

Augustin M. Mădălan, Ph.D.

University of Bucharest, Faculty of Chemistry,
Inorganic Chemistry Department,
Regina Elisabeta Blvd. 4-12, 030018 Bucharest, Romania
e-mail: augustin.madalan@chimie.unibuc.ro

Education

- University of Bucharest, Faculty of Chemistry, Ph.D. (2000 – 2004);
- “Fundeni” Clinical Institute, Bucharest – Resident Physician (2000 – 2004);
- University of Bucharest, Faculty of Chemistry, Inorganic Chemistry Department – B.Sc. Chemistry (1996 – 2000);
- „Carol Davila” Medicine and Pharmacy University, Bucharest, General Medicine Faculty – Medical-Doctor (1992 – 1998).

Research Activities

- 01.10.2013 – to date – associate professor at the *University of Bucharest, Faculty of Chemistry, Inorganic Chemistry Department*. Research topics: fluorescent materials for biomedical applications, metallo-supramolecular chemistry, crystal engineering.
- 01.03.2008 – 30.09.2013 – assistant professor at the *University of Bucharest, Faculty of Chemistry, Inorganic Chemistry Department*.
- 01.03.2006 – 29.02.2008 – postdoc research stage (*Marie Curie Intraeuropean Fellowship – contract 023627: “Self-Assembly of Bio-Nanochips”*), at the *Institut de Science et d'Ingénierie Supramoléculaires, Strasbourg - ISIS* in **Prof. Jean-Marie Lehn**'s group. Research topic: the design, synthesis and investigation of chemical and physical properties of [2×2] grid-type complexes bearing biological residues.
- 01.04.2005 – 28.02.2006 – postdoc research stage at the *Université d'Angers, Laboratoire Chimie, Ingénierie Moléculaire et Matériaux d'Angers (CIMMA)* in **Dr. Narcis Avarvari**'s group - Electrosynthesis of conductive materials containing chiral TTF derivatives as organic cation-radicals.
- 15.04. – 15.09.2001 (fellowship from *Alexander von Humboldt Foundation*) and 18.04. – 31.12.2002 – research stages at the *Institut für Anorganische Chemie der Universität Göttingen* in **Prof. Herbert W. Roesky**'s group. Research topic: Synthesis and characterization of heterospin systems, coordination compounds containing different types of spin carriers: organic radicals (2p) and different paramagnetic metal ions (3d, 4f).
- 01.11.1999 – 18.06.2004 – Ph.D. thesis (entitled “*Mononuclear copper(II) complexes – precursors for supramolecular polymetallic systems*”) at the *Inorganic Chemistry Laboratory, Faculty of Chemistry, University of Bucharest* under **Prof. Marius Andruh**'s coordination.

Publications: 120 papers (H-index: 34) and a short book chapter

- 5 invited talks, 4 poster presentations, 4 oral communications to international conferences;
- member of the Romanian Chemical Society;
- Coordinator of Exploratory Research Grant *PN-III-P4-ID-PCE-2016-0442* (financed by the Romanian National Research Council, 2017-2019);
- Coordinator of Young Research Team Grant *PN-II-RU-TE-2011-3-0252* (financed by the Romanian National Research Council, 2011-2014);

- Home mentor in a joint project Switzerland-Romania (Sciex-NMS project no. 13209);
- Beneficiary of *Marie Curie Intraeuropen Fellowship* – contract 023627 and *Marie Curie European Reintegration Grant* – contract 224845 (financed by the European Commission);
- Member in the research team in over 20 research grants.

A w a r d s

- 2008 – *The Prize for Chemistry of the Romanian National Science and Art Foundation*;
- 2007 – „*Gheorghe Spacu*” *Prize of the Romanian Academy*;
- 1992 – *Bronze Medal – International Chemistry Olympiad - Pittsburgh, USA*;

Papers

1. “Luminescent La^{3+} , Eu^{3+} and Tb^{3+} mononuclear complexes with a Schiff base tripodal ligand derived from 9-anthracenecarboxaldehyde”, A. D. Popa, M. Răducă, **A. M. Mădălan**, *Polyhedron*, **2023**, 239, 116441.
2. “Biological Evaluation and Structural Analysis of Some Aminodiphenylamine Derivatives”, A. Bujor, A. Hanganu, V. Tecuceanu, **A. M. Madalan**, M. Tudose, L. Marutescu, M. Popa, C. M. Chifiriuc, I. Zarafu, P. Ionita, *Antioxidants*, **2023**, 12, 713.
3. “Shifting emission of oxadiazoles via inter- or intramolecular hydrogen bonding”, C. C. Anghel, A. G. Mirea, C. C. Popescu, **A. M. Mădălan**, A. Hanganu, A. Bende, N. D. Hădade, M. Matache, M. Andruh, *Dyes Pigm.*, **2023**, 210, 111023.
4. “Zwitterion or diradicaloid? The case of diazenium betaines derived from DPPH”, A. F. Dobre, **A. M. Madalan**, S. Ionescu, A. Hanganu, C. Lete, C. C. Popescu, A. Paun, M. Matache, P. Ionita, *J. Mol. Struct.*, **2023**, 1275, 134703.
5. “Synthesis, Crystal Structure, and Optical Properties of a Trinuclear Zinc(II) Complex with Rhodamine B”, M. Răducă, S. Ionescu, **A. M. Mădălan**, *Crystals*, **2022**, 12, 1813.
6. “Exploring Arylazo-3,5-Bis(trifluoromethyl)pyrazole Switches”, B. C. Enache, A. Hanganu, C. Tablet, C. C. Anghel, C. C. Popescu, A. Paun, N. D. Hădade, **A. M. Mădălan**, M. Matache, *ACS Omega*, **2022**, 7, 39122–39135.
7. “A new seven-coordinated complex of Zn(II) with nicotinamide and acetate as mixed ligand: synthesis and characterization”, L. Pricop, **A. M. Mădălan**, A. Hanganu, *Rev. Roum. Chim.*, **2022**, 67(6-7), 365-371.
8. “A New Nitronyl-Nitroxide Ligand for Designing Binuclear Ln^{III} Complexes: Syntheses, Crystal Structures, Magnetic and EPR Studies”, M. Răducă, D. O. T. A. Martins, C. A. Spinu, M. Hillebrand, F. Tuna, G. Ionita, **A. M. Mădălan**, C. Lecourt, J.-P. Sutter, M. Andruh, *Eur. J. Inorg. Chem.*, **2022**, e202200128.
9. “Silver(I) complexes with a luminescent tripodal Schiff base ligand derived from fluorene-2-carboxaldehyde”, A. D. Popa, **A. M. Mădălan**, *Polyhedron*, **2022**, 220, 115849.
10. “Trinuclear cyanido-bridged $\text{M}^{\text{II}}\text{-W}^{\text{V}}$ complexes ($\text{M} = \text{Mn}, \text{Co}$): crystal structures and magnetic properties”, D. Dragancea, G. Novitchi, **A. M. Madalan**, M.-G. Alexandru, S. Shova M. Andruh, *Polyhedron*, **2022**, 220, 115839.
11. “Two are better than one - Synthesis of novel blue and green emissive hydroxy-oxadiazoles”, C. C. Anghel, C. Bădescu, A. G. Mirea, A. Păun, N. D. Hădade, **A. M. Mădălan**, M. Matache, C. C. Popescu, *Dyes Pigm.*, **2022**, 197, 109927.
12. “Atmospheric Carbon Dioxide Capture as Carbonate into a Luminescent Trinuclear Cd(II) Complex with Tris(2-aminoethyl)amine Tripodal Ligand”, **A. M. Mădălan**, *Crystals*, **2021**, 11, 1480.
13. “Cocrystals versus Salts of Fluorescein”, M. Răducă, **A. M. Mădălan**, *Crystals*, **2021**, 11, 1217.
14. “New Cyanido-Bridged Heterometallic 3d-4f 1D Coordination Polymers: Synthesis, Crystal Structures and Magnetic Properties”, D. Dragancea, G. Novitchi, **A. M. Mădălan**, M. Andruh, *Magnetochemistry*, **2021**, 7, 57.
15. “Thermal and Emission Properties of a Series of Lanthanides Complexes with N-Biphenyl-Alkylated-4-Pyridone Ligands: Crystal Structure of a Terbium Complex with N-Benzyl-4-Pyridone”, F. L. Chiriac, M. Iliș, **A. Madalan**, D. Manaila-Maximean, M. Secu, V. Cîrcu, *Molecules*, **2021**, 26, 2017.
16. “Zinc(II) mononuclear complexes with Schiff base derivatives of 2-aminofluorene. Synthesis, structural characterization, and optical properties”, M. Strinoiu, M. Răducă, **A. M. Mădălan**, *J. Coord. Chem.*, **2020**, 73, 2786-2800.
17. “Structure and magnetic properties of an original $\{\text{Cu}^{\text{II}}\text{Mn}^{\text{II}}\text{W}^{\text{V}}\}$ heterotrimetallic coordination polymer”, M.-G. Alexandru, D. Visinescu, A. M. Madalan, R. Clérac, M. Andruh, *Eur. J. Inorg. Chem.*, **2020**, 3111-3114.

18. "Mononuclear lanthanide(III) complexes with tripodal ligands as ammonium cation receptors", A. Costache, **A. M. Mădălan**, *Rev. Roum. Chim.*, **2020**, 65(7-8), 761-765.
19. "Synthesis, crystal structures and solid-state optical properties of two mannich derivatives of 2',7'-dichlorofluorescein", M. Răducă, **A. M. Mădălan**, *Rev. Roum. Chim.*, **2020**, 65(6), 617-622.
20. "Synthesis of Fluorescent Dansyl Derivatives of Methoxyamine and Diphenylhydrazine as Free Radical Precursors", B. Patrascu, S. Mocanu, A. Coman, **A. M. Madalan**, C. Popescu, A. Paun, M. Matache, P. Ionita, *Int. J. Mol. Sci.*, **2020**, 21, 3559; doi:10.3390/ijms21103559.
21. "Examination of structure-activity relationship of new N-acylhydrazones", A. G. Coman, A. Paun, C. C. Popescu, N. D. Hadade, A. Hanganu, **A. M. Mădălan**, M. Matache, *Rev. Roum. Chim.*, **2020**, 65, 109-114.
22. "Synthesis and structural analysis of some nitroderivatives of a dopamine analog", **A. M. Mădălan**, M. Matache, P. Ionita, *Rev. Roum. Chim.*, **2020**, 65, 103-108.
23. "Synthesis and spectral comparison of electronic and molecular properties of some hydrazines and hydrazyl free radicals", B. Patrascu, C. Lete, C. Popescu, M. Matache, A. Paun, **A. Madalan**, P. Ionita, *Arkivoc*, **2020**, part vi, 1-10, doi: 10.24820/ark.5550190.p011.119.
24. "Synthesis, structure and luminescent properties of a mononuclear zinc(II) complex with a bicompartamental ligand", M. Răducă, **A. M. Mădălan**, *Studia UBB Chemia*, **2019**, LXIV (3), 193-202.
25. "Heterometallic 3d-4d coordination polymers assembled from trans-[Ru^{III}(L)(CN)₂]⁻ tectons and 3d cations", G. Marinescu, **A. M. Madalan**, C. Maxim, S. Shova, R. Clérac, M. Andruh, *Dalton Trans.*, **2019**, 48, 15455-15464.
26. "Coordination polymers and a dinuclear complex constructed from zinc(II) ions and fluorescein: iodine adsorption and optical properties", M. Răducă, C.D. Ene, S. Ionescu, M. Florea, **A. M. Mădălan**, *J. Coord. Chem.*, **2019**, 72:8, 1222-1237.
27. "New mixed ligand complexes resulting from the reaction of β-diketonato derivatives with a Mannich base", M. I. Mocanu, A. A. Patrascu, **A. M. Madalan**, M. Andruh, *Rev. Roum. Chim.*, **2018**, 63(5-6), 545-549.
28. "Organic co-crystals of 1,3-bis(4-pyridyl)azulene with a series of hydrogen-bond donors", A. E. Ion, A. Dogaru, S. Shova, **A. M. Madalan**, O. Akintola, S. Ionescu, M. Voicescu, S. Nica, A. Buchholz, W. Plass, M. Anduh, *CrystEngComm*, **2018**, 20, 4463-4484.
29. "Synthesis and structural characterization of some novel methoxyamino derivatives with acid-base and redox behavior", M. Bem, R. Baratoiu, C. Radutiu, C. Lete, S. Mocanu, G. Ionita, S. Lupu, M. T. Caproiu, **A. M. Madalan**, B. Patrascu, I. Zarafu, P. Ionita, *J. Mol. Struc.*, **2018**, 1173, 291-299.
30. "Conformation-induced light emission switching of N-acylhydrazone systems", A. G. Coman, A. Paun, C. C. Popescu, N. D. Hădăde, C. C. Anghel, **A. M. Mădălan**, P. Ioniță, M. Matache, *New J. Chem.*, **2018**, 42, 14111-14119.
31. "New complexes of Ni(II) and Co(III) with a Schiff-base ligand derived from o-vanillin. Crystal structure, magnetic and catalytic properties of a dissymmetric binuclear nickel(II) complex", V. A. Neacșu, C. Maxim, **A. M. Mădălan**, M. Hillebrand, M. C. González-Arellano, S. Soriano, E. Rentschler, M. Andruh, *Polyhedron*, **2018**, 150, 77-82.
32. "Supramolecular rectangles and ladders constructed from Ni(II), Cu(II) and Zn(II) mononuclear complexes with bicompartamental ligands and 4-aminopyridine as tectons", **A. M. Madalan**, C. D. Ene, *Inorg. Chim. Acta*, **2018**, 475, 184-192.
33. "Heterometallic Co^{II}-Co^{III}-M^{II} alkoxido-bridged heptanuclear motifs (M = Cu, Zn). Syntheses, crystal structures and magnetic properties", E. Martin, V. Tudor, **A. M. Madalan**, C. Maxim, F. Tuna, F. Lloret, M. Julve, M. Andruh, *Inorg. Chim. Acta*, **2018**, 475, 98-104.
34. "Chimeric design of heterospin 2p-3d, 2p-4f, and 2p-3d-4f complexes using a novel family of paramagnetic dissymmetric compartmental ligands", A. A. Patrascu, S. Calancea, M. Briganti, S. Soriano, **A. M. Madalan**, R. A. Allão Cassaro, A. Caneschi, F. Totti, M. G. F. Vaz, Marius Andruh, *Chem. Commun.*, **2017**, 53, 6504-6507.

35. "A comparison between nitroxide and hydrazyl free radicals in selective alcohols oxidation", A. J. Shakir, **A. M. Madalan**, G. Ionita, S. Lupu, C. Lete, P. Ionita, *Chem. Phys.*, **2017**, 490, 7-11.
36. "A novel 1-D coordination polymer constructed from disilver-1,3,4-oxadiazole nodes and perchlorato bridges", C. Anghel, M. Matache, C. C. Paraschivescu, **A. M. Madalan**, M. Andruh, *Inorg. Chem. Comm.*, **2017**, 76, 22-25.
37. "Synthesis, Crystal Structures, Magnetic Properties, and Theoretical Investigation of a New Series of $Ni^{II}-Ln^{III}-W^V$ Heterotrimetallics: Understanding the SMM Behavior of Mixed Polynuclear Complexes", V. Vieru, T. D. Pasatoiu, L. Ungur, E. Suturina, **A. M. Madalan**, C. Duhayon, J.-P. Sutter, M. Andruh, L. F. Chibotaru, *Inorg. Chem.*, **2016**, 55, 12158-12171.
38. "Slow relaxation of magnetization in an Isostructural series of Zinc-lanthanide complexes: an integrated EPR and AC susceptibility study", A. Amjad, **A. M. Madalan**, M. Andruh, A. Caneschi, L. Sorace, *Chem. Eur. J.*, **2016**, 22, 12849-12858.
39. "Synthesis and properties of fluorescent 4'-azulenyl-functionalized 2,2':6',2''-terpyridines", A. E. Ion, L. Cristian, M. Voicescu, M. Bangesh, **A. M. Madalan**, D. Bala, C. Mihailciuc, S. Nica, *Beilstein J. Org. Chem.*, **2016**, 12, 1812-1825.
40. "One-dimensional coordination polymers, constructed from binuclear 3d-4f nodes and isonicotinato spacers. Synthesis, crystal structures and magnetic properties", A. Patrascu, S. Calancea, R. A. A. Cassaro, S. Soriano, **A. M. Madalan**, C. Maxim, M. A. Novak, M. G. F. Vaz, M. Andruh, *CrystEngComm*, **2016**, 18, 4779-4786.
41. "A new family of $[Cu^{II}Ln^{III}M^V]$ heterotrimetallic complexes ($Ln = La, Gd, Tb; M = Mo, W$): model systems to probe exchange interactions and single-molecule magnet properties", D. Visinescu, M. G. Alexandru, **A. M. Madalan**, I.-R. Jeon, C. Mathonière, R. Clérac, M. Andruh, *Dalton Trans.*, **2016**, 45, 7642-7649.
42. "Synthesis of novel TEMPO stable free (poly)radicals derivatives and their host-guest interaction with cucurbit[6]uril", G. Ionita, **A. M. Madalan**, A. M. Ariciu, A. Medvedovici, P. Ionita, *New J. Chem.*, **2016**, 40, 503-511.
43. "Magneto-Structural Variety of New 3d-4f-4(5)d Heterotrimetallic Complexes", D. Visinescu, M. G. Alexandru, **A. M. Madalan**, C. Pichon, C. Duhayon, J.-P. Sutter, M. Andruh, *Dalton Trans.*, **2015**, 44, 16713-16727.
44. "Interplay of hydrogen bond and stacking interactions in the crystal structure of a new mononuclear zinc complex", A. Cucos, C. Paraschiv, S. Shova, **A. Madalan**, V. Sbarcea, G. Marinescu, M. Andruh, *Rev. Roum. Chim.*, **2015**, 60, 1005-1013.
45. "Atmospheric CO_2 capture by a triphenyltin -1,2-bis(4-pyridyl)ethane system with formation of a rare trinuclear carbonato-centered core", A. L. Ghionoiu, D. L. Popescu, C. Maxim, **A. M. Madalan**, I. Haiduc, M. Andruh, *Inorg. Chem. Comm.*, **2015**, 58, 71-73.
46. "Two-Dimensional Coordination Polymers Constructed Using, Simultaneously, Linear and Angular Spacers, and Cobalt(II) Nodes. New Examples of Networks of Single Ion Magnets", A. E. Ion, S. Nica, **A. M. Madalan**, S. Shova, J. Vallejo, M. Julve, F. Lloret, M. Andruh, *Inorg. Chem.*, **2015**, 54, 16-18.
47. "New Zn(II) coordination polymers constructed from amino-alcohols and aromatic dicarboxylic acids: synthesis, structure, photocatalytic properties and solid-state conversion to ZnO", C. Paraschiv, A. Cucos, S. Shova, **A. M. Madalan**, C. Maxim, D. Visinescu, B. Cojocaru, V. I. Parvulescu, M. Andruh, *Cryst. Growth Des.*, **2015**, 15, 799-811.
48. "New heterometallic coordination polymers based on zinc(II) complexes with Schiff-base ligands and dicyanometallates. Synthesis, crystal structures and luminescent properties", G. Marinescu, **A. M. Madalan**, M. Andruh, *J. Coord. Chem.*, **2015**, 68, 479-490.
49. "Polynuclear zinc(II) complexes with adamantane-dicarboxylato-bridges. Crystal structure and luminescence properties", G. Marinescu, **A. M. Madalan**, M. Andruh, *Rev. Roum. Chim.*, **2014**, 59, 941-948.
50. "Octanuclear $[Ni^{II}_4Ln^{III}_4]$ complexes. Synthesis, crystal structures and magnetocaloric properties", T. D. Pasatoiu, A. Ghirri, **A. M. Madalan**, M. Affronte, M. Andruh, *Dalton Trans.*, **2014**, 43, 9136-9142.

51. "Ferromagnetic Coupling in Copper(II) [2x2] Grid-like Complexes", A. M. Madalan, X.-Y. Cao, G. Rogez, J.-M. Lehn, *Inorg. Chem.*, **2014**, *53*, 4275-4277.
52. "One-dimensional coordination polymers constructed from di- and trinuclear {3d - 4f} tectons. A new useful spacer in crystal engineering: 1,3-bis(4-pyridyl)-azulene", A. E. Ion, S. Nica, A. M. Madalan, C. Maxim, M. Julve, F. Lloret, M. Andruh, *CrystEngComm*, **2014**, *16*, 319-327.
53. "Charge-sensitive vibrational modes in the (EDT-TTF-OX)₂AsF₆ chiral molecular conductors", I. Olejniczak, A. Frackowiak, J. Matysiak, A. Madalan, F. Pop, N. Avarvari, *Cent. Eur. J. Phys.*, **2014**, *12*, 215-220.
54. "Tuning the Planarity of [2x2] Grids", A. R. Stefankiewicz, J. Harrowfield, A. M. Madalan, J.-M. Lehn, *CrystEngComm*, **2013**, *15*, 9128-9134.
55. "A new exo-tridentate tris-pyridine ligand derived from 3-oxa-1,5-diazabicyclo[3.3.1]nonane and its dinuclear Cu(II) complex. Synthesis and crystal structures.", A. M. Madalan, *Rev. Roum. Chim.*, **2013**, *58*, 829-833.
56. "Synthesis and crystal structures of a tripodal ligand derived from 4,4'-dihydroxybiphenyl and its gadolinium(III) mononuclear complex", E. Vulpe, A. M. Madalan, *Rev. Roum. Chim.*, **2013**, *58*, 823-828.
57. "Supramolecular homometallic Cr(III) systems resulting from second coordination sphere interactions", V. Iucha, R. Gheorghe, A. M. Madalan, M. Andruh, *Rev. Roum. Chim.*, **2013**, *58*, 255-263.
58. "A new synthetic route towards binuclear 3d-4f complexes, using non-compartmental ligands derived from o-vanillin. Syntheses, crystal structures, magnetic and luminescent properties", M. Sarwar, A. M. Madalan, C. Tiseanu, G. Novitchi, C. Maxim, G. Marinescu, D. Luneau, M. Andruh, *New J. Chem.*, **2013**, *37*, 2280-2292.
59. "Mixed ligand binuclear alkoxo-bridged copper(II) complexes derived from aminoalcohols and nitrogen ligands", V. Tudor, T. Mocanu, F. Tuna, A. M. Madalan, C. Maxim, S. Shova, M. Andruh, *J. Mol. Struct.*, **2013**, *1046*, 164-170.
60. "C₃-symmetric trinuclear copper (II) species as tectons in crystal engineering", A. E. Ion, S. Nica, A. M. Madalan, F. Lloret, M. Julve, M. Andruh, *CrystEngComm*, **2013**, *15*, 294-301.
61. "Self-assembly of [Cu^{II}Tb^{III}]³⁺ and [W(CN)₈]³⁻ tectons: a case study of a mixture containing two complexes showing slow-relaxation of the magnetization", D. Visinescu, I.-R. Jeon, A. M. Madalan, M.-G. Alexandru, B. Jurca, C. Mathonière, R. Clérac, M. Andruh, *Dalton Trans.*, **2012**, *41*, 13578-13581.
62. "Self-ordering of metallogrid complexes via directed hydrogen-bonding", A. R. Stefankiewicz, G. Rogez, J. Harrowfield, A.N. Sobolev, A. Madalan, J. Huuskonen, K. Rissanen, J.-M. Lehn, *Dalton Trans.*, **2012**, *41*, 13848-13855.
63. "A Robust Metal-Organic Framework Constructed from Alkoxo-bridged Binuclear Nodes and Hexamethylenetetramine Spacers: Crystal Structure and Sorption Studies", E. Ilyes, M. Florea, A. M. Madalan, I. Haiduc, V. I. Parvulescu, M. Andruh, *Inorg. Chem.*, **2012**, *51*, 7954-7956.
64. "One- and two-photon induced emission in heterobimetallic Zn^{II}-Sm^{III} and Zn^{II}-Tb^{III} complexes with a side-off compartmental ligand", T. D. Pasatoiu, A. M. Madalan, M. Zamfirescu, C. Tiseanu, M. Andruh, *Phys. Chem. Chem. Phys.*, **2012**, *14*, 11448-11456.
65. "Identification of [CuCl(acac)(tmed)], a copper(II) complex with mixed ligands, as a modulator of Cu,Zn-superoxide dismutase (Sod1p) activity in yeast", I. Dumitru, C. D. Ene, A. M. Ofiteru, C. Paraschivescu, A. M. Madalan, I. Baciuc, I. C. Farcasanu, *J. Biol. Inorg. Chem.*, **2012**, *17*, 961-974.
66. "[W(bipy)(CN)₆]⁻: A Suitable Metalloligand in the Design of Heterotrimetallic Complexes. The First Cu^{II}Ln^{III}W^V Trinuclear Complexes", M. G. Alexandru, D. Visinescu, A. M. Madalan, F. Lloret, M. Julve, M. Andruh, *Inorg. Chem.*, **2012**, *51*, 4906-4908.
67. "Dodecanuclear [Cu^{II}₆Gd^{III}₆] Nanoclusters as Magnetic Refrigerants", A. S. Dinca, A. Ghirri, A. M. Madalan, M. Affronte, M. Andruh, *Inorg. Chem.*, **2012**, *51*, 3935-3937.

68. "Cyano-bridged Heterometallic Oligonuclear Complexes and Coordination Polymers Constructed using Tridentate Schiff-Base Ligands. Synthesis, Crystal Structures, Magnetic and Luminescence Properties", C. Maxim, F. Tuna, **A. M. Madalan**, N. Avarvari, M. Andruh, *Cryst. Growth Des.*, **2012**, *12*, 1654-1665.
69. "Tetranuclear Zn(II) complexes with compartmental and dicyanamido ligands: Synthesis, structure and luminescent properties", G. Marinescu, **A. M. Madalan**, S. Shova, M. Andruh, *J. Coord. Chem.*, **2012**, *65*, 1539-1547.
70. "Pendent Nucleophiles on Coordination Complexes - Hydrogen-Bond Donor and Acceptor Ability", J. K. Clegg, J. M. Harrowfield, M. Kim, Y. Kim, H. Kristopo, Y. H. Lee, **A. Madalan**, P. Thuéry, *Aust. J. Chem.*, **2012**, *65*, 734-749.
71. "A dinuclear iron(III) complex bridged by the dianion of trimesic acid – $[Fe(3-MeOsaldmpn)(H_2O)]_2 Htrim] \cdot H_2O$: Synthesis, crystal structures and magnetic properties", M. Sarwar, **A. M. Madalan**, C. Maxim, M. Andruh, *Rev. Roum. Chim.*, **2012**, *57*, 687-691.
72. "Crystal structures and magnetic properties of two new heterodinuclear $[Ni^{II}Ln^{III}]$ complexes obtained using a side-off compartmental ligand and 2,6-pyridin-dicarboxylato coligand", T. D. Pasatoiu, M. Etienne, **A. M. Madalan**, R. Sessoli, M. Andruh, *Rev. Roum. Chim.*, **2012**, *57*, 507-512.
73. "Structural and metallo selectivity in the assembly of $[2 \times 2]$ grid-type metallosupramolecular species: Mechanisms and kinetic control", A. R. Stefankiewicz, J. Harrowfield, **A. Madalan**, K. Rissanen, A.N. Sobolev, J.-M. Lehn, *Dalton Trans.*, **2011**, *40*, 12320-12332.
74. "Aggregation of two different coordination polymers by reacting zinc nitrate and cadmium chloride with *N,N'*-ethylenebisacetamide", M. G. Alexandru, I. Jitaru, **A. M. Madalan**, M. Andruh, *J. Coord. Chem.*, **2011**, *64*, 3333-3341.
75. "Mononuclear Fe(III) and tetranuclear $[Fe(III)Gd(III)]_2$ complexes with a Schiff-base ligand derived from the *o*-vanillin: Synthesis, crystal structures and magnetic properties", M. Sarwar, **A. M. Madalan**, F. Lloret, M. Julve, M. Andruh, *Polyhedron*, **2011**, *30*, 2414-2420.
76. "Study of the Luminescent and Magnetic Properties of a Series of Heterodinuclear $[Zn^{II}Ln^{III}]$ Complexes", T. D. Pasatoiu, C. Tiseanu, **A. M. Madalan**, B. Jurca, C. Duhayon, J.-P. Sutter, M. Andruh, *Inorg. Chem.*, **2011**, *50*, 5879-5889.
77. "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", T. D. Pasatoiu, J.-P. Sutter, **A. M. Madalan**, F. Z. C. Fella, C. Duhayon, M. Andruh, *Inorg. Chem.*, **2011**, *50*, 5890-5898.
78. "Radical cation salts of BEDT-TTF, enantiopure tetramethyl-BEDT-TTF, and TTF-Oxazoline (TTF-Ox) donors with the homoleptic TRISPHAT anion", F. Riobé, F. Piron, C. Réthoré, **A. M. Madalan**, C. J. Gómez-García, J. Lacour, J. D. Wallis, N. Avarvari, *New J. Chem.*, **2011**, *35*, 2279-2286.
79. "Co-crystallization of coordination compounds through second-coordination sphere interactions", A. Cucos, A. Ursu, **A. M. Madalan**, C. Duhayon, J.-P. Sutter, M. Andruh, *CrystEngComm*, **2011**, *13*, 3756-3766.
80. "New d^{10} heterometallic coordination polymers based on compartmental Schiff-base ligands. Synthesis, structure and luminescence.", G. Marinescu, **A. M. Madalan**, C. Tiseanu, M. Andruh, *Polyhedron*, **2011**, *30*, 1070-1075.
81. "A new cyanido-bridged $[Cu_2^{II}L]_2(\mu-CN)_2Mo^V(CN)_6$ pentanuclear complex (L^{2-} = bicompartamental macrocyclic ligand): Synthesis, spectral and structural characterization", D. Visinescu, J.-P. Sutter, C. Duhayon, **A. M. Madalan**, B. Jurca, M. Andruh, *J. Coord. Chem.*, **2011**, *64*, 93-104.
82. "A new example of coexistence of two different complexes in one crystal: $[Cu^{II}(acac)(phen)]_2Co^{II}(NCS)_4 \cdot 2[Cu^{II}(acac)(phen)(NCS)]$ ", T. D. Pasatoiu, **A. M. Madalan**, M. Andruh, *Rev. Roum. Chim.*, **2010**, *55*, 947-951.
83. "The azidopentacyanoferrate(III) ion as a tecton in constructing heterometallic complexes: Synthesis, crystal structure and magnetic properties of $[Mn(valphen)(H_2O)_2]_2[(H_2O)(valphen)Mn(\mu-$

- CN)Fe(CN)₄(N₃)]·8H₂O*”, C. D. Ene, S. Nastase, C. Maxim, **A. M. Madalan**, F. Tuna, M. Andruh, *Inorg. Chim. Acta*, **2010**, 363, 4247-4252.
84. “*New Heterometallic Coordination Polymers Constructed from 3d-3d' Binuclear Nodes*”, D. G. Branzea, **A. M. Madalan**, S. Ciattini, N. Avarvari, A. Caneschi, M. Andruh, *New J. Chem.*, **2010**, 34, 2479-2490.
85. “*New molecular rectangles and coordination polymers constructed from binuclear phenoxo-bridged [Cu₂] and [Zn₂] tectons*”, G. Marinescu, G. Marin, **A. M. Madalan**, A. Vezeanu, C. Tiseanu, M. Andruh, *Cryst. Growth Des.*, **2010**, 10, 2096-2103.
86. “*A missing high-spin molecule in the family of cyanido-bridged heptanuclear heterometal complexes, [(LCu^{II})₆Fe^{III}(CN)₆]³⁺, and its Co^{III} and Cr^{III} analogues, accompanied in the crystal by a novel octameric water cluster.*”, C. Maxim, L. Sorace, P. Khuntia, **A. M. Madalan**, V. Kravtsov, A. Lascialfari, A. Caneschi, Y. Journaux, M. Andruh, *Dalton Trans.*, **2010**, 39, 4838-4847.
87. “*Dimers and chains of {3d-4f} single molecule magnets constructed from heterobimetallic tectons*”, T.D. Pasatoiu, M. Etienne, **A. M. Madalan**, M. Andruh, R. Sessoli, *Dalton Trans.*, **2010**, 39, 4802-4808.
88. “*A chiral heterotrimetallic 3d-3d'-4f single chain magnet constructed from anisotropic high-spin 3d-4f nodes and paramagnetic spacers*”, R. Gheorghe, **A. M. Madalan**, J.-P. Costes, W. Wernsdorfer, M. Andruh, *Dalton Trans.*, **2010**, 39, 4734-4736.
89. “*Red Fluorescent Emission of Europium Through Green Radiation Excitation of a Molecular Complex*”, T. D. Pasatoiu, C. Tiseanu, **A. M. Madalan**, M. Andruh, *Inorg. Chem.*, **2010**, 49, 2310-2315.
90. “*A new mixed-valence hexanuclear cobalt complex, [Co^{II}Co^{III}(dea)₂(Hdea)₄(piv)₄](ClO₄)₂·H₂O. Synthesis, crystal structure and magnetic properties*”, V. Tudor, **A. Madalan**, V. Lupu, F. Lloret, M. Julve, M. Andruh, *Inorg. Chim. Acta*, **2010**, 363, 823-826.
91. “*Order versus Disorder in Chiral Tetrathiafulvalene–Oxazolines Radical Cation Salts: Structural, Theoretical Investigations and Physical Properties*”, **A. M. Madalan**, C. Réthoré, M. Fourmigué, E. Canadell, E. B. Lopes, M. Almeida, P. Auban-Senzier, N. Avarvari, *Chem. Eur. J.*, **2010**, 16, 528-537.
92. “*First Heterotrimetallic {3d-4d-4f} Single Chain Magnet, Constructed from Anisotropic High-spin Heterometallic Nodes and Paramagnetic Spacers*”, D. Visinescu, **A. M. Madalan**, M. Andruh, C. Duhayon, J.-P. Sutter, L. Ungur, W. Van den Heuvel, L. F. Chibotaru, *Chem. Eur. J.*, **2009**, 15, 11808-11814.
93. “*Crystal Engineering of Hybrid Inorganic–Organic Systems Based upon Complexes with Dissymmetric Compartmental Ligands*”, D. G. Branzea, R. Gheorghe, **A. M. Madalan**, M. Andruh, *CrystEngComm*, **2009**, 11, 2571-2584.
94. “*A Michael-type reaction between acrylate ions and ethylenediamine coordinated to Ni(II). Synthesis, crystal structure and magnetic properties of [Ni₂(EDDP)₂(H₂O)₂]·2H₂O (H₂EDDP = ethylenediamine-*N,N*-dipropionic acid)*”, M. Badea, R. Olar, D. Marinescu, G. Vasile, B. Jurca, **A. M. Madalan**, M. Andruh, *Inorg. Chem. Comm.*, **2009**, 12, 555-557.
95. “*Constructing Robust Channel Structures by Packing Metallacalixarenes: Reversible Single-Crystal-to-Single-Crystal Dehydration*”, C. Ene, **A. M. Madalan**, C. Maxim, B. Jurca, N. Avarvari, M. Andruh, *J. Am. Chem. Soc.*, **2009**, 131, 4586-4587.
96. “*Heterospin Systems Constructed from [Cu₂Ln]³⁺ and [Ni(mnt)₂]¹⁻²⁻. Tectons: First 3p-3d-4f Complexes (mnt = Maleonitriledithiolato)*”, **A. M. Madalan**, N. Avarvari, M. Fourmigué, R. Clérac, L. F. Chibotaru, S. Clima, M. Andruh, *Inorg. Chem.*, **2008**, 47, 940-950.
97. “*Structural diversity in metal-organic frameworks derived from binuclear alkoxo-bridged copper(II) nodes and pyridyl linkers*”, G. Marin, M. Andruh, **A. M. Madalan**, A. J. Blake, C. Wilson, N. R. Champness, M. Schröder, *Cryst. Growth Des.*, **2008**, 8, 964-975.
98. “*One-dimensional and two-dimensional coordination polymers constructed from copper(II) nodes and polycarboxylate spacers: synthesis, crystal structures and magnetic properties*”, C. D. Ene, F. Tuna, O. Fabelo, C. Ruiz-Pérez, **A. M. Madalan**, H. W. Roesky, M. Andruh, *Polyhedron*, **2008**, 27, 574-582.

99. "Conducting Mixed Valence Salt of Bis(ethylenedithio)-tetrathiafulvalene (BEDT-TTF) with the Paramagnetic Heteroleptic Anion $[Cr^{III}(\text{oxalate})_2(2,2'\text{-bipyridine})]$ ", **A. M. Madalan**, E. Canadell, P. Auban-Senzier, D. Brânzea, M. Andruh, N. Avarvari, *New J. Chem.*, **2008**, 32, 333-339.
100. "First Ni^{II} - Ln^{III} Coordination Polymers Constructed by Using $[Ni(\text{bpca})_2]$ as a Building Block [$\text{Hbpca} = \text{bis}(2\text{-pyridylcarbonyl)amine}$]: Synthesis, Crystal Structures and Magnetic Properties", **A. M. Madalan**, K. Bernot, F. Pointillart, M. Andruh, A. Caneschi, *Eur. J. Inorg. Chem.*, **2007**, 5533-5540.
101. "Generation of $[2 \times 2]$ Grid Metallosupramolecular Architectures from Preformed Ditopic Bis(acylhydrazone) Ligands and through Component Self-assembly", X.-Y. Cao, J. Harrowfield, J. Nitschke, J. Ramirez, A.-M. Stadler, N. Kyritsakas-Gruber, **A. Madalan**, K. Rissanen, L. Russo, G. Vaughan, J.-M. Lehn, *Eur. J. Inorg. Chem.*, **2007**, 2944-2965.
102. "O...S versus N...S Intramolecular Nonbonded Interactions in Neutral and Radical Cation Salts of TTF-Oxazoline Derivatives: Synthesis, Theoretical Investigations, Crystalline Structures, and Physical Properties", C. Réthoré, **A. Madalan**, M. Fourmigué, E. Canadell, E. Lopes, M. Almeida, R. Clérac, N. Avarvari, *New J. Chem.*, **2007**, 31, 1468-1483.
103. "Supramolecular Bimetallic Systems Constructed through π - π Stacking and Hydrogen Bond Interactions", **A. M. Madalan**, M. Andruh, N. Avarvari, Marc Fourmigué, *Synth. React. Inorg. M.*, **2007**, 757-764.
104. "Copper(II) and cobalt(II) complexes of chiral tetrathiafulvalene-oxazoline (TTF-OX) and tetrathiafulvalene-thiomethyl-oxazoline (TTF-SMe-OX) derivatives", **A. M. Madalan**, C. Réthoré, N. Avarvari, *Inorg. Chim. Acta*, **2007**, 360, 233-240.
105. "Rational design of supramolecular grid-like layers and zigzag chains through a unique interplay of d^{10} - d^{10} and π - π stacking interactions", **A. M. Madalan**, N. Avarvari, M. Andruh, *Cryst. Growth Des.*, **2006**, 6, 1671-1675.
106. "Metal complexes as second-sphere ligands", **A. M. Madalan**, N. Avarvari, M. Andruh, *New J. Chem.*, **2006**, 30, 521-523.
107. "Chemistry at the apical position of square-pyramidal copper(II) complexes: synthesis, crystal structures, and magnetic properties of homopolynuclear complexes with azido bridges containing $[\text{Cu}(\text{AA})(\text{BB})]^+$ moieties (AA = acetylacetonate; BB = 1,10-phenanthroline, bipy = 2,2'-bipyridine)", **A. M. Madalan**, M. Noltemeyer, M. Neculai, H. W. Roesky, M. Schmidtman, A. Müller, Y. Journaux, M. Andruh, *Inorg. Chim. Acta*, **2006**, 359, 459-467.
108. "Exchange interaction at the supramolecular level. EPR investigation of two copper (II) compounds: $[\text{Cu}_2(\text{acac})_2(\text{phen})_2(\text{bpe})](\text{ClO}_4)_2 \cdot (\text{bpe}) \cdot \text{CH}_3\text{CN} \cdot \text{H}_2\text{O}$ and $[\text{Cu}_2(\text{acac})_2(\text{phen})_2(\text{bpp})](\text{ClO}_4)_2 \cdot 6\text{H}_2\text{O}$ (bpe = *trans*-1,2-bis(4-pyridyl)ethylene, bpp = bis(4-pyridyl)propane)", V. Voronkova, R. Galeev, L. Korobchenko, **A. M. Madalan**, M. Andruh, V. Ch. Kravtsov, Y. A. Simonov, *Appl. Magn. Res.*, **2005**, 28, 297-310.
109. "Construction of tube- and ladder-like copper(II) coordination polymers based on the nicotinato tectons", **A. M. Madalan**, C. Paraschiv, J.-P. Sutter, M. Schmidtman, A. Müller, M. Andruh, *Cryst. Growth Des.*, **2005**, 5, 707-711.
110. "Mononuclear and one-dimensional polynuclear Cu(II) complexes with two different chelatic ligands. Syntheses, structural and spectral characterization of $[\text{Cu}(\text{acac})(\text{phen})(\text{H}_2\text{O})](\text{ClO}_4)$ and $[\text{Cu}(\text{acac})(\text{bipym})(\text{ClO}_4)]_n$ ", **A. M. Madalan**, C. Ruiz-Pérez, E. Melnic, V. Kravtsov, M. Andruh, *Rev. Roum. Chim.*, **2005**, 50, 11-17.
111. "A unique diamantoid network resulted from the convolution of π - π stacking and lipophilic interactions", **A. M. Madalan**, V. Ch. Kravtsov, Y. A. Simonov, V. Voronkova, L. Korobchenko, N. Avarvari, M. Andruh, *Cryst. Growth Des.*, **2005**, 5, 45-47.
112. "Chemistry at the apical position of square-pyramidal copper (II) complexes. Synthesis, crystal structures and magnetic properties of mononuclear Cu(II), and heteronuclear Cu(II)-Hg(II) and Cu(II)-Co(II) complexes containing $[\text{Cu}(\text{AA})(\text{BB})]^+$ moieties (AA = acetylacetonate, salicylaldehydate; BB = 1,10-phenanthroline, 4,4'-dimethyl-2,2'-bipyridine)", **A. M. Madalan**, V. Ch. Kravtsov, D. Pajic,

- K. Zadro, Y. A. Simonov, N. Stanica, L. Ouahab, J. Lipkowski, M. Andruh, *Inorg. Chim. Acta*, **2004**, 357, 4151-4164.
113. "Sinteza, caracterizarea structurală și spectrală a doi noi compuși de tipul $[Cu(sal)(AA)(ClO_4)]$ ($sal =$ anionul aldehidei salicilice, $AA = 4,4'$ -dimetil-2,2'-bispiridil și 2,2'-bispirimidină)", **A. M. Mădălan**, E. Melnic, V. Ch. Kravtsov, Y. A. Simonov, M. Schmidtman, A. Müller, M. Andruh, *Rev. de Chimie*, **2004**, 9, 678-682.
114. "Exchange Interactions at the Supramolecular Level - Synthesis, Crystal Structure, Magnetic Properties, and EPR Spectra of $[Mn(MAC)(TCNQ)_2](MAC -$ Pentaaza Macrocyclic Ligand; $TCNQ^{\cdot-}$ - Radical Anion of 7,7,8,8-Tetracyano-p-quinodimethane)", **A. M. Madalan**, V. Voronkova, R. Galeev, L. Korobchenko, J. Magull, H. W. Roesky, M. Andruh, *Eur. J. Inorg. Chem.*, **2003**, 1995-1999.
115. "New tetranuclear copper(II) complexes obtained by using compartmental and exo-dentate ligands", D. Visinescu, **A. M. Madalan**, V. Kravtsov, Y. A. Simonov, M. Schmidtman, A. Müller, M. Andruh, *Polyhedron*, **2003**, 22, 1385-1389.
116. "Supramolecular solid-state architectures constructed from 4,4'-bipyridine- N,N' -dioxide and dicyanamido tectons. Synthesis and crystal structures of $[M(bpno)_2\{N(CN)_2\}_2(H_2O)_2]$ ($M = Co, Mn$) and $[Cu(bpno)\{N(CN)_2\}_2(H_2O)]$ ", A. Nedelcu, Z. Žak, **A. M. Madalan**, J. Pinkas, M. Andruh, *Polyhedron*, **2003**, 22, 789-794.
117. "The first coordination compound containing three different types of spin carriers: 2p-3d-4f ($TCNQ^{\cdot-}$, Cu^{2+} , and Gd^{3+})", **A. M. Madalan**, H. W. Roesky, M. Andruh, M. Noltemeyer, N. Stanica, *Chem. Commun.*, **2002**, 1638-1639.
118. " $[Cu(2,2'$ -bipy)(NCS) $_2]$, the missing term in the isostructural $[Cu(AA)(NCS)_2]$ series ($AA =$ aromatic diamines)", **A. M. Madalan**, V. Kravtsov, Y. A. Simonov, M. Andruh, *Rev. Roum. Chim.*, **2002**, 47, 917-921.
119. "Two Different Copper(II) Complexes in One Single Crystal: $[Cu_2L(\mu-OH)(O_2ClO_2)_2]$ and $[(Cu(acac)(phen)(OCIO_3)]$ ($L =$ bis-2,6- $[N$ -((dimethylamino)ethyl)formimidoyl]phenolato)", **A. M. Madalan**, A. Müller, M. Andruh, M. Schmidtman, *Acta Univ. Cibiniensis, Seria F Chemia*, **2002**, 1, 13-17.
120. "Two different (acetylacetonato)(bipyridine)copper(II) complexes in one single crystal: $[Cu(acac)(bipy)(N_3)]$ and $[Cu(acac)(bipy)(H_2O)]ClO_4$ ", A. M. Madalan, M. Andruh, L. Ouahab, S. Golhen, *Rev. Roum. Chim.*, 2001, 46, 433-437.