

Curriculum Vitae

PERSONAL DATA

Name

STOICA ALEXANDRU-CONSTANTIN

Address

Jud. Botoșani

E-mail

stoica.alexandru@icmpp.ro

Nationality

Romanian

Sex

Male

Marital status

Married

EDUCATION AND TRAINING

Period

01.11.2020-12.12.2023

Name of the education or training organization

"School of Advanced Studies of the Romanian Academy" (SCOSAAR) - Institute of Macromolecular Chemistry "Petru Poni", Iasi

The title of the PhD thesis

Coordination Compounds of Different Dimensions with Ligands Containing Siloxane Spacers

Thesis field

Chemistry

Period

01.10.2018-01.07.2020

Qualification obtained

Master's Degree, Major in Chemistry of Cosmetic and Pharmaceutical Products

Name of the education or training organization

"Alexandru Ioan Cuza" University in Iași, Faculty of Chemistry

Period

01.10.2015-01.07.2018

Qualification obtained

Bachelor's Degree, Major in Technological Biochemistry

Name of the education or training organization

"Alexandru Ioan Cuza" University of Iași, Faculty of Chemistry

Period

2011-2015

Qualification obtained

High school diploma

Name of the education or training organization

"Grigore Antipa" Theoretical High School, Botoșani, Science Profile, Specialty Natural Sciences

PROFESSIONAL SKILLS

Native language

Romanian

Foreign languages

English [read – B2, written -B2, spoken -B2]

Communication skills

Very good communication skills acquired during the professional training and years of university studies, through own experience appropriate to the contextual requirements: communications, presentations and oral exams, carrying out pedagogical practice in schools and graduating from psychopedagogical courses in the Chemistry specialization.

Computer skills

Microsoft Office (Word, Excel, PowerPoint), Origin, Opus, ACD SpecManager, ChemDraw, Hyperchem, Molden, Avogadro, Gaussian16, Macromedia Dreamweaver (HTML), Linux(OS), X-ray-(CrysAlisPro, Olex2, WinGx, Diamond4)

Professional experience

Period

03.04.2021-present

Position busy

Research assistant

Employer

"Petru Poni" Institute of Macromolecular Chemistry, Iasi

Acquired competences

Synthesis and characterization metal-organic compounds, with or without siloxane fragment. Structural characterization by single crystal X-ray diffraction (data acquisition and processing).

Period

05.03.2021-31.12.2024

Position busy

Research assistant

Curriculum Vitae

Employer	"Petru Poni" Institute of Macromolecular Chemistry, Iasi
Project	PN-III-P4-ID-PCE-2020-2000
Acquired competences	Synthesis and characterization of two-dimensional metal-organic networks, with or without siloxane fragment. Structural characterization of networks by single crystal X-ray diffraction (data acquisition and processing).
Period	15.11.2018-30.04.2021
Position busy	Research assistant
Employer	"Petru Poni" Institute of Macromolecular Chemistry, Iasi
Project	PN-III-P1-1.2-PCCDI-2017-0185, http://www.3nanosae.org/ecotech-gmp/
Acquired competences	Synthesis and characterization of silane and siloxane ligands, respectively their complex combinations. Recovery and re-utilization of platinum group metals from used automotive catalytic converters. The obtained compounds were characterized by techniques such as FTIR, UV-VIS, NMR, XRD. Synthesis of platinum-based composite materials used as catalysts.
<i>Invention patent</i>	no. A/00272/2020, title: Process of re-utilization of used catalysts from car exhaust
<i>Workshop-uri</i>	
Title	Alternative techniques for analysis of particles and proteins
Organizer	Ronexprim October 2018, Iași
Title	Ion chromatography
Organizer	Pro Analysis Systems September 2018, Iași
Title	Google digital workshop for management of presence and creative development of personal websites
Organizer	Leaders Foundation June 2016, Iași
Awards and honors	Gold Medal Inventica 2020 , Carmen Racleș, Maria Cazacu, <u>Alexandru Stoica</u> , Cornelia Diac, <i>Process for reuse of exhausted catalytic converters</i>

DESCRIPTION OF THE SCIENTIFIC ACTIVITY

My areas of interest are the synthesis and characterization of ligands with silane or siloxane skeleton, and their 0D-3D complex combinations with transition metals and platinum, preparation of platinum-based composites as catalysts, fine organic synthesis, synthesis of polymers and oligomers, with skills in structural analysis and elucidation of the structures by single crystal X-ray diffraction (XRD). Also, I have programming skills using various programming languages (PHP, Java, C++, VBA, Fortran90), LinuxOS. I have knowledge in the use of microcontrollers (Arduino), with the programming of the board and the creation of GUI for them.

Published Papers

1. Salen-type Schiff bases spaced by the highly flexible and hydrophobic tetramethyldisiloxane motif. Some synthetic, structural and behavioral particularities, Journal of Molecular Liquids, 316 (2020): 113852, doi: 10.1016/j.molliq.2020.113852, IF=6.165
2. Dual crystalline–amorphous salen–metal complexes behave like nematic droplets with AIEgens vistas, Dalton Transactions, 50 (2021): 13841-13858, doi: 10.1039/d1dt01980e IF=4.390

3. Two-dimensional coordination polymers containing permethylated motifs - promising candidates for 2D emerging materials. Structural, behavioral and functional particularities, *Reactive and Functional Polymers*, 168 (2021): 105039, doi: 10.1016/j.reactfunctpolym.2021.105039, IF=3.975
4. One-pot reduction-hydrophobization of heterogenized platinum with 1,1,3,3-tetramethyldisiloxane, *Applied Organometallic Chemistry*, (2021): e6485, doi: 10.1002/aoc.6485, IF=4.105
5. Silanol-functionalized tetranuclear copper complex and its nanoscale-heterogenization by immobilization on glass surface from solution, *Journal of Molecular Liquids*, 344 (2021): 117742, doi: 10.1016/j.molliq.2021.117742, IF=6.165
6. Octakis(Carboxyalkyl-Thioethyl)Silsesquioxanes and Derived Metal Complexes: Synthesis, Characterization and Catalytic Activity Assessments, *Journal of Inorganic and Organometallic Polymers and Materials*, (2022), doi: 10.1007/s10904-022-02408-8, IF= 3.543
7. Fourteen-member silacycle built by cascade reactions induced by a platinum catalyst, *Journal of Molecular Structure*, 1269 (2022): 133760, doi: 10.1016/j.molstruc.2022.133760, IF=3.841
8. Some Theoretical and Experimental Evidence for Particularities of the Siloxane Bond, *Molecules*, 23 (2022): 8563, doi: 10.3390/molecules27238563, IF=4.927
9. Micellization Turned on Dual Fluorescence and Room Temperature Phosphorescence by Pseudo-ESIPT in Thiadiazole Derivatives, *Journal of Physical Chemistry C*, 127 (2022) 99-109, doi: 10.1021/acs.jpcc.2c07651, IF=4.177
10. A Manganese(II) 3D Metal–Organic Framework with Siloxane-Spaced Dicarboxylic Ligand: Synthesis, Structure, and Properties, *Inorganics*, 21 (2023), doi: 10.3390/inorganics11010021, IF= 3.149
11. Ferronematic Co(II) Complex: An Active Filler for Magnetically Actuated Soft Materials, *Small*, (2023), doi: 10.1002/sml.202307006, IF=13.3
12. Fully carboxy-functionalized polyhedral silsesquioxanes as polar fillers to enhance the performance of dielectric silicone elastomers, *Polymer*, 289 (2023), doi: 10.1016/j.polymer.2023.126492, IF=4.6
13. A 3D coordination polymer of Cd(II) with conformationally flexible mixed ligands as an active filler for silicone elastomers, *Reactive & Functional Polymers*, 197 (2024), doi: 10.1016/j.reactfunctpolym.2024.105876, IF=5.1

Scientific events: Thirteen oral communications and seven posters at international conferences.