

## MARIUS ANDRUH

**E-mail:** marius.andruh@acad.ro

**Data nasterii:** 15 iulie 1954

**Pozitie didactica:** Profesor doctor

**Domenii de competenta:** chimie coordinativa, magnetism molecular, chimie metalosupramoleculara

**Cursuri predate:** Chimei coordinativa

### Lucrari publicate:

1. Polynuclear coordination compounds containing Fe(II) and Fe(III)  
**M. Andruh**, L. Patron, M. Brezeanu, *Rev. Chimie (Bucuresti)*, **29**, 413 (1978).
2. Photochemical reactions of coordination compounds  
M. Brezeanu, L. Patron, **M. Andruh**, *Rev. Chimie (Bucuresti)*, **30**, 745 (1979).
3. On Uspenski's rule regarding the *cis* - *trans* isomerism of coordination compounds  
**M. Andruh**, C. I. Lepadatu, M. Brezeanu, *Rev. Roum. Chim.*, **25**, 811 (1980).
4. Optical properties of some polynuclear coordination compounds of cobalt(II) and iron(II) with 4,4'-bipyridine  
**M. Andruh**, M. Brezeanu, *Bull. Inst. Politehn. Bucuresti, Ser. Chim.*, **46-47**, 162 (1984).
5. Calculation of force constants for  $[MCl_4]^{n-}$  complexes in the nuclear effective charge model  
**M. Andruh**, C. I. Lepadatu, M. Brezeanu, *Rev. Roum. Chim.*, **29**, 469 (1984).
6. Factorization of orbital energies in transition metal complexes. Factorization of the overlap integrals.  
C. I. Lepadatu, **M. Andruh**, *Rev. Roum. Chim.*, **30**, 217 (1985).
7. Coordination compounds formation within the  $MCl_2$  -  $SnCl_2$  - 2,2'-bipyridine (M = Co, Ni) system  
M. Brezeanu, **M. Andruh**, L. Patron, V. T. Popa, *Rev. Roum. Chim.*, **30**, 229 (1985).
8. Non-isothermal kinetic study of the solid-gas thermal decompositions of some coordination compounds of Co(II) and Ni(II)  
**M. Andruh**, E. Urbanovici, M. Brezeanu, E. Segal, *Thermochim. Acta*, **95**, 257 (1985).
9. The position of 4,4'-bipyridine in the spectrochemical series for nickel(II) complexes.  
**M. Andruh**, C. I. Lepadatu, M. Brezeanu, *Rev. Roum. Chim.*, **31**, 943 (1986).
10. Coordination compounds of cobalt(II) and nickel(II) with 4-benzoyl-pyridine  
M. Brezeanu, **M. Andruh**, N. Stanica, *Acta Chim. Hung.*, **124**, 391 (1987).
11. On the electronic spectra of nickel(II) polynuclear coordination compounds with pyridine and its derivatives  
**M. Andruh**, C. I. Lepadatu, M. Brezeanu, *Inorg. Chim. Acta*, **131**, 158 (1987).

12. Non-isothermal decomposition kinetics of a mononuclear coordination compound of iron(II).  
E. Urbanovici, **M. Andruh**, E. Segal, M. Brezeanu, *Thermochim. Acta*, **118**, 309, (1987).
13. Angular Overlap Model calculations for the coordination compounds with macrocyclic ligands. I  
**M. Andruh**, C. I. Lepadatu, M. Brezeanu, *Rev. Roum. Chim.*, **32**, 1033 (1987).
14. On the electronic structure of bis(isothiocyanato)tetrakis(4-benzoyl-pyridine)iron(II)  
**M. Andruh**, G. Filoti, M. Brezeanu, *Rev. Roum. Chim.*, **33**, 673 (1988).
15. Oxidation of cumene with molecular oxygen in presence of Co(II) acetylacetonate complexes heterogenized on silane modified silica  
A. C. Banciu, S. Plostinaru, **M. Andruh**, L. Patron, A. Contescu, *Rev. Roum. Chim.*, **34**, 1711 (1989).
16. Angular Overlap Model calculations for the coordination compounds with macrocyclic ligands. II  
**M. Andruh**, O. Chirica, M. Brezeanu, *Rev. Roum. Chim.*, **34**, 917 (1989).
17. On the electronic structure of  $\mu_3$ -oxo-trinuclear chromium(III) acetate in the frame of the Angular Overlap Model.  
F. Cimpoesu, M. Ferbinteanu, **M. Andruh**, *Rev. Roum. Chim.*, **34**, 2013 (1990).
18. Metal complexes with 4-benzoyl-pyridine. VI. New coordination compounds of copper(II) with 4-Benzoyl-pyridine.  
**M. Andruh**, N. Stanica, A. Meghea, M. Bercu, *Rev. Roum. Chim.*, **35**, 3 (1990).
19. Thermal behaviour of complex cation - complex anion type coordination compounds. Part I  
**M. Andruh**, M. Brezeanu, I. Paraschivoiu, E. Segal, *Thermochim. Acta*, **161**, 247 (1990).
20. Thermal behaviour of complex cation - complex anion type coordination compounds. Part II  
N. Dragoe, **M. Andruh**, A. Meghea, E. Segal, *Thermochim. Acta*, **161**, 259 (1990).
21. Carbonic anhydrase inhibitors. I. Metal complexes of sulfonamides: A novel class of carbonic anhydrase inhibitors  
C. Supuran, **M. Andruh**, I. Puscas, *Rev. Roum. Chim.*, **35**, 393 (1990).
22. A new preparation method for  $\mu_3$ -oxo-trinuclear chromium formate  
M. Brezeanu, E. Pincovschi, D. Marinescu, **M. Andruh**, *Rev. Roum. Chim.*, **35**, 535 (1990).
23. New types of carbonic anhydrase inhibitors  
C. Supuran, Gh. Manole, A. T. Balaban, M. D. Gheorghiu, A. Schiketanz, **M. Andruh**, I. Puscas, *Carbonic Anhydrase International Workshop*, Spoleto, Italy, Abstracts Book, p. 128 (1990).
24. Thermal behaviour of the complex cation - complex anion type coordination compounds. III. Thermochromism in tris(phenanthroline)nickel(II)-tetrachloropalladate complexes  
**M. Andruh**, *Rev. Roum. Chim.*, **36**, 101 (1991).

25. Thermal behaviour of complex cation - complex anion type coordination compounds. Part IV  
N. Dragoie, **M. Andruh**, E. Segal, *Thermochim. Acta*, **176**, 241 (1991).
26. Thermal behaviour of complex cation - complex anion type coordination compounds. Part V  
F. Cimpoesu, **M. Andruh**, E. Segal, *Thermochim. Acta*, **177**, 93, (1991).
27. On the thermal behaviour of two coordination compounds of Ni(II) and Co(II)  
M. Ferbinteanu, **M. Andruh**, E. Segal, *Thermochim. Acta*, **178**, 241 (1991).
28. On the thermal decomposition of some coordination compounds of copper(II) with 4-benzoylpyridine  
D. T. Teica, E. Segal, **M. Andruh**, *Thermochim. Acta*, **178**, 248, (1991).
29. Mixed-ligands coordination compounds of cobalt(II) and Ni(II) with 9,10-dihydro-9,10-ethano-12-hydroxymethylene-anthracen-11-one and 2,2'-bipyridine or 1,10-phenanthroline  
**M. Andruh**, M. Stanescu, N. Stanica, M. Ferbinteanu, *Rev. Roum. Chim.*, **36**, 109 (1991).
30. Coordination compounds of Co(II), Ni(II), and Cu(II) with 9,10-dihydro-9,10-ethano-12-hydroxymethylene-anthracen-11-one  
**M. Andruh**, M. Stanescu, F. Musuroi, M. Brezeanu, *Rev. Roum. Chim.*, **36**, 113 (1991).
31. Coordination compounds as raw materials for spinelic oxides  
M. Brezeanu, L. Patron, O. Carp, **M. Andruh**, N. Stanica, *Rev. Roum. Chim.*, **36**, 545 (1991).
32. Carbonic anhydrase inhibitors. 6. Novel coordination compounds of Ni(II), Pd(II), and Pt(II) with 6-ethoxy-benzothiazole-2-sulfonamide  
**M. Andruh**, E. Cristurean, R. Stefan, C. T. Supuran, *Rev. Roum. Chim.*, **36**, 727 (1991).
33. Carbonic anhydrase inhibitors. Complexes of ethoxzolamide with lanthanides are powerful inhibitors of isozymes I and II  
C. T. Supuran, R. Stefan, Gh. Manole, I. Puscas, **M. Andruh**, *Rev. Roum. Chim.*, **36**, 1175 (1991).
34. Combinatii complexe ale cromului cu antibiotice de tip beta-lactamic  
M. Brezeanu, V. Aldea, **M. Andruh**, *Farmacia*, **XXXIX**, 52 (1991).
35. Thermal behaviour of complex cation - complex anion type coordination compounds. VI. Thermochromism in tris(bathophenanthroline)nickel(II)-tetrachlorozincate Complex  
N. Dragoie, E. Cristurean, **M. Andruh**, *Rev. Roum. Chim.*, **37**, 181 (1992).
36. Complex compounds precursors of Mn-Zn ferrites. III. Hydroxides coprecipitation using ammonia solution  
M. Brezeanu, E. Cristurean, D. Pogorevici, E. Segal, D. Marinescu, O. Carp, **M. Andruh**, S. Ciobanu, *Ann. Univ. Bucuresti*, **1(Serie Noua)**, 15 (1992).

37. Carbonic anhydrase inhibitors. coordination compounds of heterocyclic sulfonamides are potent inhibitors of isozymes I and II  
C. T. Supuran, Gh. Manole, **M. Andruh**, *J. Inorg. Biochem.*, **49**, 97 (1993).
38. Crystal structure and magnetic properties of  $[\text{Ln}_2\text{Cu}_4]$  hexanuclear clusters (where Ln = trivalent lanthanide). Mechanism of the Gd(III)-Cu(II) magnetic interaction  
**M. Andruh**, I. Ramade, E. Codjovi, O. Guillou, O. Kahn, J.-C. Trombe, *J. Am. Chem. Soc.*, **115**, 1822 (1993).
39. Structure and spectroscopic and magnetic properties of rare earth metal(III) derivatives with the 2-formyl-4-methyl-6-(N-(2-pyridylethyl)formimidoyl)phenol ligand  
**M. Andruh**, E. Bakalbassis, O. Kahn, J.-C. Trombe, P. Porcher, *Inorg. Chem.*, **32**, 1616 (1993).
40. Oxophilicity of gadolinium(III) and synthesis of dissymmetric di(Schiff bases) and dissymmetric dinuclear compounds. Crystal Structure of  $[\text{Cu}_2\text{L}'(\text{OH})](\text{ClO}_4)_2 \cdot \text{H}_2\text{O}$  with  $\text{L}' = 2$ -[N-(2-pyridylethyl)formimidoyl]-6-[N-(dimethylamino)propyl]formimidoyl]phenolato  
**M. Andruh**, O. Kahn, J. Sainon, Y. Dromzee, S. Jeannin, *Inorg. Chem.*, **32**, 1623 (1993).
41. Syntheses and structures of three mononuclear coordination compounds containing six- and seven-coordinated manganese(II) ions  
**M. Andruh**, K. Hübner, M. Noltemeyer, H. W. Roesky, *Z. Naturforsch.*, **48b**, 591 (1993).
42. Adducts of bis(hexamethyldisilazanyl)manganese(II) with N-heterocyclic ligands: Syntheses and X-Ray structures  
**M. Andruh**, H. W. Roesky, M. Noltemeyer, H.G. Schmidt, in "*Contributions to Development of Coordination Chemistry*", Eds. G. Ondrejovic and A. Sirota, Slovak Technical University Press, Bratislava, 1993, pp. 79-82.
43. Thermal behaviour of complex cation - complex anion type coordination compounds. Part 7  
N. D. Drago, E. Segal, **M. Andruh**, *Thermochim. Acta*, **220**, 185(1993).
44. On the thermal stability and non-isothermal decomposition kinetics of some coordination compounds of cobalt, nickel and copper with a  $\beta$ -dicarbonylic compound and 4-benzoylpyridine or 4,4'-dipyridyl as ligands  
M. Ferbinteanu, F. Cimpoesu, M. D. Stanescu, **M. Andruh**, M. Badescu, E. Segal, *Thermochim. Acta*, **221**, 237(1993).
45. Complex compounds with macrocyclic ligands. dinuclear complexes of Fe(II) with macrocyclic ligands derived from benzidine and formaldehyde  
M. Brezeanu, D. Marinescu, **M. Andruh**, L. Ivan, *Rev. Roum. Chim.*, **38**, 367 (1993).

46. Complex compounds precursors of manganese - zinc ferrites. Hydrazine as precipitating agent  
M. Brezeanu, A. Antoniu, E. Cristurean, C. Draghici, **M. Andruh**, M. Badea,  
*Ann. Univ. Bucuresti*, **2(serie noua)**, 13 (1993).
47. Syntheses and X-ray structure of the polynuclear complex bis( $\mu$ -trifluoroacetato- O,O')(1,10-phenanthroline)manganese(II)  
**M. Andruh**, H. W. Roesky, M. Noltemeyer, H.-G. Schmidt, *Polyhedron*, **12**, 2901 (1993).
48. Coordination compounds as precursors for manganese-zinc ferrites  
M. Brezeanu, L. Patron, E. Cristurean, D. Marinescu, A. Antoniu, **M. Andruh**, O. Carp, N. Stanica, A. Gheorghe, *Rev. Roum. Chim.*, **38**, 1173 (1993).
49. Coordination compounds as precursors for manganese ferrite and zinc ferrite  
M. Brezeanu, L. Patron, E. Cristurean, O. Carp, A. Antoniu, **M. Andruh**, A. Gheorghe, N. Stanica, *Rev. Roum. Chim.*, **38**, 1291 (1993).
50. Reactions of bis(hexamethyldisilazanyl)manganese(II) with nitrogen containing ligands: syntheses and X-Ray structures of  $[\text{Mn}(1,10\text{-phen})\{\text{N}(\text{SiMe}_3)_2\}_2]$  and  $[\text{Mn}(4,4'\text{-bipy})\{\text{N}(\text{SiMe}_3)_2\}_2]\cdot\text{THF}$   
**M. Andruh**, H. W. Roesky, M. Noltemeyer, H.-G. Schmidt, *Z. Naturforsch.*, **49b**, 31 (1994).
51. On the thermochromic properties of the complex cation - complex anion type coordination compounds.  
**M. Andruh**, M. Brezeanu, M. Cimpoesu, N. Dragoe, E. Segal, F. Cimpoesu,  
*Roum. Chem. Quart. Rev.*, **2**, 83-104 (1994).
52. Facile syntheses of selenium- and tellurium-containing metal cubanes,  $[\text{Cp}^*\text{M}(\mu_3\text{-E})]_4$  ( $\text{Cp}^* = \text{C}_5\text{Me}_5$ ;  $\text{M} = \text{Rh}, \text{Ir}, \text{Ga}$ ;  $\text{E} = \text{Se}, \text{Te}$ ), and X-Ray structures of  $[\text{Cp}^*\text{RhSe}]_4$ ,  $[\text{Cp}^*\text{IrSe}]_4$ ,  $[\text{Cp}^*\text{RhTe}]_4$ ,  $[\text{Cp}^*\text{IrTe}]_4$  and  $[\text{Cp}^*\text{GaTe}]_4$   
S. Schulz, **M. Andruh**, T. Pape, T. Heinze, H. W. Roesky, L. Haming, A. Kuhn, R. Herbst-Irmer, *Organometallics*, **13**, 4004 (1994).
53. Coordination compounds of Al(III), Ga(III), In(III) and Tl(III) as carbonic anhydrase inhibitors  
C. T. Supuran and **M. Andruh**, *Rev. Roum. Chim.*, **39**, 1229 (1994).
54. Zinc complexes with  $\beta$ -lactam antibiotics  
M. Brezeanu, V. Aldea, **M. Andruh**, *Farmacia*, **42**, 57 (1994).
55. A bimetallic copper-lanthanum pentanuclear compound containing hydrazinium and sulphate as ligands

- V. Tudor, V. Mironov, M. Brezeanu, **M. Andruh**, A Meghea, *Ann. Univ. Bucuresti*, **4 (Serie Noua)**, 9 (1995).
- 56.**  $[\text{Cr}(\text{bipy})(\text{C}_2\text{O}_4)_2]^-$  - A versatile building block for the design of heteropolymetallic systems. Crystal structures of  $[\text{BaCr}_2(\text{bipy})_2(\text{C}_2\text{O}_4)_4(\text{H}_2\text{O})]_n \cdot n\text{H}_2\text{O}$ ,  $[\text{MnCr}_2(\text{bipy})_2(\mu\text{-C}_2\text{O}_4)_4]_n$ , and  $[\text{CoCr}_2(\text{bipy})_2(\mu\text{-C}_2\text{O}_4)_2(\text{C}_2\text{O}_4)_2(\text{H}_2\text{O})_2] \cdot \text{H}_2\text{O}$ .  
F. D. Rochon, R. Melanson, and **M. Andruh**, *Inorg. Chem.*, **35**, 6086 (1996).
- 57.** The influence of different N-substituted diethylenetriamine ligands on the aggregation of copper(II) monoacetato complexes.  
F. D. Rochon, R. Melanson, and **M. Andruh**, *Polyhedron*, **15**, 3075 (1996).
- 58.**  $[\text{Cr}(\text{bipy})(\text{C}_2\text{O}_4)_2]^-$  - A versatile building block for the design of heteropolymetallic systems. 2. Synthesis and crystal structures of  $[\text{CuCr}_2(\text{bipy})_2(\mu\text{-C}_2\text{O}_4)_2(\text{C}_2\text{O}_4)_2(\text{H}_2\text{O})_2] \cdot 1/2\text{H}_2\text{O}$  and  $[\text{AgCr}(\text{bipy})(\mu\text{-C}_2\text{O}_4)_2(\text{H}_2\text{O})_2]_2$ , and magnetic properties of the copper(II) derivative  
**M. Andruh**, R. Melanson, C. V. Stager and F. D. Rochon, *Inorg. Chim. Acta*, **251**, 309 (1996).
- 59.** A synthetic approach towards homotrimeric complexes: Design of Mn(II), Ni(II), Cu(II), and Zn(II) complexes using a new unsymmetrical tetradentate ligand  
F. Tuna, L. Patron, Y. Journaux, and **M. Andruh**, *Rev. Roum. Chim.*, **42**, 579 (1997)
- 60.** Stepwise synthesis of linear heteropolynuclear complexes using multidentate Schiff bases as ligands  
F. Tuna, G. Grasa, L. Patron and **M. Andruh**, *Rev. Roum. Chim.*, **42**, 793 (1997).
- 61.** A synthetic approach towards homotrimeric complexes: design of Mn(II), Ni(II), and Cu(II) complexes using two new unsymmetrical tetradentate ligands derived from 3-formylsalicylic acid  
F. Tuna, L. Patron, and **M. Andruh**, *Synth. React. Inorg. Metal-Org. Chem.*, **28**, 13 (1998)
- 62.** Synthesis and magnetic properties of a new oxalato-bridged heterotrimeric complex,  $[\text{NiCr}_2(\text{bipy})_2(\mu\text{-C}_2\text{O}_4)_2(\text{C}_2\text{O}_4)_2(\text{H}_2\text{O})_2] \cdot \text{H}_2\text{O}$ . A rare case of antiferromagnetic coupling between Cr(III) and Ni(II) ions  
N. Stanica, C. V. Stager, M. Cimpoesu, and **M. Andruh**, *Polyhedron*, **17**, 1787 (1998).
- 63.** Solid-state chemistry of  $[\text{Ni}(\text{AA})_3][\text{PdCl}_4] \cdot n\text{H}_2\text{O}$  complexes (AA = bipy, phen) and crystal structures of *cis*-diaqua-bis(phenanthroline)nickel(II) tetrachlorozincate and *cis*-dichloro-bis(bipyridine)nickel(II).  
M. Ferbinteanu, F. Cimpoesu, **M. Andruh**, and F. D. Rochon, *Polyhedron*, **17**, 3671 (1998).

64. Influence of the counterion on the coordinating properties of the (2,2'-bipyridine)bis(oxalato)chromate(III) anion: Crystal structures and magnetic properties of  $\text{AsPh}_4[\text{Cr}(\text{bipy})(\text{ox})_2]\cdot\text{H}_2\text{O}$  and  $[\text{NaCr}(\text{bipy})(\text{ox})_2(\text{H}_2\text{O})]\cdot 2\text{H}_2\text{O}$ .  
M. Carmen Muñoz, M. Julve, F. Lloret, J. Faus and **M. Andruh**, *J. Chem. Soc., Dalton Trans.*, **1998**, 3125.
65. Three-dimensional H-bonded supramolecular complexes. Synthesis and crystal structures of  $[\text{Mn}(\mu\text{-bpe})(\text{H}_2\text{O})_4](\text{ClO}_4)_2\cdot 4(\text{bpe})\cdot 2\text{H}_2\text{O}$  and  $[\text{M}(\mu\text{-bpe})(\text{bpe})_2(\text{H}_2\text{O})_2](\text{ClO}_4)_2\cdot \text{bpe}\cdot \text{H}_2\text{O}$ , where M = Zn, Ni and bpe = 1,2-bis(4-pyridyl)ethane.  
F. D. Rochon, **M. Andruh** and R. Melanson, *Can. J. Chem.*, **76**, 1564 (1998).
66.  $\{[\text{Co}(\mu\text{-bpe})(\text{bpe})_2(\text{H}_2\text{O})_2](0.5\text{bpe})(\text{H}_2\text{O})(\text{ClO}_4)_2\}_n$ : a transition metal - organo network with a novel supramolecular architecture (bpe = 1,2-bis(4-pyridyl)ethane).  
M. Ferbinteanu, G. Marinescu, H. W. Roesky, M. Noltemeyer, H.-G. Schmidt, and **M. Andruh**, *Polyhedron*, **18**, 243 (1999).
67. Synthesis and magnetic properties of a series of bi- and trinuclear complexes of copper(II) with the unsymmetrical tetradentate Schiff-base ligand 3-(N-2-(pyridylethyl)formimidoyl)salicylic acid,  $\text{H}_2\text{fsaaep}$ , and crystal structures of  $[\text{Cu}(\text{Hfsaaep})\text{Cl}]_2$  and  $[\text{Cu}(\text{fsaaep})(\text{H}_2\text{O})_2]_2$ .  
F. Tuna, L. Patron, Y. Journaux, **M. Andruh**, W. Plass and J. C. Trombe, *J. Chem. Soc., Dalton Trans.*, **1999**, 539.
68. Ein funktionalisiertes Heterocuban mit zahlreichen intermolekularen Wasserstoffbrückenbindungen.  
M. A. Said, H. W. Roesky, C. Rennekamp, **M. Andruh**, H. G. Schmidt and M. Noltemeyer, *Angew. Chem.* **111**, 702 (1999); *Angew. Chem., Int. Ed.*, **38**, 661 (1999).
69. Supramolecular polymetallic architectures. Heteropolynuclear oxalato complexes: Synthetic strategies, structures and magnetic properties.  
**M. Andruh**, invited leading paper in *Coordination Chemistry at the Turn of the Century* (Eds. G. Ondrejovic and A. Sirota) STU Press, Bratislava, 1999, p. 31.
70. On the thermochromic properties of the complex cation - complex anion type coordination compounds.  
M. Ferbinteanu, F. Cimpoesu, S. Tanase and **M. Andruh**, in *Coordination Chemistry at the Turn of the Century* (Eds. G. Ondrejovic and A. Sirota) STU Press, Bratislava, 1999, p. 153.
71. A rational synthetic route leading to neutral linear homotrimeric complexes: design of Ni(II), Cu(II) and Zn(II) trinuclear complexes using a new tetradentate Schiff-base ligand derived from 3-formyl-salicylic acid.

- F. Tuna, G. Grasa, L. Patron, V. Câmpeanu, A. Meghea and **M. Andruh**, *Rev. Roum. Chim.*, **44**, 881 (1999).
- 72.** A mixed-valence and mixed-spin molecular magnetic material:  $[\text{Mn}^{\text{II}}\text{L}]_6[\text{Mo}^{\text{III}}(\text{CN})_7][\text{Mo}^{\text{IV}}(\text{CN})_8]_2 \cdot 19.5\text{H}_2\text{O}$ .  
A. Kaur Sra, **M. Andruh**, O. Kahn, S. Golhen, L. Ouahab and J. V. Yakhmi, *Angew. Chem., Int. Ed.*, **38**, 2606 (1999).
- 73.** Synthesis, crystal structure and magnetic properties of the cyano-bridged heteropolynuclear complex,  
 $[\{\text{Cu}(\text{dien})_2\text{Co}(\text{CN})_6\}_n][\text{Cu}(\text{dien})(\text{H}_2\text{O})\text{Co}(\text{CN})_6]_n \cdot 5n\text{H}_2\text{O}$ .  
M. Ferbinteanu, S. Tanase, **M. Andruh**, Y. Journaux, F. Cimpoesu, I. Strenger, E. Rivière, *Polyhedron*, **18**, 3019 (1999).
- 74.** Trinuclear cobalt(II) and binuclear iron(III) complexes with unsymmetrical tetradentate Schiff-base ligands derived from 3-formyl-salicylic acid: synthesis, magnetic, spectroscopic and Mössbauer investigations.  
F. Tuna, L. Patron, A. Lazarescu and **M. Andruh**, *Rev. Roum. Chim.*, **45**, 795 (2000).
- 75.**  $[\text{Cr}(\text{phen})(\text{ox})_2]$ : A versatile building block for the design of heteropolymetallic systems. Crystal structures and magnetic properties of  $\text{AsPh}_4[\text{Cr}(\text{phen})(\text{ox})_2] \cdot \text{H}_2\text{O}$ ,  $[\text{NaCr}(\text{phen})(\text{ox})_2(\text{H}_2\text{O})] \cdot 2\text{H}_2\text{O}$  and  $\{\text{Cr}(\text{phen})(\text{ox})_2\}_2[\text{Mn}_2(\text{bipy})_2(\text{H}_2\text{O})_2(\text{ox})] \cdot 6\text{H}_2\text{O}$   
G. Marinescu, **M. Andruh**, R. Lescouëzec, M. C. Muñoz, J. Cano, F. Lloret and M. Julve, *New J. Chem.*, **24**, 527 (2000).
- 76.** Supramolecular heteropolymetallic assemblies constructed from binuclear complexes and hexacyanometallate anions. Synthesis, crystal structure and magnetic properties of  $[\text{Cu}_2(\text{fsal-33})(\text{H}_2\text{O})_2]_3[\text{Fe}(\text{CN})_6]_2 \cdot 8\text{H}_2\text{O}$ .  
G. Grasa, F. Tuna, R. Gheorghe, D. B. Leznoff, S. J. Rettig, **M. Andruh**, *New J. Chem.*, **24**, 615 (2000).
- 77.** Synthesis and characterization of a new molecular magnet,  $[\text{Ni}(\text{ampy})_2]_3[\text{Fe}(\text{CN})_6]_2 \cdot 6\text{H}_2\text{O}$ , and synthesis, crystal structure and magnetic properties of its mononuclear precursor, *trans*- $[\text{Ni}(\text{ampy})_2(\text{NO}_3)_2]$  (ampy = 2-aminomethyl-pyridine).  
S. Tanase, M. Ferbinteanu, **M. Andruh**, C. Mathonière, I. Strenger, G. Rombaut, *Polyhedron*, **19**, 1967 (2000).
- 78.** Two different (acetylacetonato)(bipyridine)copper(II) complexes in one single crystal:  $[\text{Cu}(\text{acac})(\text{bipy})(\text{N}_3)]$  and  $[\text{Cu}(\text{acac})(\text{bipy})(\text{H}_2\text{O})]\text{ClO}_4$ .  
A.M. Madalan, **M. Andruh**, L. Ouahab, and S. Golhen, *Rev. Roum. Chim.*, **46**, 433 (2001).



79. Heteropolymetallic assemblies constructed from homometallic coordination polymers and paramagnetic metal-containing anions. Synthesis, crystal structure and magnetic properties of  $[\text{Mn}(4,4'\text{-bipyridine-N,N'}\text{-dioxide})(\text{H}_2\text{O})_4][\text{Cr}(\text{bipy})(\text{C}_2\text{O}_4)_2]_2 \cdot 8\text{H}_2\text{O}$ .  
S. Bruda, **M. Andruh**, H. W. Roesky, Y. Journaux, M. Noltemeyer, E. Rivière, *Inorg. Chem. Commun.*, **4**, 111 (2001).
80. Construction of 3d – 4f heterometallic coordination polymers by simultaneous use of hexacyanometalate building-blocks and *exo*-bidentate ligands.  
S. Tanase, **M. Andruh**, A. Müller, M. Schmidtman, C. Mathonière, G. Rombaut, *Chem. Commun.*, **2001**, 1084.
81. Oligonuclear heterometallic complexes, linear heterobimetallic coordination polymers and molecular magnets constructed from hexacyanometalate building blocks.  
S. Tanase, **M. Andruh**, S. Golhen, L. Ouahab, M. Schmidtman, in: M. Melnik, A. Sirota (Editors) “Challenges for Coordination Chemistry in the New Century”, STU Press, Bratislava, 2001, p. 351.
82. Synthesis, crystal structure and magnetic properties of  $[\text{Cu}(\text{bipy})_2(\text{CH}_3\text{COO})][\text{Cu}(\text{bipy})_2(\text{Cr}(\text{C}_2\text{O}_4)_3)] \sim 10.5\text{H}_2\text{O}$ , the first compound containing the  $[\text{Cr}(\text{C}_2\text{O}_4)_3]^{3-}$  building-block acting as a monodentate ligand.  
O. Costisor, K. Mereiter, M. Julve, F. Lloret, Y. Journaux, W. Linert, **M. Andruh**, *Inorg. Chim. Acta*, **324**, 352 (2001).
83.  $[\text{Cr}(\text{dpa})(\text{ox})_2]^-$ : a new bis-oxalato building block for the design of heteropolymetallic systems. Crystal structures and magnetic properties of  $\text{PPh}_4[\text{Cr}(\text{dpa})(\text{ox})_2]$ ,  $\text{AsPh}_4[\text{Cr}(\text{dpa})(\text{ox})_2]$ ,  $\text{Hdpa}[\text{Cr}(\text{dpa})(\text{ox})_2] \cdot 4\text{H}_2\text{O}$ ,  $\text{Rad}[\text{Cr}(\text{dpa})(\text{ox})_2] \cdot \text{H}_2\text{O}$ , and  $\text{Sr}[\text{Cr}(\text{dpa})(\text{ox})_2]_2 \cdot 5.5\text{H}_2\text{O}$  (dpa = 2,2'-dipyridylamine).  
R. Lescouëzec, G. Marinescu, M. C. Muñoz, D. Luneau, **M. Andruh**, F. Lloret, J. Faus, M. Julve, J. A. Mata, R. Llusar, J. Cano, *New. J. Chem.*, **25**, 1224 (2001).
84. Intramolecular *versus* intermolecular exchange pathways in the binuclear complex  $[\text{Cu}_2(\text{H}_2\text{tea})_2(4,4'\text{-bipy})](\text{ClO}_4)_2 \cdot 3\text{H}_2\text{O}$  ( $\text{H}_3\text{tea}$  = triethanolamine and 4,4'-bipy = 4,4'-bipyridine).  
V. Tudor, V. Kravtsov, M. Julve, F. Lloret, Y. A. Simonov, J. Lipkowski, V. Buculei, **M. Andruh**, *Polyhedron*, **20**, 3033 (2001).
85. Design of molecular rectangles by using compartmental and *exo*-bidentate ligands.  
D. Visinescu, **M. Andruh**, A. Müller, M. Schmidtman, Y. Journaux, *Inorg. Chem. Commun.*, **5**, 42 (2002).
86.  $[\text{Cr}(\text{bpym})(\text{C}_2\text{O}_4)_2]^-$  in designing heterometallic complexes. Crystal structures and magnetic

- properties of  $\text{PPh}_4[\text{Cr}(\text{bpym})(\text{C}_2\text{O}_4)_2]\cdot\text{H}_2\text{O}$  and  $[\text{Ag}(\text{bpym})][\text{Cr}(\text{C}_2\text{O}_4)_2(\text{H}_2\text{O})_2]\cdot 2\text{H}_2\text{O}$  (bpym = 2,2'-bipyrimidine).
- G. Marinescu, R. Lescouëzec, D. Armentano, G. De Munno, **M. Andruh**, S. Uriel, R. Llusar, F. Lloret, M. Julve, *Inorg. Chim. Acta*, **336**, 46 (2002).
- 87.**  $[\text{Cu}(2,2'\text{-bipy})(\text{NCS})_2]$ , the missing term in the isostructural  $[\text{Cu}(\text{AA})(\text{NCS})_2]$  series (AA = aromatic diamines).
- A. M. Madalan, V. Kravtsov, Y. A. Simonov, **M. Andruh**, *Rev. Roum. Chim.* **47**, 917, (2002).
- 88.** The interplay of hydrogen bonding and  $\pi$ - $\pi$  stacking interactions in sustaining supramolecular solid-state architectures. The case of the heterometallic system  $[\text{Ni}_2(\text{fsal-33})(\text{H}_2\text{O})_4][\text{Cr}(\text{bipy})(\text{C}_2\text{O}_4)_2]_2\cdot\text{H}_2\text{O}$ .
- A. Cucos, G. Marinescu, Z. Žák, N. Stanica and **M. Andruh**, *Rev. Roum. Chim.*, **47**, 989 (2002).
- 89.** A straightforward synthetic route towards tetranuclear copper(II) complexes: reactions between binuclear complexes and *exo*-bidentate or *exo*-bis(bidentate) ligands.
- D. Visinescu, G. I. Pascu, **M. Andruh**, J. Magull, H. W. Roesky, *Inorg. Chim. Acta*, **340**, 201 (2002).
- 90.**  $[\text{Mn}_2(\text{bipym})(\text{H}_2\text{O})_8]^{4+}$  and  $[\text{Fe}(\text{bipy})(\text{CN})_4]^-$  as building blocks in designing novel bipym- and cyanide-bridged heterobimetallic complexes (bipym= 2,2'-bipyrimidine and bipy = 2,2'-bipyridine).
- L. M. Toma, R. Lescouëzec, L. D. Toma, F. Lloret, M. Julve, J. Vaissermann, **M. Andruh**, *J. Chem. Soc., Dalton Trans.*, **2002**, 3171.
- 91.** The first coordination compound containing three different types of spin carriers: 2p – 3d – 4f ( $\text{TCNQ}\cdot^-$ ,  $\text{Cu}^{2+}$  and  $\text{Gd}^{3+}$ ).
- A. M. Madalan, H. W. Roesky, **M. Andruh**, M. Noltemeyer, N. Stanica *Chem. Commun.* **2002**, 1638.
- 92.** Heterobinuclear complexes as building-blocks in designing extended structures.
- R. Gheorghe, **M. Andruh**, A. Müller, M. Schmidtman, *Inorg. Chem.*, **41**, 5314 (2002).
- 93.** Two different copper(II) complexes in one single crystal:
- $[\text{Cu}_2\text{L}(\mu\text{-OH})(\text{O}_2\text{ClO}_2)_2]$  and  $[\text{Cu}(\text{acac})(\text{phen})(\text{OClO}_3)]$  (L = bis-2,6-[N-((dimethylamino)ethyl)formimidoyl]phenolato).
- A. M. Madalan, A. Müller, **M. Andruh**, M. Schmidtman, *Acta Universitatis Cibiniensis, Seria F Chemia*, **3**, 13 (2002).
- 94.** Synthesis, crystal structures and magnetic properties of new oxalato- and phenolato-bridged binuclear copper(II) complexes with Schiff-base ligands.

- F. Tuna, G. I. Pascu, J.-P. Sutter, **M. Andruh**, S. Golhen, J. Guillevic, H. Pritzkow, *Inorg. Chim. Acta*, **342**, 131 (2003).
- 95.**  $[\text{Cr}(\text{AA})(\text{C}_2\text{O}_4)_2]^-$  and  $[\text{Cu}(\text{bpca})]^+$  as building blocks in designing new oxalato-bridged Cr(III)-Cu(II) compounds [AA = 2,2'-bipyridine and 1,10-phenanthroline; bpca = bis(2-pyridylcarbonyl)amide anion].  
R. Lescouëzec, G. Marinescu, J. Vaissermann, F. Lloret, J. Faus, **M. Andruh**, M. Julve, *Inorg. Chim. Acta*, **350**, 131 (2003).
- 96.** The interplay of coordinative, hydrogen bonding and  $\pi$ - $\pi$  stacking interactions in sustaining supramolecular solid-state architectures. A study case of bis(4-pyridyl)- and bis(4-pyridyl-N-oxide) tectons.  
H. W. Roesky and **M. Andruh**, *Coord. Chem. Rev.*, **236**, 91 (2003).
- 97.** Supramolecular solid-state architectures constructed from 4,4'-bipyridine-N,N'-dioxide and dicyanamido tectons. Synthesis and crystal structures of  $[\text{M}(\text{bpno})_2\{\text{N}(\text{CN})_2\}_2(\text{H}_2\text{O})_2]$  (M = Co, Mn) and  $[\text{Cu}(\text{bpno})\{\text{N}(\text{CN})_2\}_2(\text{H}_2\text{O})]$ .  
A. Nedelcu, Z. Žak, A. M. Madalan, J. Pinkas, **M. Andruh**, *Polyhedron*, **22**, 789 (2003).
- 98.** Stepwise synthesis of a pentanuclear copper(II)-manganese(II) cluster by using a versatile Schiff base ligand derived from 3-formyl-salicylic acid.  
F. Tuna, L. Patron, **M. Andruh**, *Inorg. Chem. Commun.*, **6**, 30 (2003).
- 99.** Substantial increase of the ordering temperature for  $\{\text{Mn}^{\text{II}}/\text{Mo}^{\text{III}}(\text{CN})_7\}$ -based magnets as a function of the 3d ion site geometry: example of two supramolecular materials with  $T_c = 75$  and 106 K.  
S. Tanase, F. Tuna, P. Guinneau, T. Marris, G. Rombaut, C. Mathonière, **M. Andruh**, O. Kahn, J.-P. Sutter, *Inorg. Chem.*, **42**, 1625 (2003).
- 100.** A novel cyano-bridged pentanuclear complex:  $[\{\text{Mn}_3(\text{MAC})_3(\text{H}_2\text{O})_2\}\{\text{Fe}(\text{CN})_6\}_2] \cdot 6\text{H}_2\text{O} \cdot 2\text{CH}_3\text{OH}$  - synthesis, crystal structure and magnetic properties (MAC = pentaaza macrocyclic ligand).  
S. Tanase, **M. Andruh**, N. Stanica, C. Mathonière, G. Rombaut, S. Golhen, L. Ouahab, *Polyhedron*, **22**, 1315 (2003).
- 101.** Exchange interactions at supramolecular level. Synthesis, crystal structure, magnetic properties, and EPR spectra of  $[\text{Mn}(\text{MAC})(\text{TCNQ})_2]$  (MAC = pentaaza macrocyclic ligand;  $\text{TCNQ}^{\cdot -}$  = the 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.
- 102.** 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*, **22**, 1385 (2003)
- 103.** A new Cr(III)-Ni(II) cyano-bridged molecule-based magnet:  $[\text{Ni}(\text{ampy})_2]_3[\text{Cr}(\text{CN})_6]_2 \cdot 6\text{H}_2\text{O}$  (ampy = 2-aminomethylpyridine).  
C. Paraschiv, **M. Andruh**, J.-P. Sutter, *Inorg. Chim. Acta*, **351**, 385 (2003).
- 104.** Alkoxo-bridged binuclear copper(II) complexes as nodes in constructing extended structures  
V. Tudor, G. Marin, V. Kravtsov, Y. A. Simonov, J. Lipkowski, M. Brezeanu,  
**M. Andruh**, *Inorg. Chim. Acta*, **353**, 35 (2003).
- 105.**  $[\text{Mn}(\text{MAC})\{\mu_{1,5}\text{-N}(\text{CN})_2\}](\text{PF}_6)$ : a new one-dimensional coordination polymer with  $\mu_{1,5}$ -dicyanamido bridges (MAC = pentaaza macrocyclic ligand) – synthesis, crystal structure and magnetic properties.  
C. Paraschiv, J.-P. Sutter, M. Schmidtman, A. Müller, **M. Andruh**, *Polyhedron*, **22**, 1611 (2003).
- 106.** A rational synthetic route leading to 3d – 3d' – 4f heterospin systems: self-assembly processes involving heterobinuclear 3d – 4f complexes and hexacyanometallates.  
R. Gheorghe, **M. Andruh**, J.-P. Costes, B. Donnadieu, *Chem. Commun.*, **2003**, 2778.
- 107.** Binuclear coordination compounds as building-blocks in designing polynuclear complexes.  
M. Pascu, M. Andruh, A. Müller, M. Schmidtman, *Polyhedron*, **23**, 673 (2004).
- 108.** Racks, Grids and Ladders,  
**M. Andruh**, in J. L. Atwood, J. W. Steed (Eds) *Encyclopedia of Supramolecular Chemistry*, M. Dekker, New York, 2004, p. 1186-1193.
- 109.** New binuclear model compounds for the study of the 4f-4f exchange interaction  
R. Gheorghe, V. Ch. Kravtsov, Y. A. Simonov, J. P. Costes, Y. Journaux,  
**M. Andruh**, *Inorg. Chim. Acta*, **357**, 1613 (2004).
- 110.** The interplay of hydrogen bonding and  $\pi$ - $\pi$  stacking interactions in sustaining supramolecular solid-state architectures. The case of the heteropolymetallic system  
 $[\text{Mn}^{\text{III}}(\text{salpn})(\text{H}_2\text{O})_2][\text{Cr}^{\text{III}}(\text{bipy})(\text{C}_2\text{O}_4)_2] \cdot \text{H}_2\text{O}$ .  
G. Marinescu, C. Ovezza, N. Avarvari, **M. Andruh**, *Rev. Roum. Chim.*, **49**, 221 (2004).
- 111.** Oxalato-bridged  $[\text{Cu}^{\text{II}}\text{Cr}^{\text{III}}]$  and  $[\text{Mn}^{\text{II}}\text{Cr}^{\text{III}}]$  binuclear complexes: synthesis, crystal structures, magnetic and EPR investigations.  
G. Marinescu, D. Visinescu, A. Cucos, **M. Andruh**, Y. Journaux, V. Kravtsov,  
Y. A. Simonov, J. Lipkowski, *Eur. J. Inorg. Chem.*, **2004**, 2914.

- 112.** The rational synthesis of complex systems with pre-established nuclearities and dimensionalities (in Romanian).  
D. Visinescu, **M. Andruh**, *Rev. Chim. (Bucuresti)* **55**, 54 (2004).
- 113.** Chemistry at the apical position of square-pyramidal copper(II) complexes.  
Synthesis, crystal structures and magnetic properties of mononuclear copper(II) and heteronuclear Cu(II) – Hg(II) and Cu(II) – Co(II) complexes containing  $[\text{Cu}(\text{AA})(\text{BB})]^+$  moieties (AA = acetylacetonate, salicylaldehyde; BB = 1,10-phenanthroline, Me<sub>2</sub>bipy = 4,4'-dimethyl-2,2'-bipyridine).  
A. M. Madalan, V. Ch. Kravtsov, D. Pajik, K. Zadro, Yu. A. Simonov, N. Stanica, L. Ouahab, J. Lipkowski, **M. Andruh**, *Inorg. Chim. Acta*, **357**, 4151 (2004)
- 114.** Ethylene-selective dimerization on polymer complex catalyst of Ni(4,4'-bipyridine)Cl<sub>2</sub> activated with AlCl(C<sub>2</sub>H<sub>5</sub>)<sub>2</sub>.  
E. Angelescu, M. Che, **M. Andruh**, R. Zavoianu, G. Costentin, C. Mirica, O. D. Pavel, *J. Molec. Cat., A. Chem.* **219**, 13 (2004).
- 115.** Ferromagnetic coupling through spin polarization in the hexanuclear [Mn<sup>II</sup><sub>3</sub>Cu<sup>II</sup><sub>3</sub>] complex.  
M. Pascu, F. Lloret, N. Avarvari, M. Julve, **M. Andruh**, *Inorg. Chem.*, **43**, 5189 (2004).
- 116.** Synthesis, spectral and structural characterization of two new compounds in the [Cu(sal)(AA)(ClO<sub>4</sub>)] series (sal = salicylaldehyde; AA = 4,4'-dimethyl-2,2'-bipyridine; 2,2'-bispyrimidine).  
A.M. Madalan, E. Melnic, V. Ch. Kravtsov, Yu. A. Simonov, M. Schmidtman, A. Müller, **M. Andruh**, *Rev. Chimie (Bucuresti)*, **55**, 678 (2004).
- 117.** A unique diamondoid network resulted from the convolution of  $\pi$ - $\pi$  stacking and lipophilic interactions.  
A. M. Madalan, V. Ch. Kravtsov, Y. A. Simonov, V. Voronkova, L. Korobchenko, N. Avarvari, **M. Andruh**, *Cryst. Growth & Des.*, **5**, 45 (2005).
- 118.** Heteropolymetallic supramolecular solid-state architectures constructed from [Cr(AA)(C<sub>2</sub>O<sub>4</sub>)<sub>2</sub>] tectons, and sustained by coordinative, hydrogen bond and  $\pi$ - $\pi$  stacking interactions (AA = 2,2'-bipyridine, 1,10-phenanthroline).  
G. Marinescu, **M. Andruh**, M. Julve, F. Lloret, R. Llusar, S. Uriel, J. Vaissermann, *Cryst. Growth & Des.*, **5**, 261 (2005).
- 119.** Extended structures constructed from alkoxo-bridged binuclear complexes as nodes, and bis(4-pyridyl)ethylene as a spacer.  
G. Marin, V. Tudor, V. Ch. Kravtsov, M. Schmidtman, Y. A. Simonov, A. Müller, **M. Andruh**, *Cryst. Growth & Des.*, **5**, 279 (2005).

- 120.** Construction of tube- and ladder-like copper(II) coordination polymers based on the nicotinato tecton.  
A.M. Madalan, C. Paraschiv, J.-P. Sutter, M. Schmidtman, A. Müller, **M. Andruh**, *Cryst. Growth & Des.*, **5**, 707 (2005).
- 121.** A new ferromagnetically coupled  $\mu$ -alkoxo- $\mu$ -acetato copper(II) trinuclear complex:  $[\text{Cu}_3(\text{H}_2\text{tea})(\text{Htea})(\text{CH}_3\text{COO})_2](\text{ClO}_4)$  ( $\text{H}_3\text{tea}$  = triethanolamine).  
V. Tudor, V. Ch. Kravtsov, M. Julve, F. Lloret, Yu. A. Simonov, B. B. Averkiev, **M. Andruh**, *Inorg. Chim. Acta*, **359**, 2066 (2005).
- 122.** Mononuclear and one-dimensional polynuclear Cu(II) complexes with two different chelating ligands. Synthesis, 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, V. Kravtsov, E. Melnic, **M. Andruh** *Rev. Roum. Chim.*, **50**, 11 (2005).
- 123.** Binuclear complexes as tectons in designing supramolecular solid-state architectures.  
**M. Andruh**, *Pure Appl. Chem.*, **77**, 1685 (2005).
- 124.** Alkoxo-bridged copper(II) complexes as nodes in designing solid-state architectures. The interplay of coordinative and  $d^{10}$ - $d^{10}$  metal-metal interactions in sustaining supramolecular solid-state architectures.  
C. Paraschiv, **M. Andruh**, S. Ferlay, M. Wais Hosseini, N. Kyritsakas, J.-M. Planeix, N. Stanica, *Dalton Trans.* 2005, 1195.
- 125.** Synthesis, crystal structures and magnetic properties of cyanide and phenolate-bridged  $[\text{M}^{\text{III}}\text{Ni}^{\text{II}}]_2$  tetranuclear complexes (M = Fe and Cr).  
L. Toma, L. M. Toma, R. Lescouëzec, D. Armentano, G. De Munno, **M. Andruh**, J. Cano, F. Lloret, M. Julve, *Dalton Trans.* 2005, 1357.
- 126.** 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, Yu. A. Simonov, *Appl. Magn. Res.*, **28**, 297 (2005).
- 127.** Organic chemistry for inorganic chemists. Unsymmetrical Schiff-bases derived from 3-formyl-salicylic acid as versatile ligands in coordination chemistry.

- M. Andruh**, F. Funa, in M. A. Cato (Editor) "Focus on Organometallic Chemistry Research", Nova Publishers, Hauppauge, NY, 2005, pp. 144-166.
- 128.** A polynuclear complex,  $\{[Cu(bpe)_2](NO_3)\}$ , with interpenetrated diamondoid networks: synthesis, properties and catalytic behavior.  
A. N. Pârvulescu, G. Marin, K. Suwinska, V. Ch. Kravtsov, **M. Andruh**, V. Pârvulescu, V. I. Pârvulescu, *J. Mater. Chem.*, **15**, 4234 (2005).
- 129** A new supramolecular multimetallic system containing three different spin carriers  
D. Visinescu, J.-P. Sutter, H. W. Roesky, J. Magull, **M. Andruh**, *Rev. Roum. Chim.*, **50**, 737 (2005).
- 130.** Oligonuclear 3d-4f complexes as tectons in designing supramolecular solid-state architectures. Impact of the nature of linkers on the structural diversity.  
R. Gheorghe, P. Cucos, **M. Andruh**, J.-P. Costes, B. Donnadieu, S. Shova, *Chem. Eur. J.*, **12**, 187 (2006).
- 131.** A new synthetic route towards heterotrimetallic complexes. Synthesis, crystal structure and magnetic properties of a  $[Cu^{II}Mn^{II}Cr^{III}]$  trinuclear complex.  
D. Visinescu, J.-P. Sutter, C. Ruiz-Pérez, **M. Andruh**, *Inorg. Chim. Acta*, **359**, 433 (2006).
- 132.** Chemistry at the apical position of square-pyramidal copper(II) complexes: synthesis, crystal structures, and magnetic properties of homopolynuclear complexes with azido bridges containing  $[Cu(AA)(BB)]^+$  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*, **359**, 459 (2006).
- 133.** Reinecke anion derivatives and homobinuclear complexes as tectons in designing heteropolymetallic systems.  
A. Cucos, N. Avarvari, **M. Andruh**, Y. Journaux, A. Müller, M. Schmidtman, *Eur. J. Inorg. Chem.*, **2006**, 903.
- 134.** Metal complexes as second-sphere ligands.  
A. M. Madalan, N. Avarvari, and **M. Andruh**, *New J. Chem.*, **30**, 521 (2006).
- 135.** An original 1D Cu-Co heterometallic compound: Synthesis, structure and magnetic properties.  
J.-P. Costes, R. Gheorghe, **M. Andruh**, S. Shova, J.-M. Clemente Juan, *New J. Chem.*, **30**, 572 (2006).
- 136.** Coordination polymers constructed from alkoxo-bridged nodes and *exo*-bidentate ligands.  
G. Marin, V. Kravtsov, Y. A. Simonov, V. Tudor, J. Lipkowski, **M. Andruh**, *J. Molec. Struct.*, **796**, 123 (2006) (themed issue on Coordination Polymers).

- 137.** Trinuclear magnetic clusters based on cyanide metal complexes: Synthesis, crystal structures, and magnetic properties of four new  $[\text{Mn}^{\text{II}}_2\text{M}^{\text{III}}]$  complexes (M = Cr, Fe, Co).  
C. Paraschiv, **M. Andruh**, Y. Journaux, Z. Žak, N. Kyritsakas, L. Ricard, *J. Mater. Chem.*, **16**, 2660 (2006) (themed issue on Molecular Magnetic Materials).
- 138.** Rational design of supramolecular grid-like layers and zigzag chains through a unique interplay of  $d^{10}$ - $d^{10}$  and  $\pi$ - $\pi$  stacking interactions.  
A. M. Madalan, N. Avarvari, **M. Andruh**, *Cryst. Growth & Des.*, **6**, 1671 (2006).
- 139.** A heterotopic helicand for designing heterometallic helicates.  
P. Cucos, M. Pascu, R. Sessoli, N. Avarvari, F. Pointillart, **M. Andruh**, *Inorg. Chem.*, **45**, 7035 (2006).
- 140.** Supramolecular copper(II) dimers resulted from hydrogen-bond interactions: synthesis, crystal structures and magnetic properties  
V. Tudor, G. Marin, V. Kravtsov, Yu. A. Simonov, M. Julve, F. Lloret, **M. Andruh**, *Rev. Roum. Chim.*, **51**, 367 (2006).
- 141.** A new 1-D hydrogen bond polymer constructed from a trinuclear 3d-4f tecton and 4,4'-bipyridine-*N,N'*-dioxide.  
R. Gheorghe, J.-P. Costes, B. Donnadieu, **M. Andruh**, *Rev. Roum. Chim.*, **51**, 491 (2006).
- 142.** Oligonuclear complexes as tectons in crystal engineering: structural diversity and magnetic properties.  
**M. Andruh**, *Chem. Commun.*, **2007**, 2565 (Feature Article).
- 143.** Synthesis and characterization of some novel homo- and hetero-diradicals of hydrazyl and nitroxide type  
P. Ionita, F. Tuna, **M. Andruh**, T. Constantinescu, A. T. Balaban, *Aust. J. Chem.* **60**, 173 (2007).
- 144.** Hybrid organic/inorganic H-bonded supramolecular networks including  $[\text{Cr}(\text{ox})_2\text{L}]$  (L = 1,10-phenanthroline and 2,2'-bipyridine) tectons.  
C. Paraschiv, S. Ferlay, M. Wais Hosseini, N. Kiritsakas, J.-M. Planeix, **M. Andruh**, *Rev. Roum. Chim.*, **52**, 101 (2007).
- 145.** Making 3d-4f hexanuclear clusters from heterotrinuclear cationic building blocks.  
R. Gheorghe, **M. Andruh**, J.-P. Costes, B. Donnadieu, M. Schmidtman, A. Müller, *Inorg. Chim. Acta*, **360**, 4044 (2007).
- 146.** Supramolecular bimetallic systems constructed through  $\pi$ - $\pi$  stacking and hydrogen bond interactions.



- A. M. Madalan, **M. Andruh**, N. Avarvari, M. Fourmigué, *Synth. React. Met.-Org. Nano-Met. Chem.*, **37**, 757 (2007).
- 147.** Supramolecular dimers and chains resulted from second coordination sphere interactions.  
S. Nastase, F. Tuna, C. Maxim, C. A. Muryn, N. Avarvari, R. E. P. Winpenny, **M. Andruh**, *Cryst. Growth & Des.*, **7**, 1825 (2007).
- 148.** First Ni<sup>II</sup>-Ln<sup>III</sup> coordination polymers constructed by using [Ni(bpca)<sub>2</sub>] as a building block [Hbpca = bis(2-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.
- 149.** Unexpected replacement of Gd(III) by Hg(II) from an oxygen binding set leading to a heterometallic Cu(II)-Hg(II) 1-D coordination polymer  
R. Gheorghe, J.-P. Costes, S. Shova, **M. Andruh**, *Rev. Roum. Chim.*, **52**, 753 (2007).
- 150.** Conducting mixed valence salt of bis(ethylenedithio)-tetrathiafulvalene (BEDT-TTF) with the paramagnetic heteroleptic anion [Cr<sup>III</sup>(oxalate)<sub>2</sub>(2,2'-bipyridine)].  
A. M. Madalan, E. Canadell, P. Auban-Senzier, D. Brânzea, N. Avarvari, **M. Andruh**, *New J. Chem.*, **32**, 333 (2008).
- 151.** One-dimensional and two-dimensional coordination polymers constructed from copper(II) nodes and polycarboxylato 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*, **27**, 574 (2008).
- 152.** Heterobinuclear complexes as tectons in designing coordination polymers.  
D. G. Branzea, A. Guerri, O. Fabelo, C. Ruiz-Pérez, L.-M. Chamoreau, C. Sangregorio, A. Caneschi, **M. Andruh**, *Cryst. Growth & Des.*, **8**, 941 (2008).
- 153.** Heterospin systems constructed from [Cu<sub>2</sub>Ln]<sup>3+</sup> and [Ni(mnt)<sub>2</sub>]<sup>1-,2-</sup> 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.*, **47**, 950 (2008)
- 154.** 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.*, **8**, 964 (2008).

- 155.** New alkoxo-bridged mixed valence cobalt clusters: Synthesis, crystal structures and magnetic properties.  
V. Tudor, G. Marin, F. Lloret, V. Ch. Kravtsov, Yu. A. Simonov, M. Julve, **M. Andruh**, *Inorg. Chim. Acta*, **361**, 3446 (2008).
- 156.** Copper(II) and zinc(II) complexes with Schiff-base ligands derived from salicylaldehyde and 3-methoxysalicylaldehyde: synthesis, crystal structures, magnetic and luminescence properties.  
C. Maxim, T. D. Pasatoiu, V. Ch. Kravtsov, S. Shova, C. A. Muryn, R. E. P. Winpenny, F. Tuna, **M. Andruh**, *Inorg. Chim. Acta*, **361**, 3903 (2008).
- 157.** A 2-D coordination polymer with canted ferromagnetism constructed from ferromagnetic  $[\text{Ni}^{\text{II}}\text{Co}^{\text{II}}]$  nodes.  
D. G. Branzea, L. Sorace, C. Maxim, **M. Andruh**, A. Caneschi, *Inorg. Chem.*, **47**, 6590 (2008).
- 158.** New manganese(II) complexes with tetraorganodichalcogenoimidodiphosphinato ligands. Crystal and molecular structure of dimeric  $[\text{Mn}\{(\text{OPPh}_2)(\text{OP}(\text{OEt})_2)\text{N}\}_2(\text{H}_2\text{O})]_2$  and monomeric  $\text{Mn}[(\text{SPMe}_2)(\text{SPPPh}_2)\text{N}]_2$ .  
S. Farcas, A. M. Preda, A. Silvestru, A. Bienko, J. Mrozinski, **M. Andruh**, *Polyhedron*, **27**, 2905 (2008).
- 159.** 3d-4f Combined chemistry: Synthetic strategies and magnetic properties.  
**M. Andruh**, J.-P. Costes, C. Diaz, S. Gao, *Inorg. Chem.*, accepted (IC Forums – Molecular Magnetism).
- 160.** A trinuclear copper(II) complex with 2,5-pyridine-dicarboxylato bridges:  $[\text{Cu}_3(2,5\text{-pydc})_2(\text{Me}_3\text{dien})_2(\text{H}_2\text{O})_2](\text{BF}_4)_2 \cdot \text{H}_2\text{O}$ : synthesis, crystal structure and magnetic properties.  
C. D. Ene, C. Maxim, F. Tuna, **M. Andruh**, *Inorg. Chim. Acta*, **362**, 1660 (2009).
- 161.** First binuclear Cr(III)-Mn(III) oxalato-bridged complexes: Synthesis, crystal structures and magnetic properties.  
S. Nastase, C. Maxim, F. Tuna, C. Duhayon, J.-P. Sutter, **M. Andruh**, *Polyhedron*, in press.
- 162.** EPR investigation of the spin-spin interactions in a Cu(II)-Gd(III)-Fe(III) heterospin system.  
A. Sukhanov, R. Galeev, L. Mingalieva, V. Voronkova, R. Gheorghe, **M. Andruh**, *Appl. Magn. Res.*, in press.
- 163.** Three are better than one: gathering three different metals in the same molecule. A straightforward route to 3d-3d'-4f heterometal systems.  
R. Gheorghe, A. M. Madalan, **M. Andruh**, in H. W. Roesky, D. Kennepohl (Editors), "Experiments in Green and Sustainable Chemistry", Wiley-VCH, in press.

- 164.** Crystal engineering of coordination polymers.  
**M. Andruh** and C. Ruiz-Pérez, in "Macromolecules Containing Metals and Metal-Like Elements: Inorganic Supramolecular Assemblies," Volume 9, Chapter 10, A. S. Abd-El-Aziz, C. E. Carraher, Jr., C. U. Pittman, Jr. and M. Zeldin (Eds.), Wiley-Interscience, Hoboken, NJ, 2009, in press.
- 165.** A heterometallic chain constructed from binuclear [Cu(II)Mn(II)] nodes and *trans*-[Cr(NCS)<sub>4</sub>(pyz)<sub>2</sub>]<sup>-</sup> spacers.  
A. Cucos, E. Melnic, Yu. A. Simonov, **M. Andruh**, *Rev. Roum. Chim.*, in press.
- 166.** Constructing robust channel structures by packing metallacalixarenes: reversible single-crystal-to-single-crystal dehydration.  
C. D. Ene, A. M. Madalan, C. Maxim, B. Jurca, N. Avarvari, **M. Andruh**, *J. Am. Chem. Soc.*, in press.

**Carti:**

1. Combinatii complexe polinucleare si aplicatiile lor, M. Brezeanu, L. Patron, M. Andruh, Editura Academiei Romane, Bucuresti, 1986.
2. Chimie metalelor, M. Brezeanu, E. Cristurean, A. Antoniu, D. Marinescu, M. Andruh, Editura Academiei Romane, Bucuresti, 1990.
3. Forma moleculelor anorganice – O introducere in stereochimia anorganica, Editura Academiei Romane, Bucuresti, 1998.