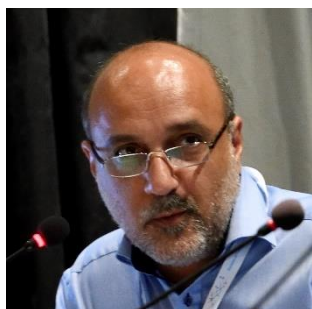


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Date of birth 1974 | Nationality Romanian

## WORK EXPERIENCE

- 1998–2000 **Junior teaching assistant**  
Faculty of Chemistry and Chemical Engineering, Babes-Bolyai University, Cluj-Napoca (Romania)  
research, teaching organic chemistry (laboratory section only)
- 1999 **Compulsory 6-month military training** (Romania)
- 2000–2007 **teaching assistant**  
Faculty of Chemistry and Chemical Engineering, Babes-Bolyai University, Cluj-Napoca (Romania)  
research, teaching – biochemistry, enzymatic technology (laboratory sections only)
- 2000–2004 **Graduate student**  
University of Georgia, Athens, GA (United States)  
teaching, general chemistry laboratory and tutoring; research, bioinorganic chemistry
- 2004–2006 **Senior Research Officer**  
Department of Biological Sciences, University of Essex, Colchester (United Kingdom)  
research, blood substitutes
- 2007–2020 **Associate Professor**  
Faculty of Chemistry and Chemical Engineering, Babes-Bolyai University, Cluj-Napoca (Romania)  
Research, teaching – bioinorganic chemistry, advanced bioinorganic chemistry, biochemistry, advanced biochemistry, applied biochemistry, molecular modelling, computational chemistry, clinical enzymology and immunology, advanced enzymology, nutrient metabolism, DNA typing.  
Habilitation for advising PhD students, since 2013.  
“Cercetator stiintific gradul I” degree (equivalent to Research Professor) since 2014  
President of the Scientific Council of the Babeș-Bolyai University, since 2012  
Co-director of the Institute of Technology of the Babeș-Bolyai University, 2011-2015  
Co-director of the Center for Molecular Modeling and Computational Quantum Chemistry, since 2010
- 2020–Present **Professor**  
Faculty of Chemistry and Chemical Engineering, Babes-Bolyai University, Cluj-Napoca (Romania)  
Research, teaching – bioinorganic chemistry, advanced bioinorganic chemistry, advanced biochemistry, applied biochemistry, computational chemistry, clinical enzymology and immunology.  
Director of the Center for University Strategy of UBB, since 2020

## EDUCATION AND TRAINING

1993–1997	<b>B.Sc. in Chemistry</b>	EQF level 6
	Babes-Bolyai University, Faculty of Chemistry and Chemical Engineering, Cluj-Napoca (Romania) Chemistry, including teacher qualifications	
1997–1998	<b>M.Sc. in Chemistry</b>	EQF level 7
	Babes-Bolyai University, Cluj-Napoca (Romania) Chemistry - organic and bioorganic	
1999–2005	<b>Ph.D. in chemistry</b>	EQF level 8
	Babes-Bolyai University, Cluj-Napoca (Romania) inorganic chemistry – directed by Prof. Ionel Haiduc – “Small molecule activation by hemoproteins and related systems”	
2000–2004	<b>Ph.D. in chemistry</b>	EQF level 8
	University of Georgia, Athens, GA (USA) bioinorganic chemistry – directed by Prof. Donald M. Kurtz, Jr. – “Non-heme iron proteins from anaerobic bacteria involved in nitrosative stress protection”	
2001–2001	<b>Summer Course in Crystallography</b>	
	American Crystallography Association, Athens, GA (USA) crystallography on small molecules and proteins	

## PERSONAL SKILLS

Mother tongue(s) Romanian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
French	B1	B1	B1	B1	B1

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2: Proficient user  
[Common European Framework of Reference for Languages](#)

**Communication skills** ~25 years teaching experience, with laboratories, seminars and lectures  
 >80 oral presentations at scientific meetings  
 >20 interviews to mass media, including live TV and radio

**Organisational / managerial skills** Supervised research and dissertations for ~120 undergraduate and graduate students, won and completed several research grants  
 Member of the Biochemistry and Molecular Biology Commissions of the Romanian National Council for Scientific Research (2011-2013) and of the National Council for Accreditation of University Degrees and Titles (2011-2012), and of the Chemistry committee of the latter (2016-2020)  
 President of the Scientific Council of the Babes-Bolyai University (2012-)  
 Director of the Center for University Strategies, Babes-Bolyai University (2020-)  
 Member of the Senate of the Babes-Bolyai University (2016-)  
 Member of the Council of the Faculty of Chemistry and Chemical Engineering of the Babes-Bolyai University (2024-)  
 Coordinator of the Working Group for Open Science at the Babes-Bolyai University (2022-)  
 Guest editor – Studia Universitatis Babeş Bolyai –Seria Chemia (2008), Chemtracts – Inorganic Chemistry (2015)  
 Review-Editor, Frontiers in Cell and Developmental Biology, 2013-2020  
 Reviewer Editorial Board of Frontiers in Molecular Medicine (2013-2020)  
 Editor in chief, Acta Metallomica <http://chem.ubbcluj.ro/acta-metallomica/> (2014-2017)

Editor, *Molecules* (Inorganic Chemistry section) (2017-)

Member of the Editorial Board, *Revue Roumaine de Chimie* (2023-)

National delegate (representative) from Romania to the Division of Computational and Theoretical Chemistry, DCTC) a European Chemical Society, EuChemS (2019-)

Organized international workshops/conferences in molecular modelling and in bioinorganic chemistry, as co-president of the committees - Molecular Modeling in Chemistry and Biochemistry MOLMOD, Metal Elements in Environment, Medicine and Biology MEEMB

Reviewer/ expert evaluator – within a project aimed at evaluating academic integrity in Romanian universities, organized by Societatea Academică din România (SAR), Alianța Națională a Organizațiilor Studentești din România (ANOSR) and Federația Studenților din Elveția (VSS-UNES-USU) (2016-2017)

Tutor for student journal club – UNIMIND Cluj-Napoca (2021-2024)

Coordinator of professional/specialty commissions for Cluj County and president of the Cluj-Napoca organization, Alliance of Liberal and Democrats, Romania (2018).

#### Job-related skills

- Protein expression and purification (soluble proteins, inclusion bodies).
- Protein crystallization, protein crystallography
- Enzymatic assays, enzyme kinetics: including steady state, transient kinetic stopped-flow/rapid-scanning
- Cryo-enzymology
- Enzymatic product determination and isolation; chemical (enzyme-free) synthesis of compounds, characterization with UV-visible, FTIR, NMR spectroscopies, (GC/LC)-MS, HPLC
- Preparative bio-transformation of chemicals, using whole cells or purified enzymes; method development
- DNA manipulation including cloning and mutagenesis techniques
- Bacterial cell cultures, including anaerobic nitrosative/oxidative stress experiments
- Anaerobic protein/chemical manipulation
- Record and interpret UV-visible, electron paramagnetic resonance, circular dichroism, and infrared spectra
- Sample (protein) preparation (and interpretation, where applicable) for EPR, Mössbauer, (VT/VH)MCD, ENDOR, resonance Raman, NMR spectroscopies, (GC/LC)-MS
- Proficient in the use of the following equipment: microplate spectrophotometer, UV-visible recording spectrophotometer, infrared spectrophotometer, biological oxygen monitor, nitric oxide monitor, fast-pressure liquid chromatography apparatus, thermocyclers, centrifuge, electrophoresis apparatus, anaerobic chamber.
- Electronic structure calculation (ab initio, semiempirical, DFT, molecular mechanics) and protein modelling (sequence homology, docking) programs (e.g., Gaussian, Spartan, Titan, Hyperchem, Cache, Sybyl, Insight), including UNIX and Linux applications
- Word processing programs, spreadsheet applications, presentation applications, scientific plotting programs, chemical structure drawing programs, DNA and protein sequence manipulation programs.
- Devised, written, and supervised general biochemistry and bioinorganic chemistry laboratory experiments.

#### Computer skills

Good command of common software in Windows and Linux operating systems, and of specialized software for chemistry, including molecular modeling, spectroscopy and crystallography

#### ADDITIONAL INFORMATION

##### Scientific publications in journals and conference proceedings ( $h_{WOS}=34$ , Times cited $_{WOS}\sim 3800$ ):

310. Gal, Melinda; Gaina Luiza; Lovasz, Tamas; Gal, Emese; Craciun, Ana-Maria; Focsan, Monica; Turza, Alexandru; Rugina, Dumitrita; Brânzanic, Adrian M.V.; Pesek, Szilard; **Silaghi-Dumitrescu, Radu**; Cristea, Castelia. **Sonochemical synthesis, optical**

- properties and DFT studies on novel (N-arylamino)phenothiazinium dyes suitable for fluorescence cells imaging. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 2024, 322, 124768. <https://doi.org/10.1016/j.saa.2024.124768>
309. Stoean, Bianca; Lehene, Maria; Zagrean-Tuza, Cezara; **Silaghi-Dumitrescu, Radu**; Cristea, Castelia Gaina, Luiza. **Transient radical species and oxygen colorimetric indicators grounded on phenothiazinium dyes**. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 2024, 320, 124602. <https://doi.org/10.1016/j.saa.2024.124602>
308. Radu, Luana; Lupan, Alexandru; Lehene, Marria; **Silaghi-Dumitrescu, Radu**. **Weak interactions between hydracids / binary acids: some considerations from a DFT analysis**. *Studia UBB Chemia*, 2024, LXIX(2), 121-134. DOI:10.24193/subbchem.2024.2.09
307. Doukeh, Rami; Craciun, Daniela; Lehene, Maria; Brănzanic Adrian M.V.; Lupan, Alexandru; **Silaghi-Dumitrescu, Radu**. **An iron-free nitrogenase? Computational estimation of the ability to bind/activate N<sub>2</sub> in manganese and cobalt complexes**. *Journal of Coordination Chemistry*, 2024, . <https://doi.org/10.1080/00958972.2024.2372812>
306. Zagrean-Tuza, Cezara; Matei, Alina; **Silaghi-Dumitrescu, Radu**. **A biomimetic assay for antioxidant reactivity, based on liposomes and myoglobin**. *Journal of Inorganic Biochemistry* 2024, 112613. <https://doi.org/10.1016/j.jinorgbio.2024.112613>
305. Zagrean-Tuza, Cezara; Igescu, Ilinca; Lupan, Alexandru; **Silaghi-Dumitrescu, Radu**. **A study of the molecular interactions of hemoglobin with diverse classes of therapeutic agents**. *Inorganica Chimica Acta*, 2024, 122053. <https://doi.org/10.1016/j.ica.2024.122053>
304. Zagrean-Tuza, Cezara; Pato, Galaba; Damian, Grigore; **Silaghi-Dumitrescu, Radu**; Mot, Augustin C. **Redox Reactivity of Nonsymbiotic Phytoglobins towards Nitrite**. *Molecules*, 2024, 29(6), 1200. <https://doi.org/10.3390/molecules29061200>
303. Rudenco, Oleg; Lupan, Alexandru; **Silaghi-Dumitrescu, Radu**; King R. Bruce. **Decarbonylation Products of Binuclear Methylphosphinidene Complexes of Cyclopentadienyliron Carbonyls: Triplet and Quintet Structures Are Favored Energetically over Singlet Structures with Iron–Iron Multiple Bonding**. *ACS Omega* 2024, 9, 10, 12125–12134. <https://doi.org/10.1021/acsomega.3c10460>
302. Stoean, Bianca; Lupan, Iulia; Cristea, Castelia; Silion, Mihaela; Silaghi-Dumitrescu, Luminita; **Silaghi-Dumitrescu, Radu**; Gaina, Luiza Ioana. **Outcomes of folic acid esterification upon the properties of hydrophilic phenothiazinium dyes: New photosensitizers for antimicrobial photodynamic therapy**. *Journal of Photochemistry and Photobiology A: Chemistry*, 2024, 451, 115500. <https://doi.org/10.1016/j.jphotochem.2024.115500>
301. Pesek, Szilard; **Silaghi-Dumitrescu, Radu**. **The Iodine/Iodide/Starch Supramolecular Complex**. *Molecules*, 2024, 29(3), 641. <https://doi.org/10.3390/molecules29030641>
300. **Silaghi-Dumitrescu, Radu**. **The king, the communists and the roman blood: an automated analysis of the Romanian national anthems**. *Proglas*, 2023, 32(2), 147-157. <https://doi.org/10.54664/GGAE2354>
299. Benedec, Daniela; Oniga, Ilioaara; Hanganu, Daniela; Tipericiuc, Brîndușa; Nistor, Adriana; Vlase, Ana-Maria; Vlase, Laurian; Pușcaș, Cristina; Duma, Mihaela; Login, Cristian Cezar; Niculae, Mihaela; **Silaghi-Dumitrescu, Radu**. **Stachys species: comparative evaluation of phenolic profile and antimicrobial and antioxidant potential**. *Antibiotics*, 2013, 12(11), 1644. <https://doi.org/10.3390/antibiotics12111644>
298. Dănescu, Theodor; Lupan, Alexandru; **Silaghi-Dumitrescu, Radu**; King, R. Bruce. **Theoretical study of the effect of phosphorus and nitrogen heteroatoms on pentahapto coordination of diazaphosphoryl ligands in binuclear ruthenium and iron carbonyl derivatives**. *Journal of Organometallic Chemistry*, 2023, 122949. <https://doi.org/10.1016/j.jorganchem.2023.122949>
297. Coman, Cristina; Hadade, Niculina; Pesek, Szilard, **Silaghi-Dumitrescu, Radu**; Mot, Augustin C. **Removal and degradation of sodium diclofenac via radical-based mechanisms using *S. sclerotiorum* laccase**. *Journal of Inorganic Biochemistry*, 2023, 112400. <https://doi.org/10.1016/j.jinorgbio.2023.112400>
296. Fischer-Fodor, Eva; Szabo, Kinga; Scurtu, Florina; Lehene, Maria; **Silaghi-Dumitrescu, Radu**. **Toxicity of hemoglobin derivatized with oxidized adenosine triphosphate against tumoral human cells**. *Studia UBB Chemia*, 2023, LXVIII(3), 153-160. DOI:10.24193/subbchem.2023.3.10.
295. Lehene, Maria; Zagrean-Tuza, Cezara; Hadade, Niculina; Aghion, Andreea; Septelean, Raluca; Iancu, Stefania; Brănzanic Adrian M.V.; **Silaghi-Dumitrescu, Radu**. **A complex of cobalamin with an organic peroxide**. *New Journal of Chemistry*, 2023, 47(39), 18178-18185. <https://doi.org/10.1039/D3NJ03307D>.
294. **Silaghi-Dumitrescu, Radu**. **Trends in the texts of national anthems: a comparative study**. *Heliyon*, 2023 e19105. <https://doi.org/10.1016/j.heliyon.2023.e19105>
293. **Silaghi-Dumitrescu, Radu**; Patrascu, Iulia; Lehene, Maria; Bercea, Iulia. **Comorbidities of COVID-19 patients**. *Medicina*, 2023,

59(8), 1393. <https://doi.org/10.3390/medicina59081393>

292. Doukeh, Rami; Craciun, Daniela; Lupan, Alexandru; Brânzanic Adrian M.V.; **Silaghi-Dumitrescu, Radu. Effect of the coordination environment on the ability of iron to bind/activate N<sub>2</sub>: a theoretical study with relevance to the nitrogenase mechanism.** Polyhedron, 2023, 116571. DOI: 10.1016/J.POLY.2023.116571

291. Lehene, Maria; Brânzanic Adrian M.V.; **Silaghi-Dumitrescu, Radu. The adducts of cyano- and aquacobalamin with hypochlorite.** Journal of Biological Inorganic Chemistry, 2023, 28(6),583-589. doi: 10.1007/s00775-023-02015-z

290. Plesa, Diana; Lehene, Maria; **Silaghi-Dumitrescu, Radu. On the reaction of Co(II) cobalamin with hydrogen peroxide.** Reaction Kinetics, Mechanisms and Catalysis, 2023, 136, 1791–1799. <https://doi.org/10.1007/s11144-023-02441-9>

289. Irsai, Izabella; Pesek, Szilard, **Silaghi-Dumitrescu, Radu. A critical review of computational efforts towards identifying secondary structure elements in polylactic acid (PLA).** Revue Roumaine de Chimie, 2023, 68(9), 471–477. DOI: 10.33224/rrch.2023.68.9.08

288. Gaina-Gardiuta, Artiom; Lupan, Alexandru; Branzanic, Adrian M. V.; **Silaghi-Dumitrescu, Radu. Study of cobalamin adducts with cysteine and its oxidized sulfenic, sulfinic and sulfonic derivatives.** Revue Roumaine de Chimie, 2023, 68(3–4), 143–151. DOI: 10.33224/rrch.2023.68.3-4.04

287. Branzanic, Adrian M. V.; **Silaghi-Dumitrescu, Radu. Quale Mechanics as a Metaphysical Weltanschauung of Quantum Mechanics.** History of science and technology, 2023, 13(1), 10-33, DOI: 10.32703/2415-7422-2023-13-1-10-33

286. Arkosi, Mariann-Kinga; Mot, Augustin C.; Lupan, Iulia; Ghinia Tegla, Miruna Georgiana; **Silaghi-Dumitrescu, Radu. Selective attachment of polyethylene glycol to hemerythrin for potential use in blood substitutes.** Protein Journal, 2023, 42, 374–382. <https://doi.org/10.1007/s10930-023-10118-4>

285. Rudenco, Oleg; Lehene, Maria; Lupan, Alexandru; Zagrean-Tuza, Cezara; Stoean, Bianca; Gaina-Gardiuta, Artiom; Ulici, Adelina Maria; **Silaghi-Dumitrescu, Radu. Versatility of thiourea dioxide as redox agent in globins: case study with myoglobin.** Inorganica Chimica Acta, 2023, 121474. <https://doi.org/10.1016/j.ica.2023.121474>

284. Stoica, Anca D.; Toma, Vlad-Al.; Roman, Ioana; Sevastre, Bogdan; Scurtu, Florina; **Silaghi-Dumitrescu, Radu. Glutaraldehyde-polymerized hemerythrin: evaluation of performance as an oxygen carrier in hemorrhage models.** Bioinorganic Chemistry and Applications, 2022, 2209101. <https://doi.org/10.1155/2022/2209101>

283. Pesek, Szilard; Lehene, Maria; Branzanic, Adrian M. V.; **Silaghi-Dumitrescu, Radu. On the origin of the blue color in the iodine / iodide / starch supramolecular complex.** Molecules, 2022, 27(24), 8974. <https://doi.org/10.3390/molecules27248974>

282. Irsai, Izabella; Pesek, Szilard, **Silaghi-Dumitrescu, Radu. Polylactic acid inter-chain interactions.** Studia Universitatis Babeş-Bolyai Seria Chemia, 2022, LXVII, 47-71. DOI:10.24193/subbchem.2022.4.04

281. Stoean, Bianca; Gaina, Luiza; Cristea, Castelia; **Silaghi-Dumitrescu, Radu**; Branzanic, Adrian M. V.; Focsan, Monica; Fischer-Fodor, Eva; Tigu, Bogdan; Moldovan, Cristian; Cecan, Andra Diana; Achimas-Cadariu, Patriciu; Astilean, Simion; **Silaghi-Dumitrescu Luminita. New methylene blue analogues with N-piperidinyl-carbinol units: Synthesis, optical properties and in vitro internalization in human ovarian cancer cells.** Dyes and Pigments, 2022, 205, 110460. <https://doi.org/10.1016/j.dyepig.2022.110460>

280. Osokin, Vladimir S.; Dereven'kov, Ilia A.; Makarov, Sergei V.; Gaina-Gardiuta, Artiom; **Silaghi-Dumitrescu, Radu. Effect of trans-ligand on properties of nitric oxide motif in nitrosylcobinamide.** Journal of Coordination Chemistry, 2022, 75(11–14), 1606–1616. <https://doi.org/10.1080/00958972.2022.2079409>

279. Carrascoza, Francisco; Branzanic, Adrian M. V.; **Silaghi-Dumitrescu, Radu. The dynamics of hemerythrin and hemerythrin derivatives.** Studia Universitatis Babeş-Bolyai Seria Chemia, 2021, 64(4), 397-404.

278. Dănescu, Theodor; **Silaghi-Dumitrescu, Radu**; Lupan, Alexandru; King R Bruce. **Cyclopentadienylmetal group 6 carbonyl derivatives with 2-propanoneoximate and related ligands.** New Journal of Chemistry, 2021, 45, 21092-21099. <https://doi.org/10.1039/D1NJ04379J>

277. Suci, Ioana-Alexandra; Lupan, Alexandru; **Silaghi-Dumitrescu, Radu. Peroxo-transition metal systems: examples of redox isomerism in palladium structure.** Revue Roumaine de Chimie 2021, 66(10-11), 811–820. 10.33224/rrch.2021.66.10-11.04

276. Mazilu (Moldovan), Amalia; Popescu, Violeta; Sarosi, Codruta; **Silaghi-Dumitrescu, Radu**; Chisnoiu, Andrea Maria; Moldovan, Marioara; **Silaghi Dumitrescu, Laura**; Prodan, Doina; Carpa, Rahela; Gheorghe, Georgiana Florentina; Chisnoiu, Radu Marcel. **Preparation and in vitro characterization of gels based on bromelain, whey and quince extract.** Gels, 2021, 7, 191. <https://doi.org/10.3390/gels7040191>

275. Lehene, Maria; Plesa, Diana; Ionescu-Zinca, Stefania; Iancu, Stefania D.; Leopold, Nicolae; Makarov, Sergei V.; Brânzanic, Adrian

- M.V.; **Silaghi-Dumitrescu, Radu. Adduct of aquacobalamin with hydrogen peroxide.** Inorganic Chemistry, 2021, 60(17), 12681-12684.
274. Irsai, Izabella; Branzanic, Adrian M. V.; **Silaghi-Dumitrescu, Radu. Polylactic acid interactions with bioceramic surfaces.** Studia Universitatis Babeş-Bolyai Seria Chemia, 2021, 66(3), 107-121.
273. Carrascoza, Francisco; **Silaghi-Dumitrescu, Radu. The dynamics of hemoglobin-haptoglobin complexes. Relevance for oxidative stress.** Journal of Molecular Structure, 2022, 1250(1), 131703.
272. Cîrjeu, Victoria; Puşcaş, Cristina; **Silaghi-Dumitrescu, Radu. Vincristine affects the redox reactivity of hemoglobin.** Studia UBB Chemia, 2021, LXVI(2), 325-332.
271. **Silaghi-Dumitrescu, Radu. Measuring pseudoscience in online media: a case study on Romanian websites.** Journal of Romanian Studies, 2021, 2, 111-128.
270. Dereven'kov, Ilia A.; Makarov, Sergei V; Branzanic, Adrian; **Silaghi-Dumitrescu, Radu; Molodtsov, Pavel A.; Pokrovskaya, Elizaveta A.. Formation of hydroxyl radical in aqueous solutions containing selenite and glutathione.** Polyhedron, 2021, 115072.
269. Radu, Luana; Attia, Amr A.; **Silaghi-Dumitrescu, Radu; Lupan, Alexandru; King, R. Bruce. Binuclear ethylenedithiolate iron carbonyls: a density functional theory study.** Inorganica Chimica Acta, 2021, 120260.
268. **Silaghi-Dumitrescu Radu. Topics in National Anthems.** Journal of Language and Literature, 2020, 20(2), 288-306, <http://dx.doi.org/10.24071/joll.v20i2.2541>
267. **Silaghi-Dumitrescu Radu; Gruian, Cristina; Puscas, Cristina; Simon, Alexandra; Fischer-Fodor, Eva; Toma, Vlad Al.; Farcas, Anca D.; Roman, Ioana; Scurtu, Florina; Attia, Amr A.A.; Damian, Grigore. Spin labelled hemoglobin-based oxygen carriers (HBOC): preparation and evaluation of in vivo/in vitro stability.** Studia UBB Chemia, 2020, 65(2), 121-132.
266. Lehene, Maria; Fischer-Fodor, Eva; Scurtu, Florina; Hadade, Niculina; Mot, Augustin C.; Gal, Emese; Matei, Alina; **Silaghi-Dumitrescu Radu. Excess ascorbate is a chemical stress agent against proteins and cells.** Pharmaceuticals, 2020, 13(6), 107. doi.org/10.3390/ph13060107
265. Farcas, Anca D.; Toma, Vlad Al.; Roman, Ioana; Sevastre, Bogdan; Scurtu, Florina; **Silaghi-Dumitrescu, Radu. Glutaraldehyde-polymerized hemoglobin: in search of improved performance as oxygen carrier in hemorrhage models.** Bioinorganic Chemistry and Applications, 2020, 1096573. doi.org/10.1155/2020/1096573
264. Matei, Alina; Puscas, Cristina; Patrascu, Iulia; Lehene, Maria; Ziebro, Julia; Scurtu, Florina; Baia, Monica; Porumb, Dan; Totos, Robert; **Silaghi-Dumitrescu Radu. On the stability of glutaraldehyde in biocide compositions.** International Journal of Molecular Sciences, 2020, 21(9), 3372.
263. Carrascoza, Francisco; Surducan, Mihai; Eriksson, Leif; **Silaghi-Dumitrescu, Radu. Interaction of cobalt and iron hydroperoxo bleomycin with deoxyribonucleic acid (DNA): dynamic vs. electronic structure considerations.** Inorganica Chimica Acta, 2020, 119682.
262. Obasi, Titus Chukwemeka; Benedec, Daniela; Hanganu, Daniela; Gheldiu, Anamaria; Vlase, Laurian; Oniga, Ilioara; Puşcaş, Cristina; **Silaghi-Dumitrescu, Radu; Oprean, Radu. Free radical scavenging activity and total polyphenol content of Securidaca longipedunculata roots and leaves extracts.** Farmacia, 2020, 68(1), 116-120.
261. Puscas, Cristina; Moldovan, Marioara; Silaghi-Dumitrescu, Laura; Ungureanu, Lavinia; **Silaghi-Dumitrescu Radu. On the apparent redox reactivity of "oxygen-enriched water".** Biological Trace Element Research, 2020, 198, 350–358. doi.org/10.1007/s12011-020-02056-4
260. **Silaghi-Dumitrescu, Radu. Redox reactivity in globins: modulation by covalent and non-covalent modifications with biomedical relevance.** Journal of Experimental and Molecular Biology, 2019, XX(3), 1-2.
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#### Patents

1. Prejmerean Cristina, Mușat Olga, Moldovan Marioara, Prodan Doina, Silaghi-Dumitrescu Laura, Furtos Gabriel, Trif Marcela, Iovu Horia, Damian Celina Maria, Sarosi Liana Codruta, Boboia Stanca, Colceriu-Burtea Adela Loredana, **Silaghi-Dumitrescu Radu Lucian**. COMPOZITIE STOMATOLOGICA PENTRU RESTAURAREA ȘI PROFILAXIA CARIEI, RO 127617 B1, 30.03.2016.
2. Prejmerean Cristina, Moldovan Marioara, Prodan Doina, Silaghi-Dumitrescu Laura, Furtos Gabriel, Iovu Horia, Damian Celina Maria, Popescu Violeta, Pascalau Violeta, Sarosi Liana-Codruta, Boboia Stanca, Filip Miuta, Colceriu-Burtea Adela Loredana, **Silaghi-Dumitrescu Radu Lucian**. MATRICE ORGANICA SI COMPOZIT DE RESTAURARE INDIRECTA PENTRU UTILIZAREA IN STOMATOLOGIE, RO 128800 B1, 30.06.2017.

#### General essays, opinion interviews:

1. **Silaghi-Dumitrescu, Radu**. **Trenul de Sarajevo și repatrierea academică din Diaspora**. PressOne, 2015: <http://pressone.ro/trenul-de-sarajevo-si-repatrierea-academica-din-diaspora/>
2. **Silaghi-Dumitrescu, Radu**. Contribuție la interviul " Ce resetare? Ce schimbări sunt esențiale în politică și în societate – sunt și în economie? Foreign Policy Romania Decembrie 2015/Ianuarie 2016, 26-27.
3. **Radu Silaghi-Dumitrescu**. **Considerations on public perceptions within Romanian public discourse**. Lambert Academic Publishing, 2017, Saarbrücken, 49 pp. ISBN 978-3-330-03040-4.
4. Radu Silaghi-Dumitrescu, **Crima la sugestia unei oi vorbitoare**, 2016, Lulu Press, Inc., 87 pp. ISBN 978-1-329-99360-0 <http://www.lulu.com/shop/radu-silaghi-dumitrescu/crima-la-sugestia-unei-oi-vorbitoare/ebook/product-22618659.html>
5. **Silaghi-Dumitrescu, Radu**. **Fără dovezi materiale pentru diluarea de zece ori a dezinfectanților Hexi Pharma**. Romania Curata, 2017: <http://www.romaniacurata.ro/fara-dovezi-materiale-pentru-diluarea-de-zece-ori-a-dezinfectantilor-hexi-pharma/>
6. **Silaghi-Dumitrescu, Radu**. **Un semafor al adevarului in presa**. Cotidianul, 2016: <http://www.cotidianul.ro/un-semafor-al-adevarului-in-presa-297101/>
7. **Silaghi-Dumitrescu, Radu**. **Curajul de a cerceta si raspunderea de a comunica**. In CERCETĂM, ANALIZĂM, EXPERIMENTĂM, APLICĂM ȘI COMUNICĂM, Editura Viața Arădeană, 2017, Arad, 98 pp. ISBN 978973161213-3
8. **Silaghi-Dumitrescu, Radu**. **Evaluarea academică: între numerologie și substanță**. In EDUCAȚIA ȘI CERCETAREA ROMÂNEASCĂ - Starea prezentă și perspectiva, Editura Casa Cartii de Stiinta 2017, Bucharest, Romania. ISBN: 978-606-17-1284-7
9. **Silaghi-Dumitrescu, Radu**. **Mitul freneziei regicide a valahilor**. Matricea Românească, 2018, <https://matricea.ro/mitul-frezeziei-regicide-printre-valahi-o-replica-la-afirmatia-lui-georg-reicherstorffer-despre-romani-si-asasinate-politice/>
10. Cercetător celebru de la UBB: „Cei care spun că virusul este o exagerare fac propagandă pentru crimă” – Adevărul 2020 [https://adevarul.ro/locale/cluj-napoca/cercetator-celebru-ubb-cei-spun-virusul-exagerare-fac-propaganda-crima-1\\_5ef70cc75163ec42715f690a/index.html](https://adevarul.ro/locale/cluj-napoca/cercetator-celebru-ubb-cei-spun-virusul-exagerare-fac-propaganda-crima-1_5ef70cc75163ec42715f690a/index.html)
11. **Silaghi-Dumitrescu, Radu**. **Corectitudinea politică – când ești nemernic și mândru de asta**. contributors.ro 2021,

<https://www.contributors.ro/corectitudinea-politica-cand-esti-nemeric-si-mandru-de-asta/>

12. **Silaghi-Dumitrescu, Radu.** Să ascultăm instituțiile de știință din România. Spunând... ce?. contributors.ro 2021, <https://www.contributors.ro/sa-ascultam-institutiile-de-stiinta-din-romania-spunand-ce/>

13. **Silaghi-Dumitrescu, Radu.** Măsurile anti-COVID din România: ce ne permite știința să criticăm? Sau: despre “România Educată”. contributors.ro 2021, <https://www.contributors.ro/masurile-anti-covid-din-romania-ce-ne-permite-stiinta-sa-criticam-sau-despre-romania-educata/>

14. **Silaghi-Dumitrescu, Radu.** Orfani de știință. contributors.ro 2021, <https://www.contributors.ro/orfani-de-stiinta/>

15. **Silaghi-Dumitrescu, Radu.** Imunizarea înainte de valul 4: optimismul n-ar trebui interzis. contributors.ro 2021, <https://www.contributors.ro/imunizarea-inainte-de-valul-4-optimismul-n-ar-trebu-interzis/>

16. **Silaghi-Dumitrescu, Radu.** Ce să faci zilnic pentru o viață sănătoasă. contributors.ro 2021, <https://www.contributors.ro/ce-sa-faci-zilnic-pentru-o-viata-sanatoasa/>

17. **Silaghi-Dumitrescu, Radu.** Vaccinarea: restricții, recompense sau altceva?. contributors.ro 2021, <https://www.contributors.ro/vaccinarea-restrictii-recompense-sau-altceva/>

18. **Silaghi-Dumitrescu, Radu.** Cum tac universitățile din România despre vaccinare. contributors.ro 2021, <https://www.contributors.ro/cum-tac-universitatile-din-romania-despre-vaccinare/>

19. **Silaghi-Dumitrescu, Radu.** Chimia Afganistanului. Când alegerea e între două crime. contributors.ro 2021, <https://www.contributors.ro/chimia-afganistanului-cand-alegerea-e-intre-doua-crime/>

20. **Silaghi-Dumitrescu, Radu.** Pandemia care n-a fost și vaccinurile care nu trebuiau: 1976. Plus: vaccinurile pentru sterilizare. contributors.ro 2021, <https://www.contributors.ro/pandemia-care-n-a-fost-si-vaccinurile-care-nu-trebuiau-1976-plus-vaccinurile-pentru-sterilizare/>

21. **Silaghi-Dumitrescu, Radu.** Legătura dintre România Educată și sfârșitul „dictaturii medicale”. contributors.ro 2022, <https://www.contributors.ro/legatura-dintre-romania-educata-si-sfarsitul-dictaturii-medicale/>

22. **Silaghi-Dumitrescu, Radu.** Războiul din Ucraina e în primul rând unul împotriva decenței. Cu un ecou în mediul academic. contributors.ro 2022, <https://www.contributors.ro/razboiul-din-ucraina-e-in-primul-rand-unul-impotriva-decenței-cu-un-ecou-in-mediul-academic/>

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24. **Silaghi-Dumitrescu, Radu.** Mușamalizarea plagiatelor la nivel înalt nu întărește România în contextul agresiunii Rusiei, ci transformă România în Rusia. contributors.ro 2022, <https://www.contributors.ro/musamalizarea-plagiatelor-la-nivel-inalt-nu-intareste-romania-in-contextul-agresiunii-rusiei-ci-transforma-romania-in-rusia/>

25. **Silaghi-Dumitrescu, Radu.** Discriminarea din instinctele noastre contributors.ro 2023, <https://www.contributors.ro/discriminarea-din-instinctele-noastre/>

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27. **Silaghi-Dumitrescu, Radu.** Regele, comuniștii și sângele roman: spune ceva despre noi un imn național schimbat de un număr record de ori? contributors.ro 2023, <https://www.contributors.ro/regele-comunistii-si-sangele-roman-spune-ceva-despre-noi-un-imn-national-schimbat-de-un-numar-record-de-ori/>

28. **Silaghi-Dumitrescu, Radu.** O revoluție bolșevică în știință: „Open Access”. contributors.ro 2023, <https://www.contributors.ro/o-revolutie-bolsevica-in-stiinta-open-access/>

29. Cocea, Madalina. **Central and eastern Europe bites back at predatory publishers**, ScienceBusiness 2024, <https://sciencebusiness.net/news/open-science/central-and-eastern-europe-bites-back-predatory-publishers>

30. **Silaghi-Dumitrescu, Radu.** Să punem punctul pe i? Nu prea avem nici punct, nici i. Vatra, 2024, 1-2, 56. <https://revistavatra.org/2024/04/18/perspectivale-studiilor-umaniste-ii/#more-12822>

**Talks at conferences, seminars:**

88. Cum recunoaștem cercetarea și la ce folosește asta?

**Centrul pentru Orientarea în Cariera a Cercetătorilor, Cluj-Napoca, Romania, 2024**

87. Small Molecule Activation at Biological Metal-Macrocyclic Complexes: Contrasts between Heme and Vitamin B<sub>12</sub>

**3<sup>rd</sup> International Conference on Reaction Kinetics, Mechanisms and Catalysis, Budapest, Hungary, 2024**

86. Synergy between computations and experiments on transition metal complexes: challenges with isomerism, spin states and spectroscopy

**BioMat4CAST Training Workshop, Iasi, Romania, 2024**

85. Virusurile și vaccinarea

**Universitatea vârstei a treia – U3a, UBB and the Mayory of the city of Cluj-Napoca, Romania, 2024**

84. Seria spectrochimică: ce măsoară ea și pentru cine? Considerente dintr-un unghi bioanorganic

**Joint anniversary symposium of the Romanian Chemical Society and American Chemical Society – Romanian Chapter, Bucharest, Romania, 2023**

83. Small Molecule Activation at Biological Metal-Macrocycle Complexes: Contrasts between Heme and Vitamin B<sub>12</sub>

**15<sup>th</sup> Symposium New Trends in Chemistry Research, Timisoara, Romania, 2023**

82. The “UV-vis-silent” coordination chemistry of cobalamin with oxidizing agents: contrasts between iron-porphyrin and cobalt-corrin complexes

**The 20th International Conference on Biological Inorganic Chemistry ICBIC20, Adelaide, Australia, 2023**

81. Considerente despre clasamentele internaționale ale universităților din Metaranking-RO

**Consiliul Național de Statistică și Prognoză a Învățământului Superior (CNSPIS), Workshop “Rankinguri Internaționale Utilizate în Metarankinguri”, Oradea, Romania, 2023**

80. Case study of interdisciplinary teamwork: a European blood substitutes consortium - invited conference

**EUTOPIA doctoral summer school, Lisbon, Portugal, 2023**

79. Old dogs, old tricks, new glasses: new chemistry with cobalamin and redox agents

**State University of Moldova, Chisinau, Moldova, 2023 - invited conference**

78. Coordination and redox chemistry with metalloproteins and agents of oxidative/nitrosative stress

**State University of Moldova, Chisinau, Moldova, 2023 - invited conference**

77. Transient species in biological metal centers and where to find them - invited conference

**International Conference “Students for Students”, Cluj-Napoca, Romania, 2023**

76. Old dogs, old tricks, new glasses: new chemistry with cobalamin and redox agents

**36th Conference of the Romanian chemical society, October 2022, Calimanesti-Caciulata, Romania**

75. Virusurile și vaccinarea

**Universitatea vârstei a treia – U3a, UBB and the Mayory of the city of Cluj-Napoca, Romania, 2020**

74. Sistemul imunitar și virusurile

**Ziua Porților Deschise – Facultate ade Chimie și Inginerie Chimică, Cluj-Napoca, Romania, 2021**

73. Metalele din noi

**Studium Generale UBB, Cluj-Napoca, 2021**

72. Structura materiei (vii)

**Studium Generale UBB, Cluj-Napoca, 2020**

71. Minoritatea cercetătorilor

**The 11<sup>th</sup> Rationalist Conference of the Romanian Secular-Humanist Association, 2022, Alba-iulia, Romania, September 2022**

70. Old dogs, old tricks, new glasses: hydrogen peroxide, cobalamin and others

**EUROBIC 16 - The European Biological Inorganic Chemistry Conference, Grenoble, France, August 2022**

69. Spectral simulations for bioinorganic centers: in the eye of the beholder – invited conference

**18th Central European Symposium on Theoretical Chemistry, Balatonszárszó, Hungary, September 2022**

68. Linkage isomerism in bioinorganic chemistry

**12<sup>th</sup> European Conference on Computational and Theoretical Chemistry, Perugia, Italy, September 2019**

67. Redox reactivity in globins: modulation by covalent and non-covalent modifications with biomedical relevance

**Annual International Conference of the Romanian Society of Biochemistry and Molecular Biology, Iasi, Romania, September 2019**

66. Linkage isomerism in bioinorganic chemistry

**Molecular modeling in chemistry and biochemistry MOLMOD 2018, Cluj-Napoca, October 2018**

65. Antioxidant and prooxidant reactivity in natural compounds: mechanisms, interactions with (metallo)proteins, and practical applications

**35th conference of the Romanian chemical society, October 2018, Calimanesti-Caciulata, Romania**

64. Substitute de sânge: cât de artificiali putem fi?

**Atelierul De Filosofie Si Antropologie Medicală, 2016, Cluj-Napoca, Romania**

63. Fără număr: traficul informației și democrația biochimică

**Atelierul De Filosofie Si Antropologie Medicală, 2015, Cluj-Napoca, Romania**

62. Hemoglobin versus hemerythrin - based blood substitutes

**Bio-Nano-Math-Chem 2017, June 2017, Cluj-Napoca, Romania**

61. Evaluarea academică: între numerologie și substanță

**Educația și cercetarea românească - Starea prezentă și perspectiva, March 2017, Bucharest, Romania**

60. Metal-induced protein and DNA radical chemistry: the cases of bleomycin and haptoglobin

**XXI conference of the Serbian crystallographic society, June 2017, Vrsac, Serbia**

59. Hemoglobin versus hemerythrin - based blood substitutes: data from top-up and hemorrhagic shock models

**Nanomateriale și dispozitive inovative cu aplicații biomedicale – symposium, November 2016, Cluj-Napoca, Romania**

58. Sulfite reductase and nitrite reductase chemistry: similarities in linkage and redox isomerism

**34th conference of the Romanian chemical society, October 2016, Calimanesti-Caciulata, Romania**

57. Hemoglobin versus hemerythrin - based blood substitutes: data from top-up and hemorrhagic shock models

**7th International Conference “Biomaterials, Tissue Engineering & Medical Devices” BIOMMEDD’2016, September 2016, Constanta, Romania**

56. Shedding Blood Over Magnets – invited lecture

**9th International Physics Conference of the Balkan Physical Union – BPU9 , August 2015 , Istanbul University, Istanbul , Turkey**

55. Hemoglobin/hemerythrin based oxygen carriers – invited lecture

**Molecular Biology – Current Aspects and Prospects, November 2015, Cluj-Napoca, Romania**

54. Probing supramolecular interactions in oxygen-carrying proteins

**Nanoscience in Chemistry, Physics, Biology and Mathematics, 2015, Cluj-Napoca, Romania**

53. Manifestul de la Leiden: un simptom și un îndeemn – invited lecture

**Conferința Națională ”Acces la literatură științifică: Rolul structurilor informaționale pentru dezvoltarea cunoașterii, inovare și sisteme de inovare” – Ediția a III-a –October 2015, Timisoara, Romania**

52. (Per)oxidation cascades induced by globins and related proteins: towards analytical tools of possible use for antiparasitic drugs

**COST Action CM1307 Meeting, October 2015, Belgrade, Serbia,**

51. (Per)oxidation cascades induced by metallo proteins: analytical uses, mechanistic insights

**COST Action CM1201 Meeting, September 2015, Lodz, Poland,**

50. High-valent reactivity in superoxide reductase, bleomycin and porphyrazines: similarities and differences

**Metal Elements in Environment, Medicine and Biology, 11th edn., November 2011, Cluj-Napoca, Romania**

49. Something old, something new, something borrowed, something blue: some bonding considerations based on DFT results

**Molecular modeling in chemistry and biochemistry MOLMOD, November 2011, Cluj-Napoca, Romania**

48. Modeling transition-metal biological centers

**Molecular modeling in chemistry and biochemistry MOLMOD, November 2011, Cluj-Napoca, Romania**

47. Substitute de sânge: stadiul actual

**Filiala Timișoara a Academiei Române, ianuarie 2015**

46. Hemoglobin/hemerythrin-based oxygen carriers (HBOC): radical view, conservative solutions

**33rd CONFERENCE OF THE ROMANIAN CHEMICAL SOCIETY, September 2014, Calimanesti-Caciulata, Romania**

45. Exploring unusual ligands at biological metal centers: from molecular nitrogen to peroxochlorate

**Molecular modeling in chemistry and biochemistry MOLMOD, November 2014, Cluj-Napoca, Romania**

44. \*\*\*

**Serile Fundatiei Miscarea Populara, November 2013, Cluj-Napoca, Romania**

43. Lead, follow, or get out of the way

**Serile de leadership, Cluj-Napoca, Fundatia Leaders Romania, 2014**

42. Hemoglobin/hemerythrin-based blood substitutes (HBOC)

**YES (Young European Scientists) Meeting, University of Porto, September 2014, invited lecture**

41. Shallow potential surfaces in small molecule activation by biological metal centers: from multiple reactivity to supramolecular association

**Summer School on Supramolecular Chemistry, University of Belgrade, August 2014, invited lecture**

40. I remember when oxygen used to be safe – accounts of a tormented oxygen molecule

**Oxygen-binding and Sensing Proteins Conference (O2BiP), 6-10 July 2014, Sheffield, UK, invited lecture**

39. \*\*\*

**Fostering Innovation at Cluj Napoca, USAMV Cluj-Napoca, March 2014**

38. Developing the artificial blood

**Healthcare, Education And Research Talks, Iuliu Hatieganu University of Medicine and Pharmacy Cluj-Napoca, 2014**

37. Regele Soare, viile Moldovei si sangele artificial: creatie sau simple consecinte?

**TEDx Iasi, 2014, invited lecture**

36. Aplicații ale tehnicilor stopped-flow și RES asupra unor specii chimice cu durata de viață limitată

**Zilele Academice Clujene, Cluj-Napoca 2014**

35. Activation of oxides and oxyanions of halides and sulfur at biologically-relevant iron centers

**European Colloquium on Inorganic Reaction Mechanisms, Debrecen, June 2014**

34. Weak interactions dictating secondary and tertiary structure in proteins

**1st Symposium on Weak Molecular Interactions, March 2013, Pecs, Hungary**

33. Shedding blood over magnets. Since 1456<sup>TM</sup>

**COST Action CM1201 / 1<sup>st</sup> Meeting, Bologna, Italy, May 2013**

32. Fast reactions of nitrite with globins: linkage isomerism and redox processes

**European Colloquium on Inorganic Reaction Mechanisms, Debrecen, July 2013**

31. Biological metal centers and supramolecular interactions: some methodology considerations

**Summer School on Supramolecular Chemistry, University of Belgrade, August 2013, invited lecture**

30. Hai sa te ReFaci

**TEDxCluj, November 2013, invited lecture**

29. Biocatalysis

**SOE (“Stability Pact for South-Eastern Europe, sponsored by Germany”) Workshop „From Molecules to Functionalised Materials“, October 2013, Cluj-Napoca, Romania**

28. O-X (X=O, N, S, halide) bond activation catalysed by transition metal centers: suicidal vs. productive pathways

**COST Action CM1201 / 1<sup>st</sup> WG1 Meeting, Newcastle upon Tyne, UK, October 2013**

27. Shedding blood over magnets: some applications on unusual valence states in biological metal centers

**EUCMOS 31, August 2012, Cluj-Napoca, Romania – invited lecture**

26. The silk, the spin, and the tunnel to China

**Advanced Structure-Property Correlation, the Gate for Special Properties at Molecular and Nano Level. Bucharest,**

## Romania, September 2012

25. Biological high-valent metal states: electromerism within them, and en route to their formation  
**EUROBIC 11 – European Congress on Biological Inorganic Chemistry, Granada, Spain, 2012**
24. Molecular modeling of supramolecular interactions in protein structure  
**32nd CONFERENCE OF THE ROMANIAN CHEMICAL SOCIETY, 2012, Calimanesti-Caciulata, Romania**
23. Molecular modeling of supramolecular interactions in protein structure  
**XIX CONFERENCE OF THE SERBIAN CRYSTALLOGRAPHIC SOCIETY, 2012, Bela Crkva, Serbia**
22. Molecular modeling of supramolecular interactions in protein structure  
**BiomMedD 2012 – 5th Conference on biomaterials, tissue engineering and biomedical devices, 2012, Constanta, Romania**
21. Superoxide reductase: a debated mechanism, comparison with superoxide dismutases  
**Metal Elements in Environment, Medicine and Biology 2010, Timisoara, Romania**
20. Walking the plank in small molecule activation by metalloenzymes and related centers  
**Molecular modeling in chemistry and biochemistry MOLMOD 2010, Cluj-Napoca, May 2010**
19. Unusual metal oxidation states in metalloproteins and related complexes: from degenerate orbitals to blood substitutes  
**7th International Conference of the Chemical Societies of the South-Eastern European Countries – Bucharest, September 2010**
18. Walking the plank in small molecule activation by metalloenzymes and related centers  
**Humboldt Conference on non-covalent interactions, Vrsac, Serbia, 2009**
17. Fe(I) and Fe(0) states in biologically-relevant systems  
**Molecular modeling in chemistry and biochemistry MOLMOD 2009, Cluj-Napoca, May 2009**
16. Fe(I) states in biologically-relevant systems  
**The 30<sup>th</sup> National Chemistry Conference, Calimanesti-Caciulata, Romania, October 2008**
15. Bioinorganic spectroscopy  
**SOE Workshop “From Molecules to Functionalised Materials“ – Cluj-Napoca, October 2009**
14. The redox reactivity of globins: the chicken and egg paradox  
**Metal Elements in Environment, Medicine and Biology, 8th edn., Timisoara, Romania, 2008**
13. Unusual metal oxidation states in metalloproteins and related complexes: from degenerate orbitals to apoptosis  
**Metal Elements in Environment, Medicine and Biology, 9th edn., Cluj-Napoca, Romania, 2009**
12. Sang et orbitales  
**Le Cinquième Colloque Franco – Roumain De Chimie Appliquée (COFrRoCA), Bacau, Romania, 2008**
11. The Sarajevo train: stress and unusual valence  
**Exploratory workshop in Chemistry with the Scientific Romanian Diaspora, Bucharest, Romania, 2008**
10. The reactivity of myoglobin towards sulfoxylate  
**The Fifth International Conference on Porphyrins and Phthalocyanines (ICPP5), Moscow, 2008**
9. Drawing blood over computational arguments: the ferryl case  
**From Molecular Informatics to Bioinformatics – an International Symposium, Budapest, Hungary, 2008**
8. Nitrite linkage isomerism in hemoproteins and related complexes: experimental and theoretical evidence  
**37th Inorganic Reaction Mechanisms Group Meeting, 37IRMG, Barcelona, Spain, 2008**
7. Nitrite linkage isomerism in hemoproteins and related complexes: experimental and theoretical evidence  
**Molecular and supramolecular chemistry of multimetallic systems, Bucharest, Romania, 2007**
6. Artificial blood: how and why do we make it?  
**Workshop in Material Science and Engineering, Cluj-Napoca, Romania, 2007**
5. Nitrite linkage isomerism in hemoproteins and related complexes – a case for mechanistic promiscuity  
**From Molecular Informatics to Bioinformatics – an International Symposium, Budapest, Hungary, 2007**
4. Nitrite linkage isomerism in hemoproteins and related complexes: experimental and theoretical evidence  
**Molecular Modelling in Chemistry and Biochemistry – MolMod, Arcalia, Romania, 2007**
3. Ferryl heme protonation gates reactivity in hemoproteins  
**The 29<sup>th</sup> National Chemistry Conference, Calimanesti-Caciulata, Romania, October 2006**
2. Transient species involved in catalytic dioxygen/peroxide activation by hemoproteins: possible involvement of protonated Compound I species  
**Dalton Discussions 8, Metals: Centers of Biological Activity, Nottingham, UK, 2005**
1. Ferryl heme protonation gates reactivity in hemoproteins



**Grants:**

1. Nitro/nitrito isomerism in biocatalytically relevant metallocomplexes, CEEX-ET Director 2006-2008
2. Bacterial Proteins Containing Novel Iron Sites, NIH, SUA team member 2000-2004
3. Genomics and Blood Substitutes for 21st Century Europe, European Union 6th Framework Programme, Marea Britanie team member 2004-2007
4. Metalloprotein-based blood substitutes – PNII Idei Director 2007-2010
5. Superoxide dismutases and superoxide reductasee – Academia Romana Director 2007-2008
6. Center for molecular modeling and computational quantum chemistry - PNII Capacitati Partner 2007-2010
7. Biologically relevant metallocomplexes of nitrite - Rusia + Acad. Romana Co-director 2008-2009
8. Organometallic reagents and intermediates in stereocontrolled synthesis with derivatives of biological relevance - CEEX team member 2006-2008
9. Bio-medical applications of metal compounds – metallomics – PCCE Director of one of 6 teams within the project 2010-2013
10. Nanomanipulation of biomolecules using atomic force microscopy PCCE Director of one of 6 teams within the project 2010-2013
11. Redox activation of small molecules by metal centers of biological relevance – PCE Director 2013-2016
12. Molecular Modeling in Chemistry and Biochemistry –conferinte internationale Director 2011
13. New generations of biomaterials for cosmetic dentistry – PCCA (“Parteneriate”) team member 2012-2015
14. Composite biomaterials based on new systems of fluorinated monomers reinforced with nano and micro bioactive fillers with residual anticariogenic properties and superior adhesion to hard dental tissues – PCCA Director 2008-2011
15. New advanced biomaterials, intelligent giomer type with various applications in dentistry – PCCA -team member - 2012-2015
16. Complex biomaterials with an advanced degree of specificity used in endodontic treatments – PCCA - team member - 2008-2011
17. Elaboration of the national strategy in the field of research, technological development and innovation for the period 2014-2020, - membru - 2013-2014
18. CNFIS-FDI-2017- 0539 Complex support of internationalization at Babeş-Bolyai University– 2017 – Project Manager, 400000 RON
19. Country delegate for Romania, COST Action CM1201 - Biomimetic Radical Chemistry, European Cooperation in Science and Technology
20. Country delegate for România, COST Action CM1307 - Targeted chemotherapy towards diseases caused by endoparasites , European Cooperation in Science and Technology
21. Supporting research excellence at Babes-Bolyai University on directions related to study programs – SCPS-UBB 2020, FDI – CNFIS, director
22. PN-III-P1-1.1-PD-2021-0286 2022 - 2024 Preventing the oxidative side effects of nonsteroidal anti-inflammatory drugs by peg-linking them with natural antioxidants – mentor for postdoctoral grant
23. PN-III-P1-1.1-PD-2021-0279 2022 - 2024 Heme edge reactivity towards sulfur- and oxygen-based stress agents – mentor for postdoctoral grant
24. PN-III-P4-ID-PCCF-2016-0142 2018 - 2022 - New targeted optical imaging nanoprobe for near-infrared (nir) real-time (rt)image-guided surgery of ovarian cancer, team member
25. CNFIS-FDI-2018-0447 2018 - Supporting excellent research at Universitatea Babeş-Bolyai, team member
26. National institutional development project - financing excellence in RDI Strategic infrastructure at Babes-Bolyai University in the context of developing new and emerging technologies 2018-2020, 33PFE/2018, team member
27. National institutional development project - Academic Research Network of Excellence STAR-UBB – STAR-UBB-N, 21PFE/30.12.2022, 2022-2024, team member
28. CNFIS-FDI-2019-0351 - Supporting research excellence at Babes-Bolyai University at its centenary 1919-2019, team member

29. CNFIS-FDI-2021-0061- Supporting institutional capacity for research at Babeş-Bolyai University (UBB) through multi- and transdisciplinary research projects/themes within the UBB Academic Schools of Science, team member
30. CNFIS-FDI-2022-0179 - Promoting and supporting Open Science practices in research excellence at Universitatea Babeş-Bolyai din Cluj-Napoca, team member
31. CNFIS-FDI-2023-F-0214 - Strengthening Open Science practices in scientific research excellence at Universitatea Babeş-Bolyai din Cluj-Napoca, team member

#### **Awards:**

*From scientific bodies:*

*The Maria Brezeanu Award for Excellence in Inorganic Chemistry, of the Romanian International Chapter of the American Chemical Society, 2023*

*Top 2% scientists cf. Ioannidis JPA, Boyack KW, Baas J (2020) Updated science-wide author databases of standardized citation indicators. PLoS Biol 18(10): e3000918. <https://doi.org/10.1371/journal.pbio.3000918>:*

*2022 all career all fields; all career field: Inorganic & Nuclear Chemistry*

*2021 all career, all fields*

*2021 all career, field: Inorganic & Nuclear Chemistry*

*2021 single-year, field: Inorganic & Nuclear Chemistry*

*2020 all career, all fields*

*2020 all career, field: Inorganic & Nuclear Chemistry*

*2019 all career, all fields*

*2019 all career, field: Inorganic & Nuclear Chemistry*

*Award for Excellence in Scientific Research at Universitatea Babeş-Bolyai, 2021, 2022, 2023*

*Excellence Award for Institutional Development at Universitatea Babeş-Bolyai, 2018*

*Excellence Award for Institutional Development at Universitatea Babeş-Bolyai, 2016*

*Award for Scientific Research at Universitatea Babeş-Bolyai, 2014*

*Scientific Research Award at Universitatea Babeş-Bolyai, 2010*

*Included in Publons' 2016 Sentinels of Science report for reviewer activity in chemistry, top 100 (<https://publons.com/community/sentinels-of-science-recipient-2016/>)*

*Annual Costin D Nenitescu prize of the Romanian Academy, 2013*

*1<sup>st</sup> prize, 2004 Procter & Gamble Poster Competition (University of Georgia, 2004)*

*Honorable mention, 2003 Procter & Gamble Poster Competition (University of Georgia, 2003)*

*Prizes (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, honorable mentions), National Chemistry, Physics and/or Mathematics contests ("Olympics"), Interdisciplinary contest (science-humanities) – Romania, 1988-1992*

*Other awards:*

*Candidate for elections - (local council –commune of Floresti, national parliament, European parliament – 2016-2019, Romania)*

*"Senior al cetatii", on behalf of the Cluj-Napoca Municipality, 2014*

*"Onoare pentru Cluj" - annual prize for research awarded by the county of Cluj, December 2013*

*"Pro Familia" annual prize for research, December 1st 2013, Bucharest*

*"Preaieste Viata" trophy, National (government-funded) Romanian Television - TVR1, Bucharest, December 2013*

*"Oameni care misca Romania in directii bune" – Gala Foreign Policy Romania, 2014*

*Gala Superlativelor VIP 2013 – premiul "Stiinta si viata"*

*Other awards (non-chemistry related, 1987-1998) - National/local contests of chess, history, geography, classical music, literature*

