

CURRICULUM VITAE

Personal data:

Surname: ROTARU
First Name: Aurelian
Date and Place of Birth: 17.06.1982, Murgeni, Romania
Marital Status: Married
Postal Address: 13, Str. Universitatii, 720229, Suceava.
Phone: (+04) 0747 815 207
E-mail: aurelian.rotaru@usm.ro



ORCID: <https://orcid.org/0000-0002-8782-7988>

ResearcherID: <https://publons.com/researcher/246799/aurelian-rotaru/>

GoogleScholar: <https://scholar.google.com/citations?user=jyyC34AAAAAJ&hl=ro&oi=ao>

Scopus: <https://www.scopus.com/authid/detail.uri?authorId=16403293300>

Web: <http://nanomat.usv.ro/>

Academic:

- Since 2020** *Vice Dean* - Faculty of Electrical Engineering and Computer Science, Stefan cel Mare University, 13, Str. Universitatii, 720229 Suceava, Romania.
- Since 2011** *Associate professor* – Faculty of Electrical Engineering and Computer Science, Stefan cel Mare University, 13, Str. Universitatii, 720229 Suceava, Romania.
- Since 2015** *Head* of Advanced Multifunctional Materials Laboratory (NANOMAT), Research Center MANSiD, Stefan cel Mare University, 13, Str. Universitatii, 720229 Suceava, Romania.
- 2011-2015** *Head* of Advanced Materials and Nanotechnology Laboratory (AMNOL), Stefan cel Mare University, 13, Str. Universitatii, 720229 Suceava, Romania.
- 2011-2012** *Guest researcher* at Laboratoire de Chimie de Coordination (LCC), Toulouse, France, C/o Dr. Azzedine BOUSSEKSOU (azzedine.bousseksou@lcc-toulouse.fr) (6 months)
- 2010 - 2011** *Lecturer* – Faculty of Electrical Engineering and Computer Science, Stefan cel Mare University, 13, Str. Universitatii, 720229 Suceava, Romania.
- 2009 – 2010** *Postdoctoral researcher* - Advanced Materials Research Institute (AMRI), 2000, Lakeshore Drive, 70148, New Orleans, Louisiana, USA, C/o Dr. Leonard SPINU (lspinu@uno.edu)

- 2008-2009** ½ ATER at Physics Department, UVSQ, Versailles, France
- 2007 – 2008** *Vacataire at Physics Department, UVSQ, Versailles, France*
- 2006 –2009:** *Ph.D studies (joint thesis): University of Versailles Saint Quentin en Yvelines, Versailles, France and “Alexandru Ioan Cuza” University, Iasi, Romania.*
Title of my Ph.D thesis: *“Theoretical and Experimental Study of Pressure and Size Effect on the Bistable Compounds: Thermal Behavior and Study of the Relaxation”*
Thesis Supervisors : **Prof. Dr. Jorge LINARES :** (jlinares@phys.uvsq.fr) and **Prof. Dr. Alexandru STANCU:** (alstancu@uaic.ro)
- 2004 – 2006:** **M. Sc.** *Electrical and Magnetic Properties of Fine and Ultra-Fine Particles,* “Alexandru Ioan Cuza” University, Iasi, Romania
- 2000 – 2004:** **B. Sc.** *Medical Physics,* “Alexandru Ioan Cuza” University, Iasi, Romania

Short Visits:

- 2022 – Visiting Professor** at Institute of Condensed Matter and Nanosciences (IMCN), UCL, Louvain la Neuve, Belgium (**2 weeks**)
- 2022 – Visiting Professor** at Coordination Chemistry Laboratory (LCC), Toulouse, France (**1 week**)
- 2021 - Invited Researcher** at UkrOrgSyntez Ltd., Kiev, Ukraine (**2 months**)
- 2020 - Invited Researcher** at UkrOrgSyntez Ltd., Kiev, Ukraine (**2 months**)
- 2019 – Invited Researcher** at Coordination Chemistry Laboratory (LCC), Toulouse, France (**2 weeks**)
- 2019 - Invited Researcher** at UkrOrgSyntez Ltd., Kiev, Ukraine (**1.5 months**)
- 2018 - Invited Researcher** at UkrOrgSyntez Ltd., Kiev, Ukraine (**2 months**)
- 2018 – Visiting Professor** at Coordination Chemistry Laboratory (LCC), Toulouse, France (**1 month**)
- 2017 - Invited Researcher** at UkrOrgSyntez Ltd., Kiev, Ukraine (**2 months**)
- 2016 - Invited Researcher** at Coordination Chemistry Laboratory (LCC), Toulouse, France (**1 month**)
- 2015 - Invited Researcher** at Institute of Condensed Matter and Nanosciences (IMCN), UCL, Louvain la Neuve, Belgium (**1 week**)
- 2015 – Invited Researcher** at Coordination Chemistry Laboratory (LCC), Toulouse, France (**1 week**)
- 2014 - Invited Researcher** at Institute of Condensed Matter and Nanosciences (IMCN), UCL, Louvain la Neuve, Belgium (**2 weeks**)
- 2013 – Invited Researcher** at Institute of Condensed Matter and Nanosciences (IMCN), UCL, Louvain la Neuve, Belgium (**2 weeks**)
- 2012 – Invited Researcher** at Coordination Chemistry Laboratory (LCC), Toulouse, France (**1.5 months**)
- 2012 – Invited Researcher** at Institute of Condensed Matter and Nanosciences (IMCN), UCL, Louvain la Neuve, Belgium (**2 weeks**)
- 2011 – Invited Researcher** at Institute of Condensed Matter and Nanosciences (IMCN), UCL, Louvain la Neuve, Belgium (**1 week**)

Scholarships:

- 2005 – 2006:** *Socrates Mobility at University of Versailles Saint Quentin en Yvelines, Versailles, France.*
- 2006 – 2007:** *ECONET, PAI (Brancusi), AUF Mobility at GEMaC Laboratory, University of Versailles Saint Quentin en Yvelines, Versailles, France.*
- 2007 – 2008:** *Eiffel PhD Scholarship - for top-level PhD students at University of Versailles Saint Quentin en Yvelines, Versailles, France.*

Personal skills and competences:

Languages: Romanian (mother tongue), French and English.

Technical skills and competences:

- **Experience in**
 - **Experimental techniques:** Magnetometry (SQUID) under various stimuli (temperature, pressure, light), Magneto-transport, Dielectric spectroscopy under various stimuli (temperature, pressure), DSC, Optical properties in variable temperature and pressure (gas pressure cell), Spectrophotometry UV-Vis, FMR (EPR, VNA), PPMS (Heat capacity, AC Susceptibility, Resistivity), Charge Transport Properties (DC), Nano-electro-manipulation (Dielectrophoresis), Electron microscopy (FE-SEM, EDX), Scanning Probe Microscopy (AFM, MFM); Thin film deposition (spin coating), Electrospinning.
 - **Setup automation** (Labview, LabWindows)
 - **Modelling and simulation of hysteresis, Numerical computing.**

Courses Taught:

- Physics for Engineers,
- Introduction to Nanoelectronics.

Grants and Contracts

Principal Investigator or member in more than 20 national and international research projects.

Selected projects:

1. Grant PN-III-CEI-BIM-PBE-2020-0042, *"New switchable molecular materials for multi-sensing applications"*, Contract Nr. 8 BM / 2021 (**PI: Aurelian Rotaru (Rou) and Yann Garcia (Be)**)
2. Grant PN-III-P1-1.1-TE-2019-2194 – „*Smart nanoelectronic devices based on switchable molecular materials – SmartDevice*”. (2020 - 2022), Contract Nr. Te 123 / 2020. (**Coordinator: Aurelian Rotaru**)
3. Grant PN-III-P4-ID-PCCF-2016-0175 – „*High-k Nanoparticle Multilayer Dielectrics for Nanoelectronics and Energy Storage Applications – HIGHkDEVICE*”, Contract No.:

- PCCF18/2018, 2018-2022, Buget Proiect : 8.500.000 Ron, (**Coordinator: Aurelian Rotaru** – Universitatea „Ștefan cel Mare” din Suceava; **Partner 1: Liliana Mitoșeriu** - Universitatea „Alexandru Ioan Cuza”, Iasi; **Partner 2: Ioana Pintilie** - Institutul National de Cercetare Dezvoltare pentru Fizica Materialelor ; **Partner 3: Aurelian Marcu** - Institutul National de Cercetare Dezvoltare pentru Fizica Laserilor, Plasmei si Radiatiei.
4. H2020-MSCA-RISE-2016, Project No. 734322 - “*Multifunctional Spin Crossover Materials –SPINSWITCH*”, 2017-2021, **954.000,00 € (Coordinator: Aurelian Rotaru)**
 5. Grant PN II-TE (Young researcher grant) – CNCSIS „*Analysis of Spin State Commutation in Spin Crossover based Switchable Devices*” (2015-2017) – **550.000 RON (~ 125.000 Eur) - (PI: Aurelian Rotaru)**
 6. POS CCE Grant (Infrastructure Grant) – ANCSI-MFE (co-funded from European Regional Development Fund) – **31.460.699 RON (~ 7.070.000,00 €)** – “*Integrated Center for Research, Development and Innovation in Advanced Materials, Nanotechnology, and Distributed Systems for fabrication and control*” – MANSiD (April 2015 – December 2015), Contract No 671 / 09.04.2015 (**Management Team: Prof. Adrian Graur, Prof. Mihai Dimian, Prof. Dumitru Amarandei, Prof. Constantin Filote and Assoc. prof. Aurelian Rotaru (contact person)**)
 7. PCCA Grant (Partnership Grant) – UEFISCDI – “*Flexible White OLED for Lighting Applications -FlexWOL*” (2014-2016) – **275 000 RON (~62 500 €) (Coordinator - Dr. Luminita Marin, Institute of Macromolecular Chemistry “Petru Poni” Iasi, Partner 1 - Dr. Aurelian Rotaru - Stefan cel Mare University of Suceava, Partner 2 - Bogdan Chiricuta - APEL LASER SRL:).**
 8. Bilateral Grant Romania-France (UEFISCDI-ANR) – „*Switchable molecules for nanoelectronics and spintronics – SwitchElec*” – (2013-2016) (**PI: Aurelian Rotaru (Rou) and Azzedine Bousseksou (Fr)**).
 9. Bilateral Grant Romania-Belgium (UEFISCDI-WBI) – „*Thermal- and piezo-switchable molecular senseurs based on alpha and beta-amino acids*”(2012-2014) (**PI: Aurelian Rotaru (Rou) and Yann Garcia (Be)**)
 10. Grant PN II-TE (Young researcher grant) – CNCSIS „*Analysis of cooperativity and low dimensionality effects in bistable molecular systems with applications in nanoelectronics*” (2012-2015) - (**PI: Aurelian Rotaru**)
 11. Grant BD – CNCSIS (Doctoral grant), (2007-2009) - (**PI: Aurelian Rotaru**).

Conference participations

I participated at more than 135 national and international conferences: more than **60 oral presentations** (of which **15 invited and 2 Keynote presentations**) and more than 75 poster presentations.

Book Chapters:

[1] M. Dimian, **A. Rotaru**, Chapter: “*Molecular magnetism modeling with applications in spin crossover compounds*”, in the book: **Magnetic Materials, InTech (2016)**, ISBN 978-953-51-2427-6

List of publications:

Number of ISI peer-reviewed papers: 119

Number of citations (without self-citations): > 3000

h-index: 30 (according WoK), 30 (according Scopus) and 34 (according Google Scholar)

2023

- [119] Y. Draoui, S. Radi, Y. Bahjou, A. Idir, A. El Mahdaoui, A. Ziad, H. N. Miras, M. Ferbinteanu, **A. Rotaru** and Y. Garcia, *New triazole-based coordination complexes as antitumor agents against triple negative breast cancer MDA-MB-468 cell line*, **RSC Advances**, **13** (2023) 36158-36167 (Q2)
- [118] P. Moradi, E. Taheri-Nassaj, A. Yourdkhani, V. Mykhailovych, A. Diaconu and **A. Rotaru**, *Dielectric, pyroelectric, and ferroelectric studies in $(1-x)\text{AgNbO}_3\text{-}x\text{FeNbO}_4$ lead-free ceramics*, **Dalton Transactions** 52 (2023) 17894 (Q1)
- [117] V. Mykhailovych, G. Caruntu, A. Graur, M. Mykhailovych, P. Fochuk, I. Fodchuk, G.-M. Rotaru, **A. Rotaru**, *Fabrication and Characterization of Dielectric ZnCr_2O_4 Nanopowders and Thin Films for Parallel-Plate Capacitor Applications*, **Micromachines**, **14** (2023) 1759 (Q2)
- [116] W. Li, **A. Rotaru**, M. Wolff, S. Demeshko, F. Meyer, *From a mononuclear $\text{Fe}^{\text{III}}\text{L}_2$ complex to a spin crossover $\text{Fe}^{\text{II}}\text{L}_6$ cage by symmetric ligand architecture modification: insights into the ammonia gas sensing mechanism*, **Journal of Materials Chemistry C**, **11** (2023) 11175-11184 (Q1)
- [115] P. Moradi, E. Taheri-Nassaj, A. Yourdkhani, V. Mykhailovych, A. Diaconu, **A. Rotaru**, *Enhanced energy storage performance in reaction-sintered AgNbO_3 antiferroelectric ceramics*, **Dalton Transactions**, **52** (2023) 4462-4474 (Q1)
- [114] Li Sun, Nour El Islam Belmouri, Mamadou Ndiaye, Koen Robeyns, Aurelian Rotaru, Kamel Boukheddaden, Yann Garcia, *Thermal-Driven Guest-Induced Spin Crossover Behavior in 3D Fe (II)-Based Porous Coordination Polymers*, **Crystal Growth & Design**, **23** (2023) 3402-3411 (Q1)
- [113] F.-D. Cojocaru, I. Gardikiotis, G. Dodi, **A. Rotaru**, V. Balan, E. Rezus, L. Verestiuc, *"Polysaccharides-calcium phosphates composite beads as bone substitutes for fractures repair and regeneration"*, **Polymers**, **6** (2023) 1509 (Q1)
- [112] L. Mihai, G. Caruntu, A. Rotaru, D. Caruntu, V. Mihailovici, C. E. Ciomaga, N. Horchidan, A. Stancalie and A. Marcu, *GHz – THz dielectric properties of flexible matrix embedded BTO nanoparticles*, **Materials**, **16** (2023), 1292 (Q2)
- [111] L. Padurariu, N. Horchidan, C. Ciomaga, L.-P. Curecheriu, V. Lukacs, R. Stirbu, G. Stoian, M. Botea, M. Florea, V.-A. Maraloiu, L. Pintilie, A. Rotaru, L. Mitoseriu, *The influence of ferroelectric filler size & clustering on the electrical properties of $(\text{Ag-BaTiO}_3)\text{-PVDF}$ sub-percolative hybrid composites*, **ACS Applied Materials & Interfaces**, **15** (2023), 5744-5759 (Q1)
-

2022

- [110] L. Sun, M. Ndiaye, N. El Islam Belmouri, K. Robeyns, A. Rotaru, K. Boukheddaden, and Y. Garcia, *Spin Crossover Coordination Polymers with Pyridine-Like 2 Modification through Selective Guest Molecules*, **Crystal Growth & Design**, **22** (2022), 7555-7563 (Q1)

- [109] N. Fifere, A. Airinei, M. Asăndulesa, A. Rotaru, E.-L. Ursu, F. Doroftei, *Investigating the vibrational, magnetic and dielectric properties, and antioxidant activity of cerium oxide nanoparticles*, **Int. J. Molec. Sci.**, **23** (2022) 13883 (Q1)
- [108] Y. Bibik, S. Shova, A. Rotaru, S. Shylin, I. Fritsky, R. Lampeka, I. Gural'skiy, *Cooperative Spin Crossover above Room Temperature in Iron(II) Cyanoborohydride Pyrazine Complex*, **Inorg. Chem.**, **61** (2022) 14761-14769 (Q1)
- [107] F. Molaverdi, R. Sarraf-Mamoory, A. Yourdkhani, A. Diaconu, A. Rotaru, *Electrical and magnetic properties of Mg_{0.85}Co_{0.15}Fe₂O₄ ceramics with V₂O₅ additives*, **J Mater Sci: Mater. Electron.**, **33** (2022) 20194–20203 (Q2)
- [106] V. Kumar, A. Rotaru and Y. Garcia, *Room temperature light induced spin state switching in a Fe II coordination polymer featuring a photo responsive anion*, **Journal of Materials Chemistry C**, **10** (2022) 14128-14134 (Q1)
- [105] S. Salemezadeh Parizi, D. Caruntu, **A. Rotaru**, G. Caruntu, *High-k BaTiO₃ Nanoparticle Films as Gate Dielectrics for Flexible Field Effect Transistors*, **Materials Advances**, **3** (2022) 6474-6484 (Q2)
- [104] L. Sun, **A. Rotaru**, Y. Garcia, *A non-porous Fe(II) complex for the colorimetric detection of hazardous gases and the monitoring of meat freshness*, **Journal of Hazardous Materials**, **437** (2022) 129364 (Q1)
- [103] Y. Draoui, S. Radi, A. Tanan, A. Oulmidi, H. N. Miras, R. Benabbes, S. Ouahhoudo, S. Mamri, **A. Rotaru**, Y. Garcia, *Novel Family of Bis-pyrazole Coordination Complexes as Potent Antibacterial and Antifungal agents*, **RSC Adv.**, **12** (2022) 17755 (Q2)
- [102] W. Li, L. Sun, C. Liu, **A. Rotaru**, K. Robeyns, M. L Singleton, Y. Garcia, *Supramolecular Fe II₄ L₄ cage for fast ammonia sensing*, **J. Mater. Chem. C**, **10** (2022) 9216-9221 (Q1)
- [101] O. I. Kucheriv, V. I. Grygoruk, V. V. Oliynyk, V. V. Zagorodnii, V. L. Launets, **A. Rotaru**, I. A. Gural'skiy, *A Vanadium Dioxide-PMMA Composite For Microwave Radiation Switching*, **ChemPlusChem**, **87** (2022) e202200107 (Q2)
- [100] C. E. Ciomaga, N. Horchidan, L. Padurariu, R. S. Stirbu, V. Tiron, F. M. Tufescu, I. Topala, O. Condurache, M. Botea, I. Pintilie, L. Pintilie, **A. Rotaru**, G. Caruntu, L. Mitoseriu, *BaTiO₃ nanocubes-gelatin composites for piezoelectric harvesting: Modeling and experimental study*, **Ceramics International**, **48** (2022) 25880-25893 (Q1)
- [99] N. Horchidan, C. E. Ciomaga, L. P. Curecheriu, G. Stoian, M. Botea, M. Florea, V. A. Maraloiu, L. Pintilie, F. M. Tufescu, V. Tiron, **A. Rotaru** and L. Mitoseriu, *Increasing Permittivity and Mechanical Harvesting Response of PVDF-Based Flexible Composites by Using Ag Nanoparticles onto BaTiO₃ Nanofillers*, **Nanomaterials** **12** (2022) 934 (Q1)
- [98] V. M. Hiiuk, S. I. Shylin, D. D. Barakhtii, D. M. Korytko, V. O. Kotsyubynsky, **A. Rotaru**, S. Shova, and I. A. Gural'skiy, *Two-step spin crossover in Hofmann-type coordination polymers [Fe(2-phenylpyrazine)₂{M(CN)₂}₂] (M = Ag, Au)*, **Inorg. Chem.**, **61** (2022) 2093-2104 (Q1)
- [97] V.A. Lukacs, M. Airimioaei, L. Padurariu, L.P. Curecheriu, C.E. Ciomaga, A. Bencan, G. Drazic, M. Avakian, J.L. Jones, G. Stoian, M. Deluca, R. Brunner, **A. Rotaru**, L. Mitoseriu, *Phase coexistence and grain size effects on the functional properties of BaTiO₃ ceramics*, **J. Eur.Ceram. Soc.**, **42** (2022) 101644 (Q1)
- [96] M. Nili-Ahmad-Ababdi, R. Sarraf-Mamoory, A. Yourdkhani, A. Diaconu, **A. Rotaru**, *Magnetic and electrical properties of Mg_{1-x}Co_xFe₂O₄ (x=0-0.15) ceramics prepared by the solid-state method*, **J. Eur. Ceram. Soc.**, **42** (2022) 442-447 (Q1)
- [95] P. Pascariu, C. Cojocar, P. Samoila, A. Airinei, N. Oлару, **A. Rotaru**, C. Romanitan, L.B. Tudoran, M. Sucheac, *Cu/TiO₂ composite nanofibers with improved photocatalytic*

2021

- [94] V. Mykhailovych, A. Kanak, Ş. Cojocar, E.-D. Chitoiu-Arsene, M. N. Palamaru, A.-R. Jordan, O. Korovyanko, A. Diaconu, V. G. Ciobanu, G. Caruntu, O. Lushchak, P. Fochuk, Y. Khalavka, **A. Rotaru** *Structural, Optical, and Catalytic Properties of MgCr₂O₄ Spinel-type Nanostructures Synthesized by Sol-Gel Auto-Combustion Method*, **Catalysts**, **11** (2021) 1476 (Q2)
- [93] L. Sun, **A. Rotaru**, Y. Garcia, *⁵⁷Fe Mössbauer study of an iron(II) sensor for the detection of toxic gases at room temperature*, **Hyperfine Interact** **242** (2021) 23
- [92] A. Oulmidi, S. Radi, A. Idir, A. Ziad, I. Kabach, M. Nhiri, K. Robeyns, **A. Rotaru** and Y. Garcia, *Synthesis and cytotoxicity against tumor cells of pincer N-heterocyclic ligands and their transition metal complexes*, **RSC Adv.**, **11** (2021) 34742 (Q2)
- [91] A. Oulmidi, **A. Rotaru**, S. Radi and Y. Garcia, *Pyrazole's substituents effect on the spin state of [Fe(bpp)₂]²⁺ complexes*, **Hyperfine Interact** **242** (2021) 8
- [90] Y. Guo, **A. Rotaru**, H. Müller-Bunz, Grace G Morgan, Shishen Zhang, Shufang Xue, Yann Garcia, *Auxiliary alkyl chain modulated spin crossover behaviour in [Fe(H₂Bpz)₂]²⁺ (Cn-bipy)] complexes*, **Dalton Transactions**, **50** (2021) 12835-12842 (Q1)
- [89] S. F. Xue, L. Wang, A. D. Naik, J. Olah, K. Robeyns, **A. Rotaru**, Y. N. Guo, Y. Garcia, *Iron(ii) pillared-layer responsive frameworks via "kagome dual" (kgd) supramolecular tessellations*, **Inorganic Chemistry Frontiers**, **60** (2021) 8788–8798 (Q1)
- [88] G. M. Rotaru, E. Codjovi, P.-R. Dahoo, I. Maurin, J. Linares, **A. Rotaru**, *Monitoring spin-crossover properties by diffused reflectivity*, **Symmetry**, **13** (2021) 1148 (Q2)
- [87] I. Kuzevanova, O. I. Kucheriv, V. M. Hiiuk, D. Naumova, S. Shova, S. I. Shylin, V. Kotsyubynsky, **A. Rotaru**, I. O. Fritsky and Il'ya A. Gural'skiy, *Spin Crossover in Iron(II) Hofmann Clathrates Analogues with 1,2,3-triazole*, **Dalton Transactions**, **50** (2021) 9250-9258 (Q1)
- [86] L. Sun, **A. Rotaru**, K. Robeyns, Y. Garcia, Yann, *A colorimetric sensor for the highly selective, ultra-sensitive and rapid detection of volatile organic compounds and hazardous gases*, **Industrial & Engineering Chemistry Research**, **60** (2021) 8788-8798 (Q2)
- [85] N. Varastegani, A. Yourdkhani, S. A. S. Ebrahimi, **A. Rotaru**, *"The effects of sintering temperature on structural, electrical, and magnetic properties of MgFe_{1.92}Bi_{0.08}O₄"*, **Journal of Electroceramics**, **46** (2021) 151-161 (Q1)
- [84] A. V. Lukacs, G. Caruntu, O. Condurache, C.E. Ciomaga, L.P. Curecheriu, L. Padurariu, M. Ignat, M. Airimioaei, G. Stoian, **A. Rotaru**, L. Mitoseriu *"Preparation and properties of porous BaTiO₃ nanostructured ceramics produced from cuboidal nanocrystals"*, **Ceramics International**, **47** (2021) 18105-18115 (Q1)
- [83] I. Rusu, I. C. Manolache-Rusu, A. Diaconu, O. Palamarciuc, I. A. Gural'skiy, G. Molnar, **A. Rotaru**, *"Pressure Gradient Effect on Spin-Crossover Materials: Experiment vs. Theory"*, **J. Appl. Phys.**, **129** (2021) 064501 (Featured article) (Q2)
- [82] D. Maskowicz, M. Sawczak, A.C. Ghosh, K. Grochowska, R. Jendrzewski, **A. Rotaru**, Y. Garcia, G. Śliwiński, *"Spin crossover and cooperativity in nanocrystalline [Fe(pyrazine)Pt(CN)₄] thin films deposited by matrix-assisted laser evaporation"*, **Appl. Surf. Science**, **541** (2021) 148419 (Q1)
-

- [81] V. Y. Sirenko, O. I. Kucheriv, **A. Rotaru**, I. O. Fritsky, and I. A. Gural'skiy *Direct Synthesis of Spin-Crossover Complexes: a New Iron-Triazolic Structure Unexpectedly Revealed*, **Eur. J. Inorg. Chem.**, **48** (2020), 4523-4531 (Q2)
- [80] P. Pascariu, N. Olaru, **A. Rotaru**, A. Airinei, *Innovative Low-Cost Carbon/ZnO Hybrid Materials with Enhanced Photocatalytic Activity towards Organic Pollutant Dyes' Removal*, **Nanomaterials**, **10** (2020) 1873. (Q2)
- [79] A.-C. Gheorghe, Y. Bibik, O. I. Kucheriv, D. D. Barakhtii, M.-V. Boicu, I. Rusu, A. Diaconu, I. A. Gural'skiy, G. Molnár, **A. Rotaru**, *Anomalous Pressure Effects on the Electrical Conductivity of the Spin Crossover Complex $[Fe(pyrazine)\{Au(CN)_2\}_2]$* , **Magnetochemistry**, **6** (2020) 31 (Q2)
- [78] V Kumar, M. El-Massaoudi, S. Radi, K. Van Hecke, **A. Rotaru**, Y. Garcia, *Iron(II) coordination pyrazole complexes with aromatic sulfonate ligands: the role of ether*, **New Journal of Chemistry**, **44** (2020), 13902-13912 (Q2)
- [77] V. M. Hiiuk, S. Shova, **A. Rotaru**, A. A. Golub, I. O. Fritsky, and I. A. Gural'skiy, *Spin crossover in 2D Iron(II) Phthalazine Cyanometallic Complexes*, **Dalton Transactions**, **49** (2020) 5302-5311 (Q1)
- [76] A. Abrishamkar, S. Suárez-García, S. Sevim, A. Sorrenti, R. Pons, S.-X. Liu, S. Decurtins, G. Aromí, D. Aguilà, S. Pané, A. J. deMello, **A. Rotaru**, D. Ruiz-Molina, J. Puigmartí-Luis, *Pathway Selection as a Tool for Crystal Defect Engineering: a Case Study with a Functional Coordination Polymer*, **Appl. Mater. Today**, **20** (2020) 100632 (Q1)
- [75] I. Soroceanu, S.-L. Lupu, I. Rusu, M. Piedrahita-Bello, L. Salmon, G. Molnár, P. Demont, A. Bousseksou and **A. Rotaru**, *Ligand Substitution Effects on the Charge Transport Properties of the Spin Crossover Complex $[Fe(Htrz)_{1+y-x}(trz)_{2-y}(NH_2trz)_x](BF_4)_y \cdot nH_2O$* , **J. Phys.: Condens. Matter**, **32** (2020) 264002 (Q2)
- [74] Y. Zhang, K. Ridier, V. Shalabaeva, M. Piedrahita-Bello, **A. Rotaru**, L. Salmon, G. Molnár, I. Séguy, A. Bousseksou, *Resistance Switching in Large-Area Vertical Junctions of the Molecular Spin Crossover Complex $[Fe(HB(tz)_3)_2]$: ON/OFF Ratios and Device Stability*, **J. Phys.: Condens. Matter**, **32** (2020) 214010 (Q2)
- [73] D. Caruntu, B. Kavey, S. Paul, A.-C. Bas, **A. Rotaru** and G. Caruntu, *Dielectric Properties of Solution-Processed BaTiO₃-Styrene Butadiene Styrene Nanocomposite Films*, **CrystEngComm**, **22** (2020), 1261-1272 (Q2)
- [72] N. Varastegani, A. Yourdkhani, S. A. S. Ebrahimi, **A. Rotaru** *Varistor and Electrical Properties of MgO (Fe₂O₃)_{1-x}(Bi₂O₃)_x Ceramics*, **J. Eur. Ceram. Soc.**, **40** (2020) 1325-1329 (Q1)

- [71] I. Soroceanu, A. Graur, E. Coca, L. Salmon, G. Molnar, P. Demont, A. Bousseksou, **A. Rotaru***, *Broadband Dielectric Spectroscopy Reveals Peak Values of Conductivity and Permittivity Switching upon Spin Crossover*, **J. Phys. Chem. Lett.**, **10** (2019) 7391 (Q1)
- [70] D. Popovici, A. Diaconu, **A. Rotaru**, L. Marin, *Microwave-assisted FeCl₃-synthesis of alternantpolyfluorene-oxadiazole. Synthesis, properties and white light-emitting devices*, **Polymers**, **11** (2019) 1562 (Q1)

- [69] S. Xue, A. Rotaru, Y. Garcia, *Ligand field strength tuning in the model [Fe(H₂Bpz₂)₂(bipy)] spin crossover complex*, **Hyperfine Interactions**, 240 (2019) 1-5.
- [68] V. M. Hiiuk, S. Shova, **A. Rotaru**, V. Ksenofontov, I. O. Fritsky, and I. A. Gural'skiy *Room Temperature Hysteretic Spin Crossover in a New Cyanoheterometallic Framework*, **Chem. Commun.**, 55 (2019) 3359-3362 (Q1)
- [67] A. Ivanova-Tolpintseva, O. Tynkevych, A. Diaconu, **A. Rotaru**, and Y. Khalavka, *Synthesis and light-induced aggregation of benzoate-stabilized silver nanoparticles*, **Applied Nanoscience**, 9 (2019) 709-714 (Q2)

2018

- [66] P. Pascariu, M. Asanduleasa, A. Airinei, **A. Rotaru**, *Insights into the optical, magnetic and dielectric properties of some novel polysulfone/NiFe₂O₄ composite materials*, **Polymer International**, 67 (2018) 1313-1324 (Q2)
- [65] T. Costanzo, J. McCracken, **A. Rotaru** and G. Caruntu, *Quasi-Monodisperse Transition Metal-Doped BaTiO₃ (M=Cr, Mn, Fe, Co) Colloidal Nanocrystals with Multiferroic Properties*, **ACS Applied Nano Materials**, 1 (2018) 4863-4874 (Q2)
- [64] H. Benaissa, **A. Rotaru**, Y. Garcia *Spin crossover in 1D Fe(II) polymers with 1,2,4-triazole thiourea building blocks*, **Hyperfine Interactions**, 2018, 239:37
- [63] A. B. Gaspar, G. Molnár, **A. Rotaru**, H. J. Shepherd, *Pressure effect investigations on spin crossover coordination compounds*, **Comptes Rendus Chimie**, 21 (2018) 1095-1120 (Q3)
- [62] S. Xue, Y. Guo, **A. Rotaru**, H. Müller-Bunz, G. Morgan, E. Trzop, E. Collet, J. Olah, Y. Garcia, *Spin crossover behaviour in a homologous series of iron(II) complexes based on functionalized-bipyridyl ligands*, **Inorganic Chemistry**, 57 (2018), 9880-9891 (Q1)
- [61] N. Fifere, A. Airinei, D. Timpu, **A. Rotaru**, L. Sacarescu, L. Ursu, *New insights into structural and magnetic properties of Ce doped ZnO nanoparticles*, **Journal of Alloys and Compounds**, 757 (2018) 60-69 (Q1)
- [60] P. Pascariu Dorneanu, C. Cojocaru, P. Samoila, N. Olaru, A. Airinei, **A. Rotaru**, *Novel fibrous composites based on electrospun PSF and PVDF ultrathin fibers reinforced with inorganic nanoparticles: Evaluation as oil spill sorbents*, **Polymers for Advanced Technologies**, 29 (2018) 1435-1446 (Q2)
- [59] V. Shalabaeva, K. Ridier, S. Rat, M. D Manrique-Juarez, L. Salmon, I. Séguy, **A. Rotaru**, G. Molnár, A. Bousseksou, *Room temperature current modulation in large area electronic junctions of spin crossover thin films*, **Appl. Phys. Lett.**, 112 (2018) 013301 (Q1)

2017

- [58] N. N. Adarsh, Marinela M. Dîrtu, **A. Rotaru**, Y. Garcia, *⁵⁷Fe Mossbauer spectroscopy study of a 2D spin transition coordination polymer built from a tris-1R-tetrazole ligand*, **Hyperfine Interact.**, 238 (2017) 60
- [57] A. Diaconu, S.-L. Lupu, I. Rusu, I.-M. Risca, L. Salmon, G. Molnár, A. Bousseksou, P. Demon, and **A. Rotaru**, *Piezoresistive Effect in the [Fe(Htrz)₂(trz)](BF₄) Spin Crossover Complex*, **J. Phys. Chem. Lett.**, 8 (2017) 3147-3151 (Q1)
- [56] C. Cojocaru, P. P. Dorneanu, A. Airinei, N. Olaru, P. Samoila, **A. Rotaru**, *Design and evaluation of electrospun polysulfone fibers and polysulfone/NiFe₂O₄ nanostructured*

composite as sorbents for oil spill cleanup, *Journal of the Taiwan Institute of Chemical Engineers*, **70** (2017) 267-281 (Q1)

- [55] P Samoila, C. Cojocaru, L. Sacarescu, P. Pascariu Dorneanu, A.-A. Domocos, **A. Rotaru**, "Remarkable catalytic properties of rare-earth doped nickel ferrites synthesized by sol-gel auto-combustion with maleic acid as fuel for CWPO of dyes", *Applied Catalysis B: Environmental*, **202** (2017) 21-32 (Q1)

2016

- [54] C. Lefter, S. Rat, J. Sánchez Costa, M. D. Manrique-Juárez, C. M. Quintero, L. Salmon, I. Séguy, T. Leichle, L. Nicu, P. Demont, **A. Rotaru**, G. Molnár and A. Bousseksou, "Current Switching Coupled to Molecular Spin-States in Large-Area Junctions", *Advanced Materials*, **28** (2016), 7508–7514 (Q1)
- [53] T. Zhao, I. Boldog, V. Spasojevic, **A. Rotaru**, Y. Garcia, C. Janiak, "Solvent-triggered relaxative spin state switching of [Fe (HB (pz) 3) 2] in closed nano-confinement of NH₂-MIL-101 (Al)", *Journal of Materials Chemistry C*, 2016, **4**, 6588-6601. (Q1)
- [52] M.M. Dirtu, A.D. Naik, **A. Rotaru**, L. Spinu, D. Poelman, Y. Garcia, "Fe-II Spin Transition Materials Including an Amino-Ester 1,2,4-Triazole Derivative. Operating at, below, and above Room Temperature", *Inorganic Chemistry*, **55** (2016) 4278-4295 (Q1)
- [51] C. Lefter, V. Davesne, L. Salmon, G. Molnár, P. Demont, **A. Rotaru**, A. Bousseksou, "Charge Transport and Electrical Properties of Spin Crossover Materials: Towards Nanoelectronic and Spintronic Devices", *Magnetochemistry*, **2** (2016), 18 (Review) (Q2)
- [50] C Jureschi, J Linares, **A Rotaru**, Y Garcia, „Multi-Step in 3D Spin Crossover Nanoparticles Simulated by an Ising Model Using Entropic Sampling Monte Carlo Technique", *Magnetochemistry* **2** (2016) 13 (Q2)
- [49] D. A. Safin, K. Robeyns, M. G. Babashkina, Y. Filinchuk, **A. Rotaru**, C. Jureschi, M. P. Mitoraj, J. Hooper, M. Brela and Y. Garcia, „Polymorphism driven optical properties of an anil dye", *CrystEngComm*, **18** (2016) 7249 (Q1)
- [48] CM Jureschi, J Linares, A Boulmaali, PR Dahoo, **A Rotaru**, Y Garcia, „Pressure and Temperature Sensors Using Two Spin Crossover Materials", *Sensors* **16** (2), **187** (Q2)
- [47] C Lefter, R. Tan, J. Dugay, S. Tricard, G. Molnár, L. Salmon, J. Carrey, W. Nicolazzi, **A. Rotaru**, A. Bousseksou, "Unidirectional electric field-induced spin-state switching in spin crossover based microelectronic devices", *Chemical Physics Letters*, **644** (2016) 138-141. – Editor's Choice (Q3)
- [46] C-M Jureschi, B.-L. Pottier, J. Linares, P.-R. Dahoo, Y. Alayli, and **A. Rotaru**, "Simulation of multi-steps thermal transition in 2D spin-crossover nanoparticles", *Physica B*, **486** (2016) 160–163 (Q3)

2015

- [45] C. Lefter, R. Tan, S. Tricard, J. Dugay, G. Molnár, L. Salmon, J. Carrey, **A. Rotaru**, A. Bousseksou, "On the stability of spin crossover materials: from bulk samples to electronic devices", *Polyhedron*, **102** (2015) 434–440 (Q2)
- [44] D. Chiruta, C-M. Jureschi, J. Linares, P-R Dahoo, Y. Garcia, **A. Rotaru**, "On the Origin of Multi-Step Spin Transition behaviour in 1D nanoparticles", *Eur. Phys. J. B*, **88**: **233** (2015) 1-5 (Q2)

- [43] D. Chiruta, C.-M. Jureschi, J. Linares, J. Nasser, **A. Rotaru** “Analysis of spin crossover nanochains using parabolic approximation in the framework of Atom-phonon coupling model”, *Physica B*, **476** (2015) 5151-5154. (Q3)
- [42] C. Lefter, S. Tricard, H. Peng, G. Molnár, L. Salmon, P. Demont, **A. Rotaru**, A. Bousseksou, “Metal substitution effects on the charge transport and spin transition properties of $[Fe_{1-x}Zn_x(Htrz)_2(trz)](BF_4)$ ($x=0, 0.26, 0.43$)”, *Journal of Physical Chemistry C*, **119** (2015) 8522-8529. (Q1)
- [41] T. Zhao, L. Cuignet, M. M. Dirtu, M. Wolff, V. Spasojevic, I. Boldog, **A. Rotaru**, Y. Garcia and C. Janiak, “Water effect on the spin-transition behavior of Fe(II) 1,2,4-triazole 1D chains embedded in pores of MCM-41”, *J. Mater. Chem. C*, **3** (2015) 7802-7812. (Q1)
- [40] M. M. Dirtu, F. Schmit, A. D. Naik, I. Rusu, **A. Rotaru**, S. Rackwitz, J. A. Wolny, V. Schunemann, L. Spinu, and Yann Garcia, “Two-Step Spin Transition in a 1D FeII 1,2,4-Triazole Chain Compound”, *Chem. Eur. J.*, **21** (2015) 5843–5855 (Q1)
- [39] C. Lefter, R. Tan, J. Dugay, S. Tricard, G. Molnár, L. Salmon, J. Carrey, **A. Rotaru**, A. Bousseksou, “Light induced modulation of charge transport phenomena across the bistability region in $[Fe(Htrz)_2(trz)](BF_4)$ spin crossover micro-rods”, *Phys. Chem. Chem. Phys.*, **17** (2015) 5151-5154 (Q1)
- [38] C.-M. Jureschi, J. Linares, **A. Rotaru**, M.-H. Ritti, M. Parlier, M.-M. Dirtu, M. Wolff and Y. Garcia, “Pressure Sensor via Optical Detection Based on a 1D Spin Transition Coordination Polymer”, *Sensors*, **15** (2015) 2388-2398 (Q2)

2014

- [37] D. Chiruta, C.-M. Jureschi, J. Linares, A. Graur, M. Dimian, and **A. Rotaru*** – “Analysis of architecture effect on hysteretic behavior of 3D Spin Crossover Nanostructures”, *IEEE Transactions on Magnetics*, **50** (2014) 2900404 (Q3)
- [36] C.-M. Jureschi, I. Rusu, E. Codjovi, J. Linares, Y. Garcia and **A. Rotaru**, “Thermo- and piezochromic properties of $[Fe(hyprtz)]A_2 \cdot H_2O$ spin crossover 1D coordination polymer: towards spin crossover based temperature and pressure sensors”, *Physica B*, **449**, 47-51 (2014). (Q3)
- [35] A. Railliet, A. Naik, **A. Rotaru** and Y. Garcia, “Mossbauer spectroscopy monitoring the spin transition of a Fe(II) 1D chain with a fluorinated 4-R-1,2,4-triazole”, *Hyperfine Interactions*, 226 (1-3), 223-227 (2014).
- [34] A. D. Naik, K. Robeyns, C. F. Meunier, A. F. Leonard, **A. Rotaru**, B. Tinant, Y. Filinchuk, B. Lian Su, and Y. Garcia, “Selective and Reusable Iron(II)-Based Molecular Sensor for the Vapor-Phase Detection of Alcohols”, *Inorg. Chem.*, **53** (3) (2014) 1263-1265 (Q1)
- [33] C. Lefter, I. A. Gural'skiy, H. Peng, G. Molnar, L. Salmon, **A. Rotaru**, A. Bousseksou, P. Demont, “Dielectric and charge transport properties of the spin crossover complex $[Fe(Htrz)_2(trz)](BF_4)$ ”, *Physica Status Solidi – RRL*, **8** (2014) 191-193 (Q1)
- [32] D. Chiruta, C.-M. Jureschi, J. Linares, Y. Garcia and **A. Rotaru***, “Lattice architecture effect on the cooperativity of spin transition coordination polymers”, *J. Appl. Phys.*, **115** (2014) 053523 (Q2)
- [31] I. Rusu, S.-G. Pentiu, C. Turcu, **A. Rotaru**, “A performance analysis of parallel eigensolvers for large dense symmetric matrices”, *18th International Conference on System Theory, Control and Computing (ICSTCC)*, (2014) 633-638

2013

- [30] A. Rotaru, J. Dugay, R. P. Tan, I. A. Gural'skiy, G. Molnar, L. Salmon, P. Demont, J. Carrey, M. Respaud, A. Bousseksou, "Nano-Electro-Manipulation of Spin Crossover Nanorods: Towards Switchable Nanoelectronic Devices", *Adv. Mater.*, **25** (2013) 1745-1749 (Q1)
- [29] A. P. Railliet, A. D. Naik, P. Castanho-Vaz, A. Rotaru, M. Grigoras, N. Lupu, J. Marchand-Brynaert, Y. Garcia, "Spin state tuning in FeII 1D coordination polymers made of 1,2,4-triazol-4-yl-propanoic and butanoic acids", *Hyperfine Interactions*, **217** (2013) 67-72

2012

- [28] A. Rotaru, I. A. Gural'skiy, G. Molnár, L. Salmon, P. Demont, A. Bousseksou, "Spin State Dependence of Electrical Conductivity in Spin Crossover Materials", *Chem. Commun.*, **48** (2012) 4163-4165 (Q1)
- [27] A. Rotaru, A. Graur, G.-M. Rotaru, J. Linares, Y. Garcia, "Influence of Intermolecular Interactions and Size Effect on LITH-FORC Diagram in 1D Spin Crossover Compounds", *J. Opt. Adv. Mater.*, **14** (2012) 529 (Q4)
- [26] M. M. Dîrtu, D. Gillard, A. D. Naik, A. Rotaru, Y. Garcia, "Weak cooperativity in selected iron(II) 1D coordination polymers", *Hyperfine Interactions*, **205** (2012) 75-79
- [25] M. M. Dîrtu, F. Schmit, A. D. Naik, A. Rotaru, J. Marchand-Brynaert, Y. Garcia, "Impact of ligand spacer and counter-anion in selected 1D iron(II) spin crossover coordination polymers", *Hyperfine Interactions*, **205** (2012) 69-73
- [24] A. P. Railliet, A. D. Naik, A. Rotaru, J. Marchand-Brynaert, Y. Garcia, "1D iron(II) spin crossover complexes with 1,2,4-triazol-4-yl-propanoic acid", *Hyperfine Interactions*, **205** (2012) 51-55

2011

- [23] A. Rotaru, F. Varret, A. Gindulescu, J. Linares, A. Stancu, J.-F. Létard, T. Forestier, C. Etrillard, "Size effect in spin-crossover systems investigated by FORC measurements, for surfacted $[Fe(NH_2-trz)_3](Br)_2 \cdot 3H_2O$ nanoparticles: reversible contributions and critical size", *Eur. Phys. J. B*, **84** (2011) 439-449 (Q2)
- [22] A. Gîndulescu, A. Rotaru, J. Linares, M. Dimian, J. Nasser, "Metastable states at low temperatures in spin crossover compounds in the framework of the atom-phonon coupling model", *Polyhedron* **30** (2011) 3186-3188 (Q2)
- [21] A. Rotaru, J.-H. Lim, D. Lenormand, A. Diaconu, J.B. Wiley, P. Postolache, A. Stancu, and L. Spinu, "Interactions and Reversal-Field Memory in Complex Magnetic Nanowire Arrays", *Phys. Rev. B*, **84** (2011) 134431 (Q1)
- [20] H. Djieutedjeu, P.A.J. Makongo, A. Rotaru, A. Palasyuk, N.J. Takas, X. Zhou, K. G. Ranmohotti, L. Spinu, C. Uher, P.F.P. Poudeu, "Crystal Structure, Charge Transport, and Magnetic Properties of $MnSb_2Se_4$ ", *Eur. J. Inorg. Chem.*, **2011** (2011) 3969 (Q2)

- [19] C. Chong, M. Itoi, K. Boukheddaden, E. Codjovi, **A. Rotaru**, F. Varret, F. A. Frye, D. R. Talham, I. Maurin, D. Chernyshov, M. Castro, “Metastable state of the photomagnetic Prussian blue analog $K_{0.3}Co[Fe(CN)_6]_{0.77} \cdot 4.4H_2O$ investigated by various physical techniques”, *Phys. Rev. B*, **84** (2011) 144102 (Q1)
- [18] M. Dirtu, F. Schmit, A. Naik, **A. Rotaru**, J. Marchand, Y. Garcia, “Spin transition sensors based on a beta-aminoacid 1,2,4-triazole derivative”, *Int. J Mol. Sci.*, **12** (2011) 5339-5351 (Q1)
- [17] B. Weber, W. Bauer, T. Pfaffeneder, M.M. Dîrtu, A.D. Naik, **A. Rotaru**, Y. Garcia, „About the Influence of Hydrogen Bonding on the Hysteresis Width in Iron(II) Spin Crossover Complexes”, *Eur. J. Inorg. Chem.*, **2011** (2011) 3193–3206 (Q2)
- [16] A. Gîndulescu, **A. Rotaru**, J. Linares, M. Dimian, and J. Nasser, “Analysis of phase transitions in spin-crossover compounds by using “atom – phonon coupling” model”, *J. Phys.: Conference Series*, **268** (2011) 012007
- [15] **A. Rotaru**, J. Linares, F. Varret, E. Codjovi, A. Slimani, R. Tanasa, C. Enachescu, A. Stancu, J. Haasnoot, “Pressure effect investigated with FORC diagram method on the spin transition compounds $[Fe_xZn_{1-x}(btr)_2(NCS)_2] \cdot H_2O$, ($x = 1, 0.6$)”, *Phys. Rev. B*, **83** (2011) 224107 (Q1)
- [14] J. Hu, T.J. Liu, B. Qian, **A. Rotaru**, L. Spinu, and Z.Q. Mao, “Calorimetric Evidence of Strong-Coupling Multiband Superconductivity in $Fe(Te_{0.57}Se_{0.43})$ Single Crystal”, *Phys. Rev. B*, **83** (2011) 134521 (Q1)

2010

- [13] H. Djieutedjeu, P. F. P. Poudeu, N. Takas, P. A. J. Makongo, **A. Rotaru**, K. G. Ranmohotti, C. Anglin; L. Spinu; J. Wiley, “Structural Distortions Driven Cooperative Magnetic and Semiconductor-to-Insulator Transitions in Ferromagnetic $FeSb_2Se_4$ ”, *Angew. Chem-Int. Edit.*, **49** (2010) 9977 (Q1)
- [12] J.-H. Lim, **A. Rotaru**, S.-G. Min, L. Malkinski, and J. B. Wiley, “Synthesis of Mild-Hard AAO Templates for Studying of Magnetic Interactions between Metal Nanowires”, *J Mater. Chem.*, **20** (2010) 9246-9252. (Q1)
- [11] T.J. Liu, J. Hu, B. Qian, D. Fobes, Z.Q. Mao, W. Bao, M. Reehuis, S.A.J. Kimber, K. Prokes, S. Matas, D.N. Argyriou, A. Hiess, **A. Rotaru**, H. Pham, L. Spinu, Y. Qiu, V. Thampy, A.T. Savici, J. A. Rodriguez, and C. Broholm, “From $(\pi, 0)$ magnetic order to superconductivity with (π, π) magnetic resonance in $Fe_{1.02}(Te_{1-x}Se_x)$ ”, *Nature Materials*, **9** (2010) 716-720. (Q1)
- [10] M.M. Dîrtu, C. Neuhausen, A.D. Naik, **A. Rotaru**, L. Spinu, Y. Garcia, “Insights to the origin of the cooperative effects in the spin transition of $[Fe(NH_2trz)_3](NO_3)_2$: the role of intramolecular interactions”, *Inorg. Chem.* **49** (2010) 5723–5736 (Q1)
- [9] A. Gîndulescu, **A. Rotaru**, J. Linares, M. Dimian, J. Nasser, “Excited metastables electronic spin states in spin crossover compounds studies by atom-phonon coupling model: gradual and two-step transition cases”, *J. Appl. Phys.*, **107** (2010) 09A959 (Q1)

2009

- [8] **A. Rotaru**, F. Varret, E. Codjovi, J. Linares, J. Nasser, A. Stancu, P. Guionneau, J.F. Létard, “Hydrostatic Pressure Investigation of the Spin Crossover Compound $[Fe(PM-$

- BiA*)₂(NCS)₂] Polymorph I Using Reflectance Detection”, *J. Appl. Phys.*, **106** (2009) 053515 (Q1)
- [7] **A. Rotaru**, J. Linares, S. Mordelet, A. Stancu, J. Nasser, “Re-entrance Phase and Excited Metastable Electronic Spin States in Spin Crossover compounds Explained by Atom-Phonon Coupling Model”, *J. Appl. Phys.*, **106** (2009) 043507 (Q1)
- [6] M.M. Dîrtu, **A. Rotaru**, D. Gillard, J. Linares, E. Codjovi, B. Tinant, Y. Garcia, Prediction of the Spin Transition Temperature in Fe(II) 1D Coordination Polymers: an anion based database”, *Inorg. Chem.*, **48** (2009) 7838–7852 (Q1)
- [5] **A. Rotaru**, M.M. Dîrtu, C. Enachescu, R. Tanasa, J. Linares, A. Stancu, Y. Garcia, Calorimetric measurements of diluted spin crossover complexes $[Fe_xM_{1-x}(btr)_2(NCS)_2] \cdot H_2O$ with $M^{II} = Zn$ and Ni , *Polyhedron*, **28/13** (2009) 2531-2536 (Q2)
- [4] **A. Rotaru**, A. Carmona, F. Combaud, J. Linares, A. Stancu, J. Nasser, “Monte Carlo simulations for 1- and 2D spin crossover compounds using the atom-phonon coupling model”, *Polyhedron*, **28** (2009) 1684 (Q2)
-

2008

- [3] **A. Rotaru**, E.Codjovi, J. Linares, J. Nasser, A. Stancu, “Size and pressure effect in the atom-phonon coupling model for spin crossover compounds”, *J. Appl. Phys.*, **103** (2008) 07B908 (Q1)
-

2007

- [2] **A. Rotaru**, J. Linares, “Atom-phonon coupling model for spin crossover compounds: Relaxation and Light Induced Thermal Hysteresis (LITH) simulations”, *J. Opt. Adv. Mater.*, **9** (2007) 2724 – 2730 (Q4)
- [1] M. M. Dîrtu, Y. Garcia, M. Nica, **A. Rotaru**, J. Linares, F. Varret, “Iron(II) spin transition 1,2,4-triazole chain compounds with novel inorganic fluorinated counteranions”, *Polyhedron*, **26** (2007) 2259–2263 (Q2)
-

01.01.2024

Aurelian ROTARU

