lanthanide Single-Molecule Magnets Based on the Polyoxometalates $[Ln(W_5O_{18})_2]^{9-}$ and $[Ln(SiW_{11}O_{39})_2]^{7-}$ ($Ln(III) = Tb, Dy, Ho, Er, Tm, \text{ and } Yb$)"
Inorg. Chem. **48**, 3467 (2009). CITATIONS: 170
- 10 E. Coronado, C. Martí-Gastaldo, E. Navarro-Moratalla, A. Ribera, S.J. Blundell, P. J. Baker
"Coexistence of Superconductivity and Magnetism by Chemical Design"
Nature Chem. **2**, 1031 (2010). CITATIONS: 46
- 11 F. Prins, M. Monrabal-Capilla, E.A. Osorio, E. Coronado, H.S.J. van der Zant
"Room-Temperature Electrical Addressing of a Bistable Spin-Crossover Molecular System"
Adv. Mater. **23**, 11545 (2011). CITATIONS: 66
- 12 S. Cardona-Serra, J.M. Clemente-Juan, E. Coronado, A. Gaita-Ariño, A. Camón, M. Evangelisti, F. Luis, M. J. Martínez-Pérez, J. Sese
"Mononuclear Lanthanide Single-Molecule Magnets Based on the Polyoxometalates $[Ln(W_5O_{18})_2]^{9-}$ and $[Ln(SiW_{11}O_{39})_2]^{7-}$ ($Ln(III) = Tb, Dy, Ho, Er, Tm, \text{ and } Yb$)"
J. Am. Chem. Soc. **134**, 14982 (2012). CITATIONS: 36

LIST OF RECENT SCIENTIFIC PUBLICATIONS (since 2004)

Special thematic issues in journals (external editor)

- 1 E. Coronado, D. Gatteschi
“Magnetic Molecular Materials” in *J. Mater. Chem.* Vol. 16 (2006)
- 2 E. Coronado, C. Giménez-Saiz, C. Rovira
“Molecular Metals, Superconductors and Magnets” in *Solid State Sci.* Vol. 10 (issue 12) (2008)
- 3 E. Coronado, A. J. Epstein
“Molecular Materials for Spintronics and Quantum Computing” in *J. Mater. Chem.* (issue 12) (2009)
- 6 E. Coronado, K. R. Dunbar
“Molecular Magnetism” *Inorg. Chem.* (issue of April 2009)

Book chapters

- 7 E. Coronado, J.R. Galán-Mascarós, A. Murcia-Martínez, F.M. Romero, A. Tarazón
“Multifunctionality in Molecular Conductors and Magnets”
In Organic Conductors, Superconductors and Magnets: From Synthesis to Molecular Electronics, NATO ASI Series, Eds. L. Ouahab and E. Yagubskii, Kluwer Academic Publishers 139, 127-142, (2004)
- 8 E. Coronado, J.R. Galán-Mascarós, F. Romero
“Building Multifunctionality in Hybrid Materials”, in Functional Hybrid Materials, Eds. P. Gómez-Romero and C. Sanchez WILEY-VCH, 317-346, (2004)
- 9 P. Day, E. Coronado
"Molecular Materials combining magnetic and conducting properties"
in Magnetism: Molecules to materials. Vol. 5. Eds. J.S. Miller, M. Drillon. Wiley-VCH, 2005, 105-155
- 10 E. Coronado, J.R. Galán-Mascarós, J. S. Miller
“Organometallic Magnetic Materials“ in Comprehensive Organometallic Chemistry III,
Eds. Robert H. Crabtree and D. Michael P. Mingos. Elsevier: Oxford, vol. 12, 413 – 444 (2006).
- 11 E. Coronado, C. Giménez-Saiz, C. Martí-Gastaldo
“Crystal Engineering of Multifunctional Molecular Materials” in Engineering of Crystalline Materials Properties, Eds. J.J. Novoa, D. Braga, L. Addadi. NATO Science for Peace and Security Series- B: Physics and Biophysics. Springer, 173 – 191 (2008).
- 12 A. Palii, B. Tsukerblat, J.M. Clemente-Juan, E. Coronado
“Coherent Spin Dependent Landau-Zener Tunneling in Mixed Valence Dimers” in Vibronic Interactions and the Jahn-Teller Effect: Theory and Applications, Progress in Theoretical Chemistry and Physics,
Ed. Springer vol 23, 329 – 350 (2012).
- 13 B. Tsukerblat, A. Palii, J.M. Clemente-Juan, E. Coronado
“A Symmetry Adapted Approach to the Dynamic Jahn-Teller Problem” in Vibronic Interactions and the Jahn-Teller Effect: Theory and Applications, Progress in Theoretical Chemistry and Physics,
Ed. Springer vol 23, 39 – 57 (2012).
- 14 J.M. Clemente-Juan, E. Coronado, A. Gaita-Ariño
“Magnetic Polyoxometalates” in Polyoxometalate Chemistry. Some recent trends,
Ed. F. Secheresse. World Scientific Series in Nanoscience and Nanotechnology. vol 8, 155-169 (2013).

Reviews , Accounts, Highlights, Perspective articles

- 15 E. Coronado, P. Day
"Magnetic molecular conductors"
Chem. Rev. 104, 5419 (2004)
- 16 E. Coronado, J.R. Galán-Mascarós
"Hybrid molecular conductors"
J. Mater. Chem. 15, 66–74 (2005)
- 17 E. Coronado, C. Giménez Saiz, C.J. Gómez-García
"Recent advances in polyoxometalate-containing molecular conductors"
Coord. Chem. Rev. 249, 1776-1796 (2005)
- 18 E. Coronado, E. Palomares
"Hybrid molecular materials for optoelectronic devices"
J. Mater. Chem. 15, 35-36 (2005)
- 19 M. Clemente-León, E. Coronado, A. Soriano-Portillo, C. Mingotaud, J.M. Dominguez-Vera
"Langmuir-Blodgett Films Based on Inorganic Molecular Complexes with Magnetic or Optical Properties"
Adv. Coll. Interf. Sci. 116, 193 - 203 (2005)
- 20 E. Coronado, D. Gatteschi
"Trends and challenges in molecule-based magnetic materials"
J. Mater. Chem. 16, 2513 - 2515 (2006)
- 21 E. Coronado, C. Martí-Gastaldo, S. Tatay
"Magnetic molecular nanostructures: Design of magnetic molecular materials as monolayers, multilayers and thin films"
App. Surf. Science 254, 225-235 (2007)
- 22 E. Coronado, A. J. Epstein
"Molecular spintronics and quantum computing"
J. Mater. Chem. 19, 1670-1671 (2009)
- 23 J. Lehmann, A. Gaita-Ariño, E. Coronado, D. Loss
"Quantum computing with molecular spin systems"
J. Mater. Chem. 19, 1672-1677 (2009)
- 24 J. Camarero, E. Coronado
"Molecular vs. inorganic spintronics: the role of molecular materials and single molecules"
J. Mater. Chem. 19, 1678-1684 (2009)
- 25 E. Coronado, P. Gavina, S. Tatay
"Catenanes and threaded systems: from solution to surfaces"
Chem. Soc. Rev. 38, 1674-1689 (2009)
- 26 E. Coronado, K. R. Dunbar
"Forum on Molecular Magnetism: The role of inorganic chemistry"
Inorg. Chem. 48, 3293-3295 (2009)
- 27 A. Palii, B. Tsukerblat, J.M. Clemente-Juan, E. Coronado
"Magnetic exchange between metal ions with unquenched orbital angular momenta: basic concepts and relevance to molecular magnetism"
International Reviews in Physical Chemistry 29, 1, 135–230 (2010)
- 28 M. Clemente-León, E. Coronado, C. Martí-Gastaldo, F.M. Romero
"Multifunctionality in hybrid magnetic materials based on bimetallic oxalate complexes"
Chem. Soc. Rev. 40, 473 – 497 (2011)
- 29 A. Palii, B. Tsukerblat, S. Klokisner, KR Dunbar, JM Clemente-Juan, E. Coronado
"Beyond the Spin Model: Exchange coupling in molecular magnets with unquenched orbital angular momenta"
Chem. Soc. Rev. 40, 3130 – 3156 (2011)

- 30 J. M. Clemente-Juan, E. Coronado, A. Gaita-Ariño
“Magnetic polyoxometalates: from molecular magnetism to molecular
spintronics and quantum computing”
Chem. Soc. Rev. 7964 - 7478 (2012)
- 31 E. Coronado, G. Minguez Espallargas
“Dynamic magnetic MOFs”
Chem. Soc. Rev. 45, 1525-1539 (2013)

Scientific papers

a) Molecular Magnetism: Bimetallic Ferrimagnetic Chains and other low-dimensional magnetic materials, Mixed-valence clusters and magnetic clusters.

- 32 B. Woddard, R.D. Willett, Salim Haddad, B. Twamley, C.J. Gómez-García, E. Coronado "Structure of Two Azide Salts of a Copper(II) Macrocycle and Magnetic Properties of Cu₁₄-ane Cu(N₃)₄"
Inorg. Chem. **43**, 1822–1824, (2004)
- 33 M. Feliz, R. Llusar, S. Uriel, C. Vicent, E. Coronado, C.J. Gómez-García
"Cubane-Type Mo₃CoS₄ Molecular Clusters with Three Different Metal Electron Populations: Structure, Reactivity and Their Use in the Synthesis of Hybrid Charge-Transfer Salts"
Chem. Eur. J. **10**, 4308–4314, (2004)
- 34 S. Curreli, P. Deplano, C. Faulmann, M.L. Mercuri, L. Pilia, A. Serpe, E. Coronado, C.J. Gómez-García
"Synthesis, crystal structures and magnetic properties of mononuclear tris(croconate)ferrate(III) complexes"
Inorg. Chim. Acta **359**, 1177-1183, (2006)
- 35 S. Fernández-Armas, J.L. Mesa, J.L. Pizarro, J.-M. Clemente-Juan, E. Coronado, M.I. Arriortua, T. Rojo
"Parametrization of the Magnetic Behaviour of the Triangular Spin Ladder Chains Organically Templated: (C₂N₂H₁₀)[M(HPO₃)F₃](M^{III} = Fe, Cr, and V). Crystal Structure and Thermal and Spectroscopic Properties of the Iron (III) Phase"
Inorg. Chem. **45**, 3240 - 3248 (2006)
- 36 D.-K. Cao, J. Xiao, Y.-Z. Li, J.M. Clemente-Juan, E. Coronado, L.-M. Zheng
"Metal Phosphonates based on (Benzimidazol-2-ylmethyl)imino is(methylenephosphonate): Syntheses, Structures and Magnetic Properties of Chain Compounds M{(C₇H₅N₂)CH₂N(CH₂PO₃H)₂} (M = Mn, Fe, Co, Cu, Cd)"
Eur. J. Inorg. Chem. 1830 – 1837 (2006)
- 37 M.J. Plater, S. Kemp, E. Coronado, C.J. Gómez-García, R.W. Harrington, W. Clegg
"A stable oxoverdazyl free radical: Structural and magnetic characterization"
Polyhedron **25**, 2433 - 2438 (2006)
- 38 S. Benmansour, F. Setifi, C.J. Gómez-García, S. Triki, E. Coronado
"New coordination polymers based on a novel polynitrile ligand: Synthesis, structure and magnetic properties of the series [M(tcnOEtOH)₂(4,40-bpy)(H₂O)₂] (tcnOEtOH⁻ = [(NC)₂CC(OCH₂CH₂OH)C(CN)₂]⁻; M = Fe, Co and Ni)"
Inorg. Chim. Acta **361**, 3856–3862 (2008)
- 39 S. Benmansour, F. Setifi, C.J. Gómez-García, S. Triki, E. Coronado, J.-Y. Salaün
"A novel polynitrile ligand with different coordination modes: Synthesis, structure and magnetic properties of the series [M(tcnoprOH)₂(H₂O)₂] (M = Mn, Co and Cu) (tcnoprOH⁻ = [(NC)₂CC(OCH₂CH₂OH)C(CN)₂]⁻)"
J. Mol. Struct. **890**, 255 – 262 (2008)
- 40 F. Artizzu, K. Bernot, A. Caneschi, E. Coronado, J.M. Clemente-Juan, L. Marchiò, M. L. Mercuri, L. Pilia, A. Serpe, P. Deplano
"Synthesis, Structure, Spectroscopic Studies and Magnetic Properties of the Tetrakis(5,7-dichloro-8-quinolinolato)gadolinium(III) Complex"
Eur. J. Inorg. Chem. 3820–3826 (2008)
- 41 E. Coronado, C. Giménez-Saiz, F.M. Romero, A. Tarazón
"Metal Complexes of a Picolinate-Based Nitronyl Nitroxide Free Radical"
Inorg. Chem. **48**, 2205-2214 (2009)
- 42 J. M. Clemente-Juan, E. Coronado, G. M. Espallargas, H. Adams, L. Brammer
"Effect of the Halogen Bonding in Ferromagnetic Chains based on Co(II) Coordination Polymers"
CrystEngComm. **12**, 2339-2342 (2010)
- 43 E. C. Constable, G. Q. Zhang, E. Coronado, C. E. Housecroft, N. Neuburger
"Not just size and shape: spherically symmetrical d(5) and d(10) metal ions give different coordination nets with 4,2':6',4"-terpyridines"
CrystEngComm. **12**, 2139-2145 (2010)

- 44 A. V. Palii, B.S. Tsukerblat, J.M. Clemente-Juan, E. Coronado
“Isotropic Magnetic Exchange between Anisotropic Yb(III) Ions. Study of Cs₃Yb₂Cl₉ and Cs₃Yb₂Br₉ Crystals”
Inorg. Chem. **44**, 3984–3992, (2005)
- 45 J.M. Clemente-Juan, J.J. Borrás-Almenar, E. Coronado, A. V. Palii, B.S. Tsukerblat
“High-Nuclearity Mixed-Valence Clusters and Mixed-Valence Chains: General Approach to the Calculation of the Energy Levels and Bulk Magnetic Properties “
Inorg. Chem. **48**, 4557-4568 (2009)
- 46 J.J. Borrás-Almenar, S. Cardona-Serra, J.M. Clemente-Juan, E. Coronado, A. V. Palii, B.S. Tsukerblat
“MVPACK: A Package to Calculate Energy Levels and Magnetic Properties of High Nuclearity Mixed Valence Clusters”
J. Computational Chem. **31**, 1321-1332 (2010)
- 47 J.M. Clemente-Juan, J.J. Borrás-Almenar, E. Coronado, A. V. Palii, B.S. Tsukerblat
“Role of the Orbital Degeneracy in the Single Molecule Magnet Behavior of a Mononuclear High-Spin Fe(II) Complex “
Inorg. Chem. **49**, 8073-8077 (2010)
- 48 Z. Serna, N. de la Pinta, M.K. Urtiaga, L. Lezama, G. Madariaga, J. M. Clemente-Juan, E. Coronado, R. Cortés
“Defective Dicubane-like Tetranuclear Nickel(II) Cyanate and Azide Nanoscale Magnets”
Inorg. Chem. **49**, 11541-11549 (2010)
- 49 J.J. Baldoví, S. Cardona-Serra, J.M. Clemente-Juan, E. Coronado, A. Gaita-Ariño, A. Palii
“SIMPRES: A software package to calculate crystal field parameters, energy levels and magnetic properties on mononuclear lanthanoid complexes based on charge distributions”
J. Comput. Chem. **34**, 1961 – 1967 (2013)
- 50 W. Canon-Mancisidor, C. J. Gomez-Garcia, G. Minguez-Espallargas, A. Vega, E. Spodine, D. Venegas-Yazigi, E. Coronado
“Structural re-arrangement in two hexanuclear Cu-II complexes: from a spin frustrated trigonal prism to a strongly coupled antiferromagnetic soluble ring complex with a porous tubular structure”
Chem. Sci. **5**, 324-332 (2014)

b) Magnetic Polyoxometalates: Exchange interactions, single-molecule magnets and spin qubits

- 51 J.M. Clemente-Juan, E. Coronado, A. Forment-Aliaga, J.R. Galán-Mascarós, C. Giménez Saiz, C.J. Gómez-García
“A New Heptanuclear Cobalt(II) Cluster Encapsulated in a Novel Heteropolyoxometalate Topology: Synthesis, Structure, and Magnetic Properties of $[\text{Co}_7(\text{H}_2\text{O})_2(\text{OH})_2\text{P}_2\text{W}_{25}\text{O}_{94}]^{16-}$ ”
Inorg. Chem. **43**, 2689-2694 (2004)
- 52 N. Suaud, A. Gaita-Ariño, J.M. Clemente-Juan, E. Coronado
“Electron Delocalization and Electrostatic Repulsion at the Origin of the Strong Spin Coupling in Mixed-Valence Keggin Polyoxometalates: Ab Initio Calculations of the One- and Two-Electron Processes”
Chem. Eur. J. **10**, 4041-4053, (2004)
- 53 M. Clemente-Juan, E. Coronado, A. Gaita-Ariño, C. Giménez-Saiz, H.-U. Güdel, A. Sieber, R. Bircher, H. Mutka
”Magnetic Polyoxometalates: Anisotropic Exchange Interactions in the Co^{II}_3 Moiety of $[(\text{NaOH}_2)\text{Co}_3(\text{H}_2\text{O})(\text{P}_2\text{W}_{15}\text{O}_{56})_2]^{17-}$ ”
Inorg. Chem. **44**, 3389-3395, (2005)
- 54 L. Lisnard, P. Mialane, A. Dolbecq, J. Marrot, J.M. Clemente-Juan, E. Coronado, B. Feita, P. De Oliveira, L. Nadjo, F. Sécheresse
“Effect of Cyanato, Azido, Carboxylato, and Carbonato Ligands on the Formation of Cobalt (II) Polyoxometalates: Characterization, Magnetic, and Electrochemical Studies of Multinuclear Cobalt Clusters”
Chem. Eur. J. **13**, 3525-3536 (2007)
- 55 J.M. Clemente-Juan, E. Coronado, A. Gaita-Ariño, N. Suaud
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