

CURRICULUM VITAE



DATE PERSONALE

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| Nume | Aurelian ROTARU |
| Adresă | 13, Str. Universitatii, 720229 Suceava, Romania |
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| Naționalitatea | Română |
| Data și locul nașterii | 17.06.1982 |
| Starea civilă | Căsătorit |

STUDII UNIVERSITARE

| | |
|--------------------------------------|---|
| • Perioada | 2000-2004 |
| • Instituția de învățământ | Facultatea de Fizică, Universitatea "Alexandru Ioan Cuza", Iași |
| • Specializarea | Fizică Medicală |
| • Titlul obținut la absolvire | Licențiat în Fizică medicală |

MASTERAT

| | |
|--|--|
| • Perioada | 2004-2006 |
| • Instituția de învățământ | Facultatea de Fizică, Universitatea "Alexandru Ioan Cuza", Iași |
| • Domeniul | Fizica corpului solid |
| • Denumirea programului de studiu | Proprietăți electrice și magnetice ale particulelor fine și ultra fine |

DOCTORAT

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|---|---|
| • Instituția de învățământ coordonatoare | Universitatea "Alexandru Ioan Cuza", Iași |
| • Domeniul de doctorat | Magnetism molecular |
| • Titlul tezei de doctorat | Studiul teoretic și experimental al efectului presiunii asupra compușilor bistabili: comportament termic și studiul relaxării |
| • Anul susținerii tezei | 2009 |
| • Titlul obținut la absolvire | Doctor în Fizică |

ALTE STUDII / STAGII DE PREGĂTIRE

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|--|--|
| • Perioada | 2009-2010 |
| • Instituția | Advanced Materials Research Institute, New Orleans, Louisiana, USA |
| • Denumirea programului de studii | Studii postdoctorale |

ACTIVITATEA PROFESIONALĂ

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|---------------------------------|---|
| • Perioada | 2007-2008 |
| • Locul de muncă | Universitatea din Versailles și Saint Quentin en Yvelines, Versailles, Franța |
| • Domeniul de activitate | Educație și cercetare |
| • Funcția | Cadru didactic asociat (Vacataire) |

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| • Principalele activități și responsabilități | Activități didactice și de cercetare |
| • Domenii de competență | Fizică computațională |

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|--|---|
| • Perioada | 2008-2009 |
| • Locul de muncă | Universitatea din Versailles și Saint Quentin en Yvelines, Versailles, Franța |
| • Domeniul de activitate | Educație și cercetare |
| • Funcția | Cadru didactic asociat (ATER) |
| • Principalele activități și responsabilități | Activități didactice și de cercetare |
| • Domenii de competență | Fizică computațională, Magnetostatică și Electrostatică |

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|--|--|
| • Perioada | 2011-2015 |
| • Locul de muncă | Laboratorul de Materiale Avansate și Nanotehnologii (AMNOL), Universitatea „Ștefan cel Mare” din Suceava |
| • Domeniul de activitate | Cercetare |
| • Funcția | Responsabil Laborator |
| • Principalele activități și responsabilități | Activități de cercetare |
| • Domenii de competență | Nanoelectronică, Nanotehnologii, Materiale avansate multifuncționale. |

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|--|--|
| • Perioada | 2015-prezent |
| • Locul de muncă | Laboratorul de Materiale Avansate Multifuncționale (NANOMAT), Centrul de Cercetare MANSiD, Universitatea „Ștefan cel Mare” din Suceava |
| • Domeniul de activitate | Cercetare |
| • Funcția | Responsabil Laborator |
| • Principalele activități și responsabilități | Activități de cercetare |
| • Domenii de competență | Nanoelectronică, Nanotehnologii, Materiale avansate multifuncționale. |

ACTIVITATEA DIDACTICĂ ÎN ÎNVĂȚĂMÂNTUL SUPERIOR

| | | |
|--|--|---------------------|
| • Perioada | 2010 – 2011 | |
| • Locul de muncă | Facultatea de Inginerie Electrică și Știința Calculatoarelor, Universitatea “Ștefan cel Mare”, Suceava | |
| • Gradul didactic | Lector universitar | |
| • Principalele activități și responsabilități | • cursuri susținute: | Fizică I, Fizică II |
| | • seminarii și laboratoare: | Fizică I, Fizică II |

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|--|--|---|
| • Perioada | Octombrie 2011 – prezent | |
| • Locul de muncă | Facultatea de Inginerie Electrică și Știința Calculatoarelor, Universitatea “Ștefan cel Mare”, Suceava | |
| • Gradul didactic | Conferențiar universitar | |
| • Principalele activități și responsabilități | • cursuri susținute: | Fizică I, Fizică II, Introducere în Nanoelectronică |
| | • seminarii și laboratoare: | Fizică I, Fizică II, Introducere în Nanoelectronică |

ACTIVITATEA ȘTIINȚIFICĂ

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|------------------------------|-------------|
| PUBLICAȚII | Vezi anexe. |
| PROIECTE DE CERCETARE | Vezi anexe. |

PARTICIPĂRI LA CONFERINȚE NAȚIONALE ȘI INTERNAȚIONALE REPREZENTATIVE

Vezi anexe.

LIMBI STRĂINE

1. Franceză
2. Engleză

| Înțelegere | | | | Vorbire | | | | Scriere | |
|------------|----|--------|----|-------------|----|--------------|----|---------|----|
| Ascultare | | Citire | | Conversație | | Discurs oral | | | |
| 1 | C2 | 1 | C2 | | C1 | | C1 | | C1 |
| 2 | C1 | 2 | C1 | | C1 | | C1 | | C1 |

ANEXE

I. Vizite/Stagii de cercetare

2020 - Cercetător invitat la UkrOrgSyntez Ltd. , Kiev, Ukraine (**2 luni**)

2019 – Cercetător invitat la Coordination Chemistry Laboratory (LCC), Toulouse, France (**2 săptămâni**)

2019 - Cercetător invitat la UkrOrgSyntez Ltd. , Kiev, Ukraine (**2 luni**)

2018 - Cercetător invitat la UkrOrgSyntez Ltd. , Kiev, Ukraine (**2 luni**)

2017 - Cercetător invitat la UkrOrgSyntez Ltd., Kiev, Ukraine (**2 luni**)

2016 - Cercetător invitat la Coordination Chemistry Laboratory (LCC), Toulouse, France (**1 luna**)

2015 - Cercetător invitat la Institute of Condensed Matter and Nanosciences (IMCN), UCL, Louvain la Neuve, Belgium (**1 săptămâna**)

2015 – Cercetător invitat la Coordination Chemistry Laboratory (LCC), Toulouse, France (**1 săptămâna**)

2014 - Cercetător invitat la Institute of Condensed Matter and Nanosciences (IMCN), UCL, Louvain la Neuve, Belgium (**2 săptămâni**)

2013 – Cercetător invitat la Institute of Condensed Matter and Nanosciences (IMCN), UCL, Louvain la Neuve, Belgium (**2 săptămâni**)

2012 – Cercetător invitat la Coordination Chemistry Laboratory (LCC), Toulouse, France (**1.5 luni**)

2012 – Cercetător invitat la at Institute of Condensed Matter and Nanosciences (IMCN), UCL, Louvain la Neuve, Belgium (**2 săptămâni**)

2011 – Cercetător invitat la Institute of Condensed Matter and Nanosciences (IMCN), UCL, Louvain la Neuve, Belgium (**1 săptămâna**)

II. PROIECTE DE CERCETARE

- Grant PN-III-P1-1.1-TE-2019-2194 (*Proiecte de cercetare pentru stimularea tinerelor echipe independente - TE*) – „Dispozitive nanoelectronice inteligente pe bază de materiale moleculare comutabile – SmartDevice”. (2020 - 2022), Contract Nr. Te 123 / 2020. (**Coordinator: Aurelian Rotaru**)
- Grant PN-III-P4-ID-PCCF-2016-0175 – „High-k Nanoparticle Multilayer Dielectrics for Nanoelectronics and Energy Storage Applications – HIGHkDEVICE”, Nr. Contract: 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.

- H2020-MSCA-RISE-2016, Project No. 734322 - “Multifunctional Spin Crossover Materials –SPINSWITCH”, 2017-2020, **954.000,00 € (Coordinator: Aurelian Rotaru)**
- 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)
- 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)**)
- 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.**)
- Bilateral Grant Romania-France (UEFISCDI-ANR) – „Switchable molecules for nanoelectronics and spintronics – SwitchElec” – (2013-2016) (**PI: Aurelian Rotaru (Rou) and Azzedine Bousseksou (Fr).**)
- Bilateral Grant Romania-Belgium (UEFISCDI-WBI) –, „Thermal- and piezo-switchable molecular sensors based on alpha and beta-amino acids”(2012-2014) (**PI: Aurelian Rotaru (Rou) and Yann Garcia (Be)**)
- 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**)
- Grant BD – CNCSIS (Doctoral grant), (2007-2009) - (**PI: Aurelian Rotaru**).

III. Publicații:

Capitole de carte:

- [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

Articole ISI:

Number of peer-reviewed papers: 83

Number of citations (without self-citations): > 2000

h-index: 24 (conform WoK și Scopus) și 29 (conform Google Scholar)

2021

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- [83] I. Rusu, I. C. Manolache-Rusu, A. Diaconu, O. Palamarciuc, I. A. Gural'skiy^{4,5}, 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

2020

- [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.*, **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*, **b 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}(NH₂trz)_x](BF₄)_y•nH₂O*, *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 (Q1)
- [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)

2019

- [71] 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.* 2019 (in press) <https://www.sciencedirect.com/science/article/pii/S0955221919308404> (Q1)
- [70] 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)

- [69] 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)
- [68] 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.
- [67] 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.Comm.**, **55** (2019) 3359-3362 (Q1)
- [66] 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

- [65] 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)
- [64] 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
- [63] 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
- [62] 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)
- [61] 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)
- [60] 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)
- [59] 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)
- [58] 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

- [57] 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.**, (2017) in press, DOI 10.1007/s10751-017-1431-9
- [56] 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)

- [55] 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)
- [54] 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

- [53] 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)
- [52] 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 nanoconfinement of NH₂-MIL-101 (Al)”, **Journal of Materials Chemistry C**, 2016, **4**, 6588-6601. (Q1)
- [51] 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)
- [50] 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)
- [49] 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
- [48] 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)
- [47] 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)
- [46] 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)
- [45] 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

- [44] 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)
- [43] 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)

- [42] 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)
- [41] 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)
- [40] 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)
- [39] M. M. Dîrtu, 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)
- [38] 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)
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IV. Participare la conferințe:

Am participat cu peste 120 de lucrări la conferințe naționale și internaționale din care: peste 50 de prezentări orale (din care 10 invited lectures) și peste 70 de prezentări sub formă de poster.

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Semnătura