

Curriculum vitae

Personal Information



Name **Alex-Adrian Farcaș**

Adress Donat 67-103, Cluj-Napoca

Contact Tel.: (+40) 264-58 40 37

Email:

farcasa@itim-cj.ro

Personal information Nationality: Romanian

Education

Diploma **PhD Faculty of Physics** (Present)

Jul. 2017 – Present “Babeș –Bolyai” University, Cluj-Napoca, România

Diploma **Master degree in Computational Physics** (Jul. 2017)

Oct. 2015 – Jun. 2017 “Babeș –Bolyai” University, Cluj-Napoca, România

Diploma **Engineer’s degree Faculty of Physics** (Jul. 2015)

Oct. 2011 – Jul. 2015 “Babeș –Bolyai” University, Cluj-Napoca, România

Profesional experience

Dec. 2017 - Present **Research Assistent** (National Institute for Research and Development of Isotopic and Molecular Technology, Cluj-Napoca, România)

Department

Design of some spin-crossover supramolecular structures controlled by ultrashort laser pulses (Project Registration code: PN-III-P4-ID-PCE-2016-0208)

Nov. 2013 – Jan. 2016 **Research Assistent** (“Babeș –Bolyai” University, Faculty of Physics, Cluj-Napoca, România)

Department

The research project is directed on the study of novel types of magnetic tunnelling junctions (Project Registration Code: PN-II-ID-PCE-2012-4-0028)

Jul. 2013 – Aug. 2013 **Research Assistent** (Joint Institute for Nuclear Research, Dubna, Moscow, Russia)

Department

Computational Physics

Abilities

Research abilities - *Quantum Chemistry* (Gaussian, Quevo, NWChem, Molpro)

- *Data Analysis* (Gnuplot, Mathematica, Matlab)

Computational abilities - *Programming*: C, C++, parallel programming (MPI), Python, Java, Fortran

- *Editing/Presenting*: MSOffice, LaTeX, Adobe Acrobat

- *OS's*: Windows (XP, 7, 8, 10), Linux (Ubuntu)

Languages Romanian (native), English (fluent), French (fluent), Spanish (fluent)

Comunication	- Good ability to communicate effectively with superiors, colleagues, and staff
Scientific results	

Project related publications:

- 1 A.-A. Farcaş, T. A. Beu and A. Bende: "*The influence of the metal-to-ligand charge transfer on the strength of the spin-orbit coupling in Ni(II)-based metal-ligand complexes*", International Journal of Quantum Chemistry, (2019) - to be submitted.
- 2 A.-A. Farcaş and A. Bende: "*DFT study of adiabatic singlet-triplet energy gaps in Ni(II)-based macrocyclic-ligand supramolecular complexes.*", AIP Conference Proceedings, **2206**, 030001 (2020).
- 3 A.-A. Farcaş and A. Bende: "*Improving the Light-Induced Spin Transition Efficiency in Ni(II)-Based Macrocyclic-Ligand Complexes.*", **Molecules**, **24**(23), 4249 (2019).
- 4 A.-A. Farcaş, T. A. Beu and A. Bende: "*Mapping the light-induced intersystem crossings in Ni(II)-based macrocyclic-ligand complexes: A DFT study.*", **Journal of Photochemistry and Photobiology A: Chemistry**, **376**, 316–323 (2019).

Conference participation:

- 1 International Conference on "Processes in Isotopes and Molecules" (PIM 2019); 25 – 27 September **2019** in Cluj Napoca, Romania; **Oral presentation:** A. Bende and A.-A. Farcaş: "*Structural stability of Ni (II)-based macrocyclic-ligand complexes with square-pyramidal and octahedral coordination configuration.*"
- 2 17th Central European Symposium on Theoretical Chemistry (CESTC 2019); 9 – 12 September **2019** in Burg Schlaining, Austria; **Poster presentation:** A.-A. Farcaş, T. A. Beu and A. Bende: "*The influence of the metal-ligand charge transfer effects on the structural stability and the strength of the spin-orbit coupling in Ni(II)-based metal-ligand complexes.*"
- 3 18th International Conference on Density-Functional Theory and its Application (DFT 2019); 22 – 26 July **2019** in Alicante, Spain; **Poster presentation:** A.-A. Farcaş, T. A. Beu and A. Bende: "*Light induced singlet-triplet transition in Ni(II)-based macrocyclic-ligand complexes.*"
- 4 10th Triennial Congress of the International Society for Theoretical Chemical Physics (ISTCP 2019); 11 – 17 July **2019** in Tromsø, Norway; **Poster presentation:** A.-A. Farcaş, T. A. Beu and A. Bende: "*The influence of the metal-ligand charge transfer effects on the structural stability and the strength of the spin-orbit coupling in Ni(II)-based metal-ligand complexes.*"
- 5 9th Conference on Molecular Modeling in Chemistry and Biochemistry (MOLMOD2018); 28 – 30 October **2018** in Cluj Napoca, Romania; **Poster presentation:** A.-A. Farcaş and A. Bende: "*Intersystem crossing in metalligand coordination complexes with pyramidal-planar and octahedral coordination configurations*"
- 6 12th Joint Conference on Mathematics and Computer Science (MaCS 2018); 14 – 17 June **2018** in Cluj-Napoca, Romania; **Oral presentation:** A.-A. Farcaş and A. Bende: "*Modeling laser-induced spin crossover transitions using time-dependent density functional theory.*"

- 7 Central European Conference on Photochemistry (CECP 2018); 4 – 8 February **2018** in Bad Hofgastein, Austria; **Poster presentation:** A.-A. Farcaş and A. Bende: "*Structural stability and laser induced singlet-triplet transition in Ni(II) macrocyclic ligand complex: A TD-DFT study.*"

Workshops:

1. A.-A. Farcaş: ZCAM School on New Computational Methods for Attosecond Molecular Processes, 21 – 25 May **2018** in Zaragoza, Spain;