

INFORMAȚII PERSONALE

Radu Silaghi-Dumitrescu



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📅 **Data nașterii** 1974-10-26 | **Naționalitate** Română

EXPERIENȚĂ PROFESIONALĂ

- 1998–2000 **Preparator universitar**
Facultatea de Chimie și Inginerie Chimică, Universitatea Babeș-Bolyai, Cluj-Napoca (România)
cercetare, predare laborator chimie organică
- 1999 **Stagiul military obligatoriu, 6 luni (România)**
- 2000–2007 **Asistent universitar**
Facultatea de Chimie și Inginerie Chimică, Universitatea Babeș-Bolyai, Cluj-Napoca (România)
Cercetare, predare – biochimie, tehnologii enzimactice (laborator/seminar)
- 2000–2004 **Doctorand (Teaching Assistant, Research Assistant)**
Department of Chemistry, University of Georgia, Athens, GA (United States)
Predare laborator chimie generală și chimie organică, cercetare
- 2004–2006 **Senior Research Officer**
Department of Biological Sciences, University of Essex, Colchester (United Kingdom)
Cercetare, substitute de sânge
- 2007–2020 **Conferențiar Universitar**
Facultatea de Chimie și Inginerie Chimică, Universitatea Babeș-Bolyai, Cluj-Napoca (România)
Predare chimie bioanorganică, materiale și procese bioorganice / chimie bioanorganică avansată, biochimie, biochimie avansată, biochimie aplicată, modelare moleculară, chimie computațională, enzimologie clinică și imunologie, metabolismul nutrienților, amprentare genetică; cercetare
Abilitare conducere doctorat, din 2013.
Cercetător Științific grad I din 2014
Președinte al Consiliului Științific al Universității Babeș-Bolyai, din 2012
Co-director al Institutului de Tehnologie al Universității Babeș-Bolyai, 2011-2015
Co-director al Centrului de Modelare Moleculară și Chimie Cuantică Computațională, din 2010
- 2020-prezent **Profesor Universitar**
Facultatea de Chimie și Inginerie Chimică, Universitatea Babeș-Bolyai, Cluj-Napoca (România)
Predare chimie bioanorganică, materiale și procese bioorganice / chimie bioanorganică avansată, biochimie avansată, biochimie aplicată, chimie computațională, enzimologie clinică și imunologie, cercetare
Director al Centrului pentru Strategie Universitară al UBB, din 2020
Coordonator al Oficiului pentru Știință Deschisă al UBB, din 2024

EDUCAȚIE

- 1993–1997 **Licenta in Chimie** EQF level 6
Universitatea Babeș-Bolyai University, Facultatea de Chimie și Inginerie Chimică, Cluj-Napoca (România)
Chimie, inclusiv modul didactic
- 1997–1998 **Masterat in Chimie** EQF level 7
Universitatea Babeș-Bolyai University, Facultatea de Chimie și Inginerie Chimică, Cluj-Napoca

1999–2005	(România) Chimie, organică și bioorganică Doctorat in chimie	EQF level 8
2000–2004	Universitatea Babeș-Bolyai, Facultatea de Chimie și Inginerie Chimică, Cluj-Napoca (România) Chimie anorganică Doctorat in chimie	EQF level 8
2001–2001	Universitatea din Georgia, Athens (GA) Statele Unite ale Americii Chimie bioanorganică Summer Course in Crystallography	
	American Crystallography Association, Athens, GA (USA) Cristalografie pentru molecule mici și proteine	

APTITUDINI PERSONALE

Limba materna Română

Alte limbi

	Inteles		Vorbit		Scris
	Ascultat	Citit	Interactiune vorbita	Productie vorbita	
Engleza	C2	C2	C2	C2	C2
Franceza	B1	B1	B1	B1	B1

Aptitudini de comunicare ~25 ani de experiență didactică și de cercetare
>80 prezentări orale la conferințe științifice
>20 interviuri în mass-media, inclusiv în direct la TV și radio

Aptitudini organizationale Supervizat cercetare (licență, masterat, doctorat) pentru ~120 studenți, câștigat și condus granturi de cercetare

Membru al Comisiei de Biochimie și Biologie Moleculară a CNCS (2011-2013) și respectiv CNATDCU (2011-2012), membru al Comisiei de Chimie a CNATDCU (2016-2020)

Președinte al Consiliului Științific al Universității Babeș-Bolyai (2012-)

Director al Centrului pentru Strategie Universitară al Universității Babeș-Bolyai (2020-)

Membru al Senatului Universității Babeș-Bolyai (2016-)

Membru al Consiliului Facultății de Chimie și Inginerie Chimică a Universității Babeș-Bolyai (2024-)

Coordonator al Grupului de Lucru pentru Știința Deschisă al Universității Babeș-Bolyai (2022-2024)

Coordonator al Oficului pentru Știința Deschisă al Universității Babeș-Bolyai (2024-)

Editor, Acta Metallomica <http://chem.ubbcluj.ro/acta-metallomica/> (2014-2017)

Guest editor – Studia Universitatis Babeș Bolyai –Seria Chemia, Chemtracts – Inorganic Chemistry.

Reviewer Editorial Board al Frontiers in Molecular Medicine, 2013-2020

Editor, Molecules (secțiunea Inorganic Chemistry) (2017-)

Membru colectiv editorial, Revue Roumaine de Chimie (2023-)

Delegatul național (reprezentantul) din partea României la Divizia de Chimie Computațională și Teoretică (Division of Computational and Theoretical Chemistry, DCTC) a European Chemical Society, EuChemS (2019-)

Organizat workshopuri/conferințe în modelare moleculară și în chimie bioanorganică, în calitate de co-președinte sau secretar al comitetelor: Molecular Modeling in Chemistry and Biochemistry MOLMOD, Metal Elements in Environment, Medicine and Biology MEEMB

Expert evaluator – proiect de evaluare a integrității academice în universități, organizat în proiect comun de Societatea Academică din România (SAR), alături de Alianța Națională a Organizațiilor Studențești din România (ANOSR) și Federația Studenților din Elveția (VSS-UNES-USU) co-finanțate printr-un grant din partea Elveției prin intermediul Contribuției Elvețiene pentru Uniunea Europeană extinsă (2016-2017)

Tutore cerc studențesc UNIMIND Cluj-Napoca (2021-2024)

Coordonator al Comisiilor de specialitate ale județului Cluj și președinte al organizației Cluj-Napoca în cadrul ALDE (2018)

Aptitudini profesionale

- Exprimare și purificare proteine (solubile, corpi de incluziune)
- Cristalografie de proteine
- Măsuratori de activitate enzimatică, cinetică enzimatică, inclusiv prin tehnici stopped-flow și freeze-quench
- Crio-enzimologie
- Determinarea și izolarea produșilor reacțiilor enzimatică; sinteză chimică și caracterizare structurală cu spectroscopii UV-viz, FTIR, RMN, (GC/LC)-MS, HPLC
- Bio-transformări preparative, folosind celule intacte sau preparate enzimatic purificate; dezvoltare de metodă
- Manipulare ADN – inclusiv clonare și mutagenză direcționată
- Cultură celule bacteriene, inclusiv experimente de stres oxidativ și nitrozativ
- Tehnici anaerobe pentru chimie și biochimie
- Întregistrare și interpretare de spectre UV-viz, de rezonanță electronică paramagnetică (REP/RES), de dicroism circular, vibraționale
- Preparare de probe (proteine) și interpretare (unde este aplicabil) pentru spectroscopii RES, Mössbauer, (VTVH)MCD, ENDOR, rezonanță Raman, RMN, (GC/LC)-MS
- Folosirea unor aparate precum spectrofotometre microplate, UV-viz, IR, senzori pentru măsurarea concentrațiilor dizolvate de gaze precum NO și O₂, FPLC, aparate de termociclare, electroforeză, camera anaerobe
- Calcule de structură electronică (ab initio, semiempiric, DFT, mecanică moleculară) și modelare de proteine (e.g., Gaussian, Spartan, Titan, Hyperchem, Cache, Sybyl, Insight), inclusiv aplicații UNIX și Linux
- Programe de procesare date – tip Word, spreadsheet, de prezentare științifică, de manipulare de structuri primare de proteine și ADN, reprezentări structuri chimice
- Conceput, scris și supervizat executarea de experimente didactice în biochimie și chimie bioanorganică

Aptitudini de calculator

Software uzual în Windows și Linux, software specializat pentru chimie – inclusiv modelare moleculară, spectroscopie sau cristalografie

INFORMATII SUPLIMENTARE

Scientific publications in journals and conference proceedings (h_{WOS}=35, Times cited_{WOS}~4200):

311. Rudenco, Oleg; Lupan, Alexandru; **Silaghi-Dumitrescu, Radu**; King R. Bruce. Binuclear methylphosphinidine complexes of cyclopentadienylruthenium carbonyls: effects of the higher ligand field strength of ruthenium derivatives relative to iron derivatives. Dalton Transactions, 2024, <https://doi.org/10.1039/D4DT02279C>

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; Brânzanic Adrian M.V.; Lupan, Alexandru; **Silaghi-Dumitrescu, Radu. An iron-free nitrogenase? Computational estimation of the ability to bind/activate N₂ 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; Sillion, 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, Iliora; Hanganu, Daniela; Tiperciuc, 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 diazaphospholyl 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; Brânzanic 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 N₂: a theoretical study with relevance to the nitrogenase mechanism.** *Polyhedron*, 2023, 116571. DOI: 10.1016/J.POLY.2023.116571

291. Lehene, Maria; Brănzanic 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 Babes-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, Iliia 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 Babes-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.; Brănzanic, 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 Babes-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; Pușcaș, 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; Surducian, 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 Chukwuemeka; Benedec, Daniela; Hanganu, Daniela; Gheldiu, Anamaria; Vlase, Laurian; Oniga, Ilioara; Pușcaș, 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.
259. Attia, Amr A.; Lupan, Alexandru; **Silaghi-Dumitrescu, Radu;** King, R. Bruce. **Neutral rhenadecaboranes with Re(CO)₂(NO) vertices: a theoretical study of building blocks for rhenacarborane-based drug delivery agents.** *Molecules*, 2019, 25(1), E110.
258. Branzanic, Adrian; Ryde, Ulf; **Silaghi-Dumitrescu, Radu. Importance of the iron–sulfur component and of the siroheme modification in the resting state of sulfite reductase.** *Journal of Inorganic Biochemistry*, 2019, 110928.
257. Mot, Augustin C.; Coman, Cristina; Hadade, Niculina; Damian, Grigore; **Silaghi-Dumitrescu, Radu;** Heering, Hendrik A. **"Yellow" laccase from *Sclerotinia sclerotiorum* is a blue laccase that enhances its substrate affinity by forming a reversible tyrosyl-product adduct.** *PLoS One*, 2019, 0225530.
256. Branzanic, Adrian; Ryde, Ulf; **Silaghi-Dumitrescu, Radu. Why does sulfite reductase employ siroheme?** *Chemical Communications*, 2019, 55, 14047-14049.
255. Hanganu, Daniela; Olah, Neli-Kinga; Pop, Carmen; Vlase, Laurian; Oniga, Ilioara; Ciocarlan, Nina; Matei, Alina; Puscas, Cristina; **Silaghi-Dumitrescu, Radu;** Benedec, Daniela. **Evaluation of polyphenolic profile and antioxidant Activity for some *Salvia* species.** *Farmacia*, 2019, 67(5), 801-805. <https://doi.org/10.31925/farmacia.2019.5.8>

254. Hannibal, Luciana; Molodtsov, Pavel; Branzanic, Adrian; **Silaghi-Dumitrescu, Radu**; Makarov, Sergei. **Kinetic, spectroscopic and in silico characterization of the first step of the reaction between glutathione and selenite**. *Inorganica Chimica Acta*, 2020, 499, 119215.
253. Moldovan, Mirela L.; Iurian, Sonia; Puscas, Cristina; **Silaghi-Dumitrescu, Radu**; Hanganu, Daniela; Bogdan, Catalina; Vlase, Laurian; Oniga, Ilioara; Benedec, Daniela. **A design of experiments strategy to enhance the recovery of polyphenolic compounds from *Vitis vinifera* by-products through heat reflux extraction**. *Biomolecules*, 2019, 9(10), 529; <https://doi.org/10.3390/biom9100529>
252. Farcas, Anca Daniela; Mot, Augustin C.; Zagrean-Tuza, Cezara; Ticolea, Madalina; Sevastre, Bogdan; Kulak, Muhittin; **Silaghi-Dumitrescu Radu**, Parvu, Alina. **Remarkable rutin-rich *Hypericum capitatum* extract exhibits anti-inflammatory effects on turpentine oil-induced inflammation in rats**. *BMC Complementary and Alternative Medicine*, 2019, 19, 289.
251. Sacalis, Carmen; Morar, Cristina; Lameiras, Pedro; Lupan, Alexandru; **Silaghi-Dumitrescu, Radu**; Bende, Attila; Katona, Gabriel; Porumb, Dan; Harakat, Dominique; Gál, Emese; Darabantu, Mircea. **Design, synthesis and structure of novel dendritic G-2 melamines comprising piperidine motifs as key linkers and 4-(n-octyloxy)aniline as a peripheral unit**. *Tetrahedron*, 2019, 75, 130468, <https://doi.org/10.1016/j.tet.2019.130468>
250. Radu, Luana; Attia, Amr A.; **Silaghi-Dumitrescu, Radu**; Lupan, Alexandru; King, R. Bruce. **The group 9 cyclopentadienylmetal cis ethylenedithiolates as metallodithiolene ligands in metal carbonyl chemistry: analogies to benzene metal carbonyl complexes**. *New Journal of Chemistry*, 2019, 43(32), 12711-12718.
249. Puscas, Cristina; Mircea, Alina; Raiu, Madalina; Mic, Mihaela; Attia, Amr A. A.; **Silaghi-Dumitrescu Radu**. **Affinity and effect of anticancer drugs on the redox reactivity of hemoglobin**. *Chemical Research in Toxicology*, 2019, 32(7), 1402-1411.
248. Mot, Augustin C.; Puscas, Cristina; Dorneanu, Sorin; **Silaghi-Dumitrescu Radu**. **Isolation, purification and characterization of ascorbate oxidase and peroxidase from *Cucurbita pepo medullosa***. *Studia Universitatis Babes-Bolyai Seria Chemia*, 2019, 64(2), 49-60.
247. Scurtu, Florina; Tebrean, Bogdan; Árkosi, Mariann Kinga; Lonele, Adrian; **Silaghi-Dumitrescu, Radu**. **Hemoglobin-albumin co-polymers for blood substitutes: increasing the reproducibility of the polymerization reaction**. *Studia Universitatis Babes-Bolyai Seria Chemia*, 2019, 64(2), 421-434.
246. Mot, Augustin C; Puscas, Cristina; Dorneanu, Sorin; **Silaghi-Dumitrescu Radu**. **EPR detection of sulfanyl radical during sulfhemoglobin formation—Influence of catalase**. *Free Radical Biology and Medicine*, 2019, 137, 110-115.
245. Radu, Luana; Attia, Amr A.; **Silaghi-Dumitrescu, Radu**; Lupan, Alexandru; King, R. Bruce. **Reversible complexation of ammonia by breaking a manganese-manganese bond in a manganese carbonyl ethylenedithiolate complex: a theoretical study of an unusual type of Lewis acid**. *Dalton Transactions*, 2019, 48, 324-332.
244. Turcas, Ramona; Kripli, Balázs; Attia, Amr A. A.; Lakk-Bogáth, Dóra; Speier, Gábor; Giorgi, Michel; **Silaghi-Dumitrescu, Radu**; Kaizer, József. **Catalytic and stoichiometric flavanone oxidation mediated by nonheme oxoiron (IV) complexes as flavone synthase mimics: kinetic, mechanistic and computational studies**. *Dalton Transactions*, 2018, 47, 14416-14420.
243. Puscas, Cristina; Radu, Luana; Carrascoza, Francisco; Mot, Augustin C; Amariei, Diana; Lungu, Oana; Scurtu, Florina; Podea, Paula; Septean, Raluca; Matei, Alina; Mic, Mihaela; Attia, Amr A.; **Silaghi-Dumitrescu Radu**. **The high affinity of small-molecule antioxidants for hemoglobin**. *Free Radical Biology and Medicine*, 2018, 124, 260-274.
242. Oniga, Ilioara; Pușcaș, Cristina; **Silaghi-Dumitrescu, Radu**; Olah, Neli-Kinga; Sevastre, Bogdan; Marica, Raluca; Marcus, Ioan; Sevastre-Berghian, Alexandra; Benedec, Daniela; Pop, Carmen; Hanganu Daniela. ***Origanum vulgare* ssp. *vulgare*: Chemical Composition and Biological Studies**. *Molecules*, 2018, 23(8), 2077.
241. Mot, Augustin C; Puscas, Cristina; Miclea, Patricia; Naumova-Letia, Galaba; Dorneanu, Sorin; Podar, Dorina; Dissmeyer, Nico; **Silaghi-Dumitrescu Radu**. **Redox control and autoxidation of class 1, 2 and 3 phytooglobins from *Arabidopsis thaliana***. *Scientific Reports*, 2018, 8(1), 13714.
240. Joy, Syed RU; Eszter, Trufan; Smith, Mark D.; Puscas, Cristina; **Silaghi-Dumitrescu, Radu**; Semeniuc, Radu F. **An unexpected μ_4 -oxido-bridged tetranuclear Cu(II) inverse coordination complex of a heptadentate bis(pyrazolyl)methane-based ligand: Synthesis, structure, spectroscopic properties, and catecholase activity**. *Inorganica Chimica Acta*, 2018, 485, 190-199.
239. Benedec, Daniela; Oniga, Ilioara; Hanganu, Daniela; Gheldiu, Ana Maria; Pușcaș, Cristina; **Silaghi-Dumitrescu, Radu**; Duma, Mihaela; Tiperciuc, Brîndușa; Vârban, Rodica; Vlase, Laurian. **Sources for developing new medicinal products: biochemical investigations on alcoholic extracts obtained from aerial parts of some Romanian *Amaryllidaceae* species**. *BMC Complementary and Alternative Medicine*, 2018, 18(1), 226.
238. Kostadinovic Velickovska, Sanja; Naumova Letia, Galaba; Cocevska, Maja; Bruhl, Ludger; **Silaghi-Dumitrescu, Radu**; Mirhosseini, Hamed; Ilieva, Fidanka; Mihajlov, Ljupco; Dimovska, Violeta; Kovacevic, Biljana; Gulaboski, Rubin; Matthaus, Bertrand. **Effect of bioactive compounds on antiradical and antimicrobial activity of extracts and cold-pressed edible oils from nutty fruits from Macedonia**. *Journal of Food Measurement and Characterization*, 2018, 12, 1-8. 10.1007/s11694-018-9871-8
237. Farcas, Anca Daniela; Mot, Augustin C.; Zagrean-Tuza, Cezara; Toma, Vlad; Cimpoi, Claudia; Hosu, Anamaria; Parvu, Marcel; Roman, Ioana; **Silaghi-Dumitrescu, Radu**. **Chemo-mapping and biochemical-modulatory and antioxidant/prooxidant effect of *Galium verum* extract during acute restraint stress in female rats**. *PLoS One*, 2018, 13(7), e0200022.

236. Surducu, Mihai; Branzanic, Adrian; **Silaghi-Dumitrescu, Radu. Heme Fe-SO²⁻ intermediates in sulfite reduction: contrasts with Fe-OO²⁻ species from oxygen-oxygen bond activating systems.** International Journal of Quantum Chemistry, 2018, 118(19), e25697.
235. Hathazi, Denisa; Scurtu, Florina; Bischin, Cristina; Mot, Augustin; Attia, Amr A. A.; Kongsted, Jacob; **Silaghi-Dumitrescu, Radu. The reaction of oxy hemoglobin with nitrite: mechanism, antioxidant-modulated effect, and implications for blood substitute evaluation.** Molecules, 2018, 23(2), E350. doi: 10.3390/molecules23020350
234. Kostadinovic Velickovska, Sanja; Mot, Augustin C.; Mitrev, Sasa; Gulabovski, Rubin; Bruhl, Ludger; Mirhosseini, Hamed; **Silaghi-Dumitrescu, Radu; Matthaus, Bertrand. Bioactive compounds and “in vitro” antioxidant activity of some traditional and non-traditional cold-pressed edible oils from Macedonia.** Journal of Food Science and Technology, 2018, 55(5), 1614–1623.
233. **Silaghi-Dumitrescu, Radu; Tomoioagă, Nicoleta; Jurco, Eugen. Variability in biochemical composition of milk among three representative breeds of dairy cows from Romania.** Studia Universitatis Babeş-Bolyai Seria Chimia, 2018, LXIII, 55-62.
232. Irsai, Izabella; Lupan, Alexandru; Majdik, Comelia; **Silaghi-Dumitrescu, Radu. Computational investigation of spectroscopic parameters in putative secondary structure elements for polylactic acid and comparison with experiment.** Studia Universitatis Babeş-Bolyai Seria Chimia, 2017, LXII(4), 495-513.
231. Bischin, Cristina; Contra, Gabriela; Tusan, Camelia; Miclea, Patricia; Taciuc, Vicentiu; Parvu, Marcel; **Silaghi-Dumitrescu, Radu. Free-radical reactions: the fine line between the anti- and pro-oxidant reactivities.** Oxidation Communications, 2018, 41(1), 130–140.
230. **Silaghi-Dumitrescu, Radu. “Compulsory prison for all”: an ironically-proposed rite of passage in a post-communist country.** Journal of Media Critiques 2017, 12(3), 51-58.
229. Attia, Amr A. A.; **Silaghi-Dumitrescu, Radu. Nickel-substituted iron dependent cysteine dioxygenase: implications for the dioxygenation activity of nickel model compounds.** International Journal of Quantum Chemistry, 2018, 118(13), e25564.
228. Scurtu, Florina; Popa, Anamaria; **Silaghi-Dumitrescu, Radu. Periodate-oxidized alginate as polycondensation reagent for hemoglobin.** Studia Universitatis Babeş-Bolyai Seria Chimia, 2017, LXII(4), 59-66.
227. Mot, Augustin; C.; Bischin, Cristina; Damian, Grigore; Attia, Amr A.A.; Gal, Emese; Dina, Nicoleta E.; Leopold, Nicolae; **Silaghi-Dumitrescu, Radu. Fe(III) – sulfide interaction in globins: characterization and quest for a putative Fe(IV)-sulfide species.** Journal of Inorganic Biochemistry, 2018, 179, 32-39.
226. **Silaghi-Dumitrescu, Radu. Feudalism in Modern Eastern Europe.** Balkanistic Forum, 2018, (1), 11-15.
225. Toma, Vlad Al.; Farcas, Anca D.; Roman, Ioana; Sevastre, Bogdan; Hathazi, Denisa; Scurtu, Florina; Damian, Grigore; **Silaghi-Dumitrescu, Radu. In vivo evaluation of hemerythrin-based oxygen carriers: similarities with hemoglobin-based counterparts.** International Journal of Biological Macromolecules 2017, 107, 1422-1427.
224. Lupan, Alexandru; King, R. Bruce; **Silaghi-Dumitrescu, Radu. Tetracapped tetrahedral ruthenium-sulfur clusters related to iron-sulfur structural units in metalloenzymes.** Inorganica Chimica Acta, 2018, 475, 193-199.
223. Mot, Augustin; C. Parvu, Marcel; Parvu, Alina E.; Rosca-Casian, Oana; Dina, Nicoleta E.; Leopold, Nicolae; **Silaghi-Dumitrescu, Radu; Mircea, Cristina. Reversible naltrexone-induced carotenoid depigmentation in *Rhodotorula mucilaginosa* (A. Jörg.) F.C. Harrison causing onychomycosis.** Scientific Reports, 2017, 7(1), 11125.
222. **Silaghi-Dumitrescu, Radu; Attia, Amr A. A.; Silaghi-Dumitrescu, Radu; Blake, Alexander J.; Sowerby, D. Bryan. Supramolecular architecture of [AsPh₂Br₂]₂[(Br₃)... (Br₂)... (Br₃)] obtained by bromination of (AsPh₂)₂S.** Inorganica Chimica Acta, 2018, 475, 120-126.
221. Hanganu, Daniela; Benedec, Daniela; Vlase, Laurian; Olah, Noemi; Damian, Grigore; **Silaghi-Dumitrescu, Radu, Moț, Augustin; Toma, C. Polyphenolic profile and antioxidant and antibacterial activities from two trifolium species.** Farmacia, 2017, 65(3), 449-453.
220. Dereven'kov, Ilia; Ivlev, Pavel; Bischin, Cristina; Salnikov, Denis; **Silaghi-Dumitrescu, Radu; Makarov, Sergei; Koifman, Oscar. Comparative studies of reaction of cobalamin (ii) and cobinamide (ii) with sulfur dioxide.** Journal of Biological Inorganic Chemistry, 2017, 22(2), 969-975.
219. **Silaghi-Dumitrescu, Radu. Arguable precedence for the World Wars of the XXth century.** Social Evolution & History, 2018, 17(2), 96-108.
218. Bischin, Cristina; Attia, Amr A. A.; **Silaghi-Dumitrescu, Radu. Chlorite reactivity with myoglobin: analogy with peroxide and nitrite chemistry?** Journal of Inorganic Biochemistry, 2017, 172, 122-128.
217. Dereven'kov, Ilia A.; Ivlev, Pavel A.; Salnikov, Denis S.; Bischin, Cristina; Attia, Amr A. A.; **Silaghi-Dumitrescu, Radu; Makarov, Sergei V. Studies of reaction of tetramethylthiourea with hydrogen peroxide: evidence of formation of tetramethylthiourea monoxide as a key intermediate of the reaction.** Journal of Sulfur Chemistry 2017, 38(5), 496-509.
216. **Silaghi-Dumitrescu, Radu; Mihály, Béla; Mihály, Timea; Attia, Amr A. A.; Sanz Miguel, Pablo J.; Lippert, Bernhard. The exocyclic amino group of adenine in Pt II and Pd II complexes: a critical comparison of the X-ray crystallographic structural data and gas phase calculations.** Journal of Biological Inorganic Chemistry, 2017, 22(4), 567-579.
215. Toma, Vlad Al.; Farcas, Anca D.; Parvu, Marcel; **Silaghi-Dumitrescu, Radu; Roman, Ioana. CA3 hippocampal field: cellular changes and its relation with blood nitro-oxidative stress reveal a balancing function of CA3 area in rats exposed to**

repeated restraint stress. Brain Research Bulletin, 2017, 130, 10-17.

214. **Silaghi-Dumitrescu Radu. Fatalism and inaction associations with the Romanian Ballad of the Little Ewe.** Venets: The Belogradchik Journal for Local History, Cultural Heritage and Folk Studies, 2016, 7(3), 332-341.

213. Arkosi, Mariann; Scurtu, Florina; Vulpoi, Adriana; **Silaghi-Dumitrescu Radu**; Kurtz, Donald M. Jr. **Copolymerization of recombinant *Phascolopsis gouldii* hemerythrin with human serum albumin for use in blood substitutes.** Artificial Cells, Nanomedicine, and Biotechnology 2017, 45(2), 218-223.

212. Attia, Amr A. A.; Cioloboc, Daniela; Lupan, Alexandru; **Silaghi-Dumitrescu, Radu. Multiconfigurational and DFT analyses of the electromeric formulation and UVVis absorption spectra of the superoxide adduct of ferrous superoxide reductase.** Journal of Inorganic Biochemistry, 2016, 165, 49-53.

211. Benedec, Daniela; Hanganu, Daniela; Oniga, Ilioaara; Filip, Lorena; Bischin, Cristina; **Silaghi-Dumitrescu, Radu**; Tipericiuc, Brîndușa; Vlase, Laurian. ***Achillea schurii* flowers: chemical, antioxidant, and antimicrobial investigations.** Molecules, 2016, 21(8), 1050.

210. Attia, Amr A. A.; **Silaghi-Dumitrescu, Radu . A mononuclear non-heme-iron dioxygen-carrying protein?** Journal of Molecular Graphics and Modelling, 2016, 69, 103-110.

209. Szávuly, Miklós István; Surducun, Mihai; Nagy, Emőke; Surányi, Mátyás; Speier, Gábor; **Silaghi-Dumitrescu, Radu**; Kaizer, József. **Functional models of nonheme diiron enzymes: kinetic and computational evidence for the formation of oxoiron(IV) species from peroxo-diiron(III) complexes, and their reactivity towards phenols and H₂O₂.** Dalton Transactions, 2016, 45, 14709-14718.

208. **Silaghi-Dumitrescu, Radu**; Cioloboc, Daniela. **Comparative computational characterization of ferric cytochrome P450 and superoxide reductase binding to cyanide.** Studia Universitatis Babes-Bolyai Seria Chemia, 2016, 61(3), 45-54.

207. Benedec, Daniela; Popica, Iulia-Elena; Oniga, Ilioaara; Hanganu, Daniela; Duma, Mihaela; **Silaghi-Dumitrescu, Radu**; Bischin, Cristina; Vlase, Laurian. **Comparative HPLC-MS analysis of phenolics from *Achillea distans* and *Achillea millefolium* and their bioactivity.** Studia Universitatis Babes-Bolyai Seria Chemia 2015, LX(4), 257-266.

206. Toma, Vlad Al.; Farcaș, Anca D.; Roman, Ioana; Sevastre, Bogdan; Hathazi, Denisa; Scurtu, Florina; Damian, Grigore; **Silaghi-Dumitrescu, Radu. Comparative in vivo effects of hemoglobin-based oxygen carriers (HBOC) with varying prooxidant and physiological reactivity.** PLoS One, 2016, 11(4): e0153909. doi:10.1371/journal.pone.0153909

205. Lupan, Alexandru; Țolan, Roxana; **Silaghi-Dumitrescu, Radu. Copper-porphyrins electronic structure with different axial ligands.** Journal of the Chemical Society of Pakistan, 2016, 38(3), 405-414.

204. **Silaghi-Dumitrescu, Radu. Editorial: Inorganic biochemistry – a brief scientometric perspective with focus on eastern Europe and Romania.** Acta Metallomica, 2014, XI(2), 3-14.

203. Mocan, Andrei; Vlase, Laurian; Arsene, Andreea; Vodnar, Dan; Bischin, Cristina; **Silaghi-Dumitrescu, Radu**; Crisan, Geanina. **HPLC/MS analysis of caffeic and chlorogenic acids from three Romanian *Veronica* species and their antioxidant and antimicrobial properties.** Farmacia, 2015, 63(6), 890-896.

202. Tamaian, Radu; Moț, Augustin C.; **Silaghi-Dumitrescu, Radu**; Ionuț, Ioana; Stana, Anca; Oniga, Ovidiu; Nastasă, Cristina; Benedec, Daniela; Tipericiuc, Brîndușa. **Study of the relationships between the structure, lipophilicity and biological activity of some thiazolyl-carbonyl-thiosemicarbazides and thiazolyl-azoles.** Molecules, 2015, 22188–22201.

201. Benedec, Daniela; Hanganu, Daniela; Oniga, Ilioaara; Tipericiuc, Brîndușa; Olah, Neli-Kinga; Raita, Oana; Bischin, Cristina; **Silaghi-Dumitrescu, Radu**; Vlase, Laurian. **Assessment of rosmarinic acid content in six *Lamiaceae* species extracts and their antioxidant and antimicrobial potential.** Pakistan Journal of Pharmaceutical Science, 2015, 28 (6(Suppl)), 2297-2303.

200. Dereven'kov, Iliia A.; Salnikov, Denis S.; **Silaghi-Dumitrescu, Radu**; Makarov, Sergei V.; Koiffman, Oscar I. **Redox chemistry of cobalamin and its derivatives.** Coordination Chemistry Reviews, 2016, 309, 68–83. DOI 10.1016/j.ccr.2015.11.001

199. Kakes, Melinda; Cioloboc, Daniela; Tomsa, Adrian-Raul; **Silaghi-Dumitrescu, Radu**; Damian Grigore. **Redox and ligand binding reactivity in iron and chromium –substituted polyoxometalates.** Revue Roumaine de Chimie, 2015, 60(7-8), 707-720.

198. Toma, Vlad; Farcaș, Anca; Hathazi, Denisa; Fischer-Fodor, Eva; Scurtu, Florina; Roman, Ioana; Sevastre, Bogdan; **Silaghi-Dumitrescu, Radu. Hemoglobin and hemerythrin based blood substitutes.** Romanian Journal of Biochemistry, 2014, 51, Suppl., 90.

197. Bischin, Cristina; **Silaghi-Dumitrescu, Radu. Hypochlorite activation at the heme iron center of hemoglobin.** Romanian Journal of Biochemistry 2014, 51, Suppl., 49.

196. Bischin, Cristina; **Silaghi-Dumitrescu, Radu. Hypochlorite activation at the heme iron center of hemoglobin.** Journal of Biological Inorganic Chemistry 2014, 19, S848-S848.

195. Scurtu, Florina; Hathazi, Denisa; Moț, Augustin; Vaida, Anetta; Fischer-Fodor, Eva; Damian, Grigore ; Kurtz, Donald; Toma, Vlad; Farcaș, Anca; Roman, Ioana; **Silaghi-Dumitrescu, Radu. Hemoglobin and hemerythrin based blood substitutes.** Journal of Biological Inorganic Chemistry 2014, 19, S848-S849.

194. **Silaghi-Dumitrescu, Radu. A scientometrics-informed peer-review exercise.** Revista de Politica Științei și Scientometrie

2015, 4(3), 234-237.

193. Porteka, Bernadett; Moț, Augustin C.; Cimpoiu, Claudia; Hosu, Anamaria; Bischin, Cristina; Damian, Grigore; Fisher-Fodor, Eva; **Silaghi-Dumitrescu, Radu. Selective protective effect of antioxidant-rich *Rumex acetosa* extracts.** *Revista de Chimie*, 2016, 67(5), 833-837.

192. **Silaghi-Dumitrescu, Radu;** Scurtu, Florina; Mason, Maria; Svistunenکو, Dimitri A.; Wilson, Michael T.; Cooper, Chris E. **The reaction of oxyhemoglobin with nitric oxide: EPR evidence for an iron(III)-nitrate intermediate.** *Inorganica Chimica Acta*, 2015, 436, 179–183.

191. Moț, Augustin C.; Bischin, Cristina; Muresan, Bianca; Parvu, Marcel; Damian, Grigore; Vlase, Laurian; **Silaghi-Dumitrescu, Radu. Antioxidant activity evaluation by physiologically relevant assays based on haemoglobin peroxidase activity and cytochrome c-induced oxidation of liposomes.** *Natural Product Research*, 2016, 1315-1319. doi.org/10.1080/14786419.2015.1054824

190. Mureșan, Bianca; Cimpoiu, Claudia; Hosu, Anamaria; Bischin, Cristina; Gal, Emese; Damian, Grigore; Fischer-Fodor, Eva; **Silaghi-Dumitrescu, Radu. Antioxidant content in romanian traditional distilled alcoholic beverages.** *Studia Universitatis Babes-Bolyai Seria Chemia*, 2015, LX(2), 355-370.

189. **Silaghi-Dumitrescu, Radu. Manifestul de la Leiden: un simptom și un îndeemn (The Leiden manifesto: a symptom and an impulse).** *Revista de Politică Științei și Scientometrie*, 2015, 4(2), 125-129.

188. **Silaghi-Dumitrescu, Radu. Is a mega-project the ELI in the room?** *Correspondence to Nature*, 2015, 520, 295.

187. Attia, Amr A. A.; **Silaghi-Dumitrescu, Radu. Bacterial nitric oxide reductase: a mechanism revisited by an ONIOM (DFT:MM) study.** *Journal of Molecular Modeling*, 2015, 21, 130-142.

186. Attia, Amr A. A.; Dereven'kov, Ilia A.; **Silaghi-Dumitrescu, Radu. Ruthenium dinitrosyl complexes – computational characterization of structure and reactivity.** *Journal of Coordination Chemistry*, 2015, 68(14), 2409-2422. DOI:10.1080/00958972.2015.1041936

185. Saplonțai-Pop, Aniela; Moț, Augustin; Moldovan, Marioara; Oprean, Radu; **Silaghi-Dumitrescu, Radu;** Orășan, Olga; Pârnu, Marcel; Gal, Emese; Ionescu, Corina. **Testing antiplatelet and antioxidant activity of the extract of seven varieties of *Allium cepa* L.** *Open Life Sciences*, 2015, 10, 89–98.

184. Dezsi, Ștefan; Bădărău, Alexandru Sabin; Bischin, Cristina; Vodnar, Dan Cristian; **Silaghi-Dumitrescu, Radu;** Gheldiu, Ana-Maria; Mocan, Andrei; Vlase, Laurian. **Antimicrobial and Antioxidant activities and phenolic profile of *Eucalytus globulus* Labill. and *Corymbia ficifolia* (F.Muell.) K.D.Hill & L.A.S. Johnson leaves.** *Molecules*, 2015, 20, 4720-4734; doi:10.3390/molecules20034720

183. **Silaghi-Dumitrescu, Radu;** Cioloboc, Daniela. **Peroxide binding to Fe(IV) centers: involvement of Fe(III)-superoxide redox isomers.** *Studia UBB Physica*, 2014, 59(2), 47-57.

182. Lakk-Bogáth, Dóra; Speier, Gábor; Surducuan, Mihai; **Silaghi-Dumitrescu, Radu;** Simaan, A. Jalila; Faure, Bruno; Kaizer, József. **Comparison of heme and nonheme iron-based 1-aminocyclopropane-1-carboxylic acid oxidase mimics: kinetic, mechanistic and computational studies.** *RSC Advances*, 2015, 5, 2075–2079.

181. **Silaghi-Dumitrescu, Radu;** Carrascoza Mayen, Juan Francisco. **A twist in the anomeric effect.** *Studia Universitatis Babes-Bolyai Seria Chemia* 2014, LIX(3), 95-101.

180. Carrascoza, Francisco; Lupan, Alexandru; Cosar, Ciprian; Kun, Attila; **Silaghi-Dumitrescu, Radu. On the roles of the alanine and serine in the β sheet structure of fibroin.** *Biophysical Chemistry*, 2015, 197, 10-17.

179. Mahut, Sonia; **Silaghi-Dumitrescu, Radu. CO in bioinorganic chemistry.** *Acta Metallomica*, 2014, XI(1), 59-64.

178. Attia, Amr; **Silaghi-Dumitrescu, Radu. Computational Investigation of the initial two-electron, two-proton steps in the reaction mechanism of hydroxylamine oxidoreductase.** *Journal of Physical Chemistry B*, 2014, 118(42), 12140-5 .

177. Attia, Amr Ali; **Silaghi-Dumitrescu, Radu. The Super-reduced mechanism of nitric oxide reduction in flavo-diiron NO reductases.** *European Journal of Inorganic Chemistry*, 2014, 6061–6065. DOI: 10.1002/ejic.201402385

176. Surducuan, Mihai; Makarov, Sergei V.; **Silaghi-Dumitrescu, Radu. O-S bond activation in structures isoelectronic to ferric-peroxide species known in O-O-activating enzymes: relevance for sulfide activation and sulfite reductase.** *European Journal of Inorganic Chemistry*, 2014, 34, 5827–5837 DOI: 10.1002/ejic.201402657

175. **Silaghi-Dumitrescu, Radu;** Svistunenکو, Dimitri A.; Cioloboc, Daniela; Bischin, Cristina; Scurtu, Florina; Cooper, Chris E. **Nitrite binding to globins: linkage isomerism, EPR silence and reductive chemistry.** *Nitric Oxide – Biology and Chemistry*, 2014, 42C, 32-39.

174. Hathazi, Denisa; Mahuț, Sonia Diana; Scurtu, Florina-Violeta; Bischin, Cristina; Stanciu, Corina; Attia, Amr Ali; Damian, Grigore;

Silaghi-Dumitrescu, Radu. Involvement of ferryl in the reaction between nitrite and the oxy forms of globins. Journal of Biological Inorganic Chemistry, 2014, 19, (7), 1233-1239. DOI: 10.1007/s00775-014-1181-y

173. Mocan, Andrei; Vlase, Laurian; Vodnar, Dan Cristian; Bischin, Cristina; Hanganu, Daniela; Gheldiu, Ana-Maria; Oprean, Radu; **Silaghi-Dumitrescu, Radu;** Crișan, Gianina. **Polyphenolic content, antioxidant and antimicrobial activities of *Lycium barbarum L.* and *Lycium chinense Mill.* leaves.** Molecules, 2014, 19, 10056-10073; DOI:10.3390/molecules190710056

172. **Silaghi-Dumitrescu, Radu;** Simon, Simion; Filipescu, Sorin; Ploscariu, Augusta. **Implementation of a scientometric-based evaluation system for research units at a Romanian University.** Revista de Politică Științei și Scientometrie, 2014, 3(2), 151-165.

171. Makarov, Sergei V.; Horváth, Attila K.; **Silaghi-Dumitrescu, Radu;** Gao, Qingyu. **Recent developments in the chemistry of thiourea oxides.** Chemistry – A European Journal, 2014, 20(44), 14164–14176. DOI: 10.1002/chem.201403453 – featured online by the journal.

170. Benedec, Daniela; Oniga, Iliora; Muresan, Bianca; Mot, Augustin C.; Damian, Grigore; Nistor, Adriana; **Silaghi-Dumitrescu, Radu;** Hanganu, Daniela; Duma, Mihaela; Vlase, Laurian. **Contrast between water and ethanol based antioxidant assays. Aspen (*Populus tremula*) and black poplar (*Populus nigra*) extracts as a case study.** Journal of Food Quality, 2014, 37(4), 259-267.

169. Parvu, Alina Elena; Parvu, Marcel; Vlase, Laurian; Miclea, Patricia; Mot, Augustin C.; **Silaghi-Dumitrescu, Radu.** **Anti-inflammatory effects of *Allium schoenoprasum L.* leaves.** Journal of Physiology and Pharmacology, 2014, 65, 2, 309-315.

168. Lupan, Alexandru; Attia, Amr; **Silaghi-Dumitrescu, Radu;** Makarov, Sergei V.; Vanin, Anatoly F. **Structural and electronic isomerism in Fe,S centers.** Journal of Biological Inorganic Chemistry, 2014, 19, S279.

167. **Silaghi-Dumitrescu, Radu.** **Nitrite and globins: linkage isomerism and redox processes.** Journal of Biological Inorganic Chemistry, 2014, 19, S277.

166. Vlase, Laurian; Benedec, Daniela; Hanganu, Daniela; Damian, Grigore; Csillag, Ioan; Sevastre, Bogdan; Mot, Augustin C.; **Silaghi-Dumitrescu, Radu;** Tilea, Ioan. **Evaluation of antioxidant and antimicrobial activities and phenolic profile for *Hyssopus officinalis*, *Ocimum basilicum* and *Teucrium chamaedrys* from Romania.** Molecules, 2014, 19(5), 5490-5507. Doi:10.3390/molecules19055490

165. Attia, Amr Ali; Makarov, Sergei V., Vanin, Anatoly F., **Silaghi-Dumitrescu, Radu.** **Asymmetry within the Fe(NO)₂ moiety of dithiolate dinitrosyl complexes.** Inorganica Chimica Acta, 2014, 418, 42-50.

164. Hathazi, Denisa; Mot, Augustin C; Vaida, Anetta; Scurtu, Florina; Lupan, Iulia; Fischer-Fodor, Eva; Damian, Grigore; Kurtz, Jr., Donald M.; **Silaghi-Dumitrescu, Radu.** **Oxidative protection of hemoglobin and hemerythrin by cross-linking with a non-heme iron peroxidase: potentially improved oxygen carriers for use in blood substitutes.** Biomacromolecules, 2014, 15(5), 1920-1927.

163. Carrascoza, Francisco; Zaric, Snezana; **Silaghi-Dumitrescu, Radu.** **Computational study of protein secondary structure elements: Ramachandran plots revisited.** Journal of Molecular Graphics and Modelling, 2014, 50, 125-133.

162. Surducu, Mihai; Makarov, Sergei V.; **Silaghi-Dumitrescu, Radu.** **Redox and linkage isomerism with ligands relevant to oxidative and nitrosative stress in cobalamin.** Polyhedron, 2014, 78, 72-84.

161. Attia, Amr Ali; **Silaghi-Dumitrescu, Radu.** **A theoretical study on the reaction pathways of peroxyxynitrite formation and decay at non-heme iron centers.** International Journal of Quantum Chemistry, 2014, 14(10), 652-665.

160. Gârban, Zeno; **Silaghi-Dumitrescu, Radu;** Gârban, Gabriela; Avacovici, Adina; Hădărugă, Nicoleta; Baltă, C.; Ghibu, G.-D.; Bischin, Cristina; Rada, Olga-Alina. **Metallomics related to gallium compounds: biochemical and xenobiochemical aspects.** Macedonian Journal of Chemistry and Chemical Engineering, 2014, 33(1), 39-52.

159. Takacs, Istvan Mihaly; Mot, Augustin; **Silaghi-Dumitrescu, Radu;** Damian, Grigore. **EPR investigation of libration motion of spin labeled hemerythrin.** Journal of Molecular Structure, 2014, 1073, 18-23. 10.1016/j.molstruc.2014.01.074

158. Papp, Anita; Surducu, Mihai; **Silaghi-Dumitrescu, Radu.** **Dioxygen activation by copper-bleomycin: theoretical considerations.** Croatica Chemica Acta, 2014, 87 (1), 75–78.

157. **Silaghi-Dumitrescu, Radu;** Sabau, Augusta. **Scientometric analysis of relative performance in a key university in Romania.** Scientometrics, 2014, 99(2), 463-474. DOI: 10.1007/s11192-014-1232-8

156. Mot, Augustin C.; Bischin, Cristina; Damian, Grigore; **Silaghi-Dumitrescu, Radu.** **Antioxidant activity evaluation involving hemoglobin-related free radical reactivity.** Advanced Protocols in Oxidative Stress III, Methods in Molecular Biology, ed. Donald Armstrong, 2015, 1208, 247-255.

155. Bischin, Cristina; Tusan, Camelia; Bartok, Agota; Septelean, Raluca; Damian, Grigore; **Silaghi-Dumitrescu, Radu.** **Evaluation of the biochemical effects of silyl-phosphaalkenes on oxidative and nitrosative stress pathways involving metalcenters.**

Phosphorus, Sulfur, and Silicon and the Related Elements, 2014, 189, 1-8.

154. Cîrneai, Dragos; **Silaghi-Dumitrescu, Radu**. **Learning tasks as a possible treatment for DNA lesions induced by oxidative stress in hippocampal neurons**. *Neural Regeneration Research*, 2013, 8(32), 3063-3070. doi:10.3969/j.issn.1673-5374.2013.32.010

153. Cioloboc, Daniela; Arkosi, Mariann; **Silaghi-Dumitrescu, Radu**. **A new protocol for purifying human serum albumin**. *Studia Universitatis Babes-Bolyai Seria Chemia*, 2013, LVIII (3), 27-32.

152. Gârban, Gabriela; **Silaghi-Dumitrescu, Radu**; Ioniță, Hortensia; Gârban, Zeno; Hădărugă, Nicoleta-Gabriela; Ghibu, George-Daniel; Baltă, Cornel; Simiz, Florin-Dan; Mitar, Carmen. **Influence of novel gallium complexes on the homeostasis of some biochemical and hematological parameters in rats**. *Biological Trace Element Research*, 2013, 155 (3), 387-395. DOI: 10.1007/s12011-013-9796-3

151. Gaina, Luiza Torje, Ioana; Gal, Emese; Cristea, Castelia; Lupan, Alexandru; Bischin, Cristina; **Silaghi-Dumitrescu, Radu**; Lonneck, Peter; **Silaghi-Dumitrescu Luminita**. **Microwave assisted synthesis photophysical and redox properties of phenothiazinil-vinil-piridinium dyes**. *Dyes and Pigments*, 2014, 102C, 315-325. DOI:10.1016/j.dyepig.2013.10.044

150. Attia, Amr Ali Ahmed Ali; Lupan, Alexandru; **Silaghi-Dumitrescu, Radu**. **Spin state preference and bond formation/cleavage barriers in ferrous-dioxygen heme adducts: remarkable dependence on methodology**. *RSC Advances*, 2013, 3 (48), 26194–26204. DOI:10.1039/C3RA45789C

149. Podea, Paula; Prejmerean, Cristina; Surducian, Mihai; **Silaghi-Dumitrescu, Radu**. **Computational analysis of dental material monomer bisphenolglycidylmethacrylate (BisGMA)**. *Journal of Optoelectronics and Advanced Materials*, 2013, 15(9-10), 1095-1100.

148. Mot, Augustin; Damian, Grigore; Coman, Cristina; Miron, Carmen; Sarbu, Costel; **Silaghi-Dumitrescu, Radu**. **An assay for prooxidant reactivity based on phenoxyl radicals generated by laccase**. *Food Chemistry*, 2014, 143, 214-222.

147. Takacs, Istvan Mihaly; Mot, Augustin; **Silaghi-Dumitrescu, Radu**, Damian, Grigore. **Site directed spin labeling of hemerythrin and hemoglobin**. *Studia Universitatis Babes-Bolyai Seria Chemia*, 2013, LVIII, 2, 61 – 69.

146. Benedec, Daniela Vlase, Laurian Oniga, Ilioara Mot, Augustin; Damian, Grigore Hanganu, Daniela; Duma, Mihaela; **Silaghi-Dumitrescu, Radu**. **polyphenolic composition, antioxidant and antibacterial activities for two Romanian subspecies of *Achillea distans Waldst. et Kit. ex Willd.*** *Molecules*, 2013, 18(8), 8725-39.

145. Takacs, Istvan M; Mot, Augustin C; **Silaghi-Dumitrescu, Radu**; Damian, Grigore. **Study of mobility hemoglobin side chains by spin labelled EPR spectroscopy**. *Studia Universitatis Babes-Bolyai Seria Physica*, 2013, 58(1), 49-58.

144. Scurtu, Violeta-Florina; Mot, Augustin C.; **Silaghi-Dumitrescu, Radu**. **Protein-based blood substitutes: recent attempts at controlling pro-oxidant reactivity with and beyond hemoglobin**. *Pharmaceuticals*, 2013, 6, 867-880; doi:10.3390/ph6070867

143. Benedec, Daniela; Vlase, Laurian; Oniga, Ilioara; Mot, Augustin C.; **Silaghi-Dumitrescu, Radu**; Hanganu, Daniela; Tipericiuc, Brîndușa; Crișan, Gianina. **LC-MS analysis and antioxidant activity of phenolic compounds from two indigenous species of *Mentha*. Note I**. *Farmacia*, 2013, 61(2), 262-267.

142. Coman, Cristina; Mot, Augustin; Gal, Emese; Parvu, Marcel; **Silaghi-Dumitrescu, Radu**. **Laccase is upregulated via stress pathways in the phytopathogenic fungus *Sclerotinia sclerotiorum***. *Fungal Biology*, 2013, 17(7-8), 528-39.

141. Găină, Luiza I.; Mătarângă-Popa, Larisa N.; Gal, Emese; Boar, Paul; Lönneck, Peter; Hey-Hawkins, Evamarie; Bischin, Cristina; **Silaghi-Dumitrescu, Radu**; Lupan, Iulia; Cristea, Castelia; **Silaghi-Dumitrescu, Luminita**. **Microwave-assisted catalytic amination of phenothiazine – reliable access to phenothiazine analogues of Tröger's base**. *European Journal of Organic Chemistry*, 2013, 24, 5500-5508. DOI: 10.1002/ejoc.201300480

140. Bischin, Cristina; Țălu, Ștefan; **Silaghi-Dumitrescu, Radu**; Țălu, M.; Giovanzana, S.; Lupașcu, Carmen Alina. **Computerized morphometric assessment of the human red blood cells treated with cisplatin**. *Annals of the Romanian Society for Cell Biology* 2012, XVII(2), 105-110.

139. Dereven'kov, Ilia A.; Salnikov, Denis S.; Makarov, Sergei V.; Surducian, Mihai; **Silaghi-Dumitrescu, Radu**; Boss, Gerry R. **Comparative study of reaction of cobalamin and cobinamide with thiocyanate**. *Journal of Inorganic Biochemistry*, 2013, 125C:32-39. doi: 10.1016/j.jinorgbio.2013.04.011

138. Scurtu, Florina; Zolog, Oana; Iacob, Bianca; **Silaghi-Dumitrescu, Radu**. **Hemoglobin-albumin crosslinking with disuccinimidyl suberate (DSS) and/or glutaraldehyde for blood substitutes**. *Artificial Cells Nanomedicine and Biotechnology*, 2014, 42(1), 13-17.

137. Tamokou, Jean de Dieu; Chouna, Jean Rodolphe; Fischer-Fodor, Eva; Chereches, Gabriela; Barbos, Otilia; Damian, Grigore; Benedec, Daniela; Duma, Mihaela; Efouet, Alango Pépin Nkeng; Wabo, Hippolyte Kamdem; Kuate, Jules Roger; Mot, Augustin; **Silaghi-Dumitrescu, Radu**. **Anticancer and antimicrobial activities of some antioxidant-rich Cameroonian medicinal plants**. *PLoS ONE*, 2013, 8(2):e55880. doi: 10.1371/journal.pone.0055880

136. **Silaghi-Dumitrescu, Radu**; Lupan, Alexandru. **Weak sulfur-sulfur interactions between chemically-identical atoms**.

Central European Journal of Chemistry, 2013, 11(3), 457-463. DOI: 10.2478/s11532-012-0178-z

135. **Silaghi-Dumitrescu, Radu**; Ghinga, Radu. **Electronic structure contributions towards the anomeric effect**. Revista de Chimie, 2013, 64(3), 246-248.

134. Makarov, Sergei V.; **Silaghi-Dumitrescu, Radu**. Sodium dithionite and its relatives: past and present. Journal of Sulfur Chemistry, 2013, 34, 444-449. DOI:10.1080/17415993.2012.749878

133. Tebrean, Bogdan; **Silaghi-Dumitrescu, Radu**; Crisan, Titus Eduard. **Modelling of a capsule for controlled slow delivery, monitored via a capacitive method**. Acta Electrotehnica, 2012, 53(4), 323.

132. Tebrean, Bogdan; **Silaghi-Dumitrescu, Radu**; Crisan, Titus Eduard. **Modelling of coplanar capacitors for dermal or transdermal drug delivery system monitoring**. Proceedings of the Romanian Academy Ser. A, 2013, 14(2), 134-143.

131. Attia, Amr Ali Ahmed Ali; Cioloboc, Daniela; Lupan, Alexandru; **Silaghi-Dumitrescu, Radu**. **Fe-O versus O-O bond cleavage in reactive iron-peroxide intermediates of superoxide reductase**. Journal of Biological Inorganic Chemistry, 2013, 18(1), 95-101. DOI 10.1007/s00775-012-0954-4

130. Stuzhin, Pavel A.; Ivanova, Svetlana S; Dereven'kov, Ilya; Makarov, Sergey V.; **Silaghi-Dumitrescu, Radu**; Homborg, Heiner. **First water-soluble μ -nitrido dimer of iron phthalocyanine**. Macrocyclics, 2012, 5(2), 175-177.

129. Valean, Ana-Maria; Gómez-Ruiz, Santiago; Lupan, Alexandru; **Silaghi-Dumitrescu, Radu**; Silaghi-Dumitrescu, Luminita; Hey-Hawkins, Evamarie. **Phosphinoarythiolato molybdenum and iron complexes $[M\{(SC_6H_4-2-PPh_2)-j_2S,P\}_2(CO)_2]$ (M = Mo, Fe): Analogous composition – Different structure**. Inorganica Chimica Acta, 2013, 394, 289-294.

128. Xie, Yaoming; Schaefer III, Henry F; **Silaghi-Dumitrescu, Radu**; Peng, Bin; Li, Qian-shu ; Stearns, Jaime A.; Rizzo, Thomas R. **Conformational preferences of gas-phase helices: experiment and theory struggle to agree: the seven-residue peptide Ac-Phe-(Ala)(5)-Lys-H(+)**. Chemistry – A European Journal, 2012, 18(41), 12941-12944. DOI: 10.1002/chem.201202068

127. Surducun, Mihai; Lup, Dorina; Lupan, Alexandru; Makarov, Sergei V.; **Silaghi-Dumitrescu, Radu**. **Electromerism and linkage isomerism in biologically-relevant Fe-SO complexes**. Journal of Inorganic Biochemistry, 2013, 118, 13–20.

126. Moț, Augustin C.; **Silaghi-Dumitrescu, Radu**. **Laccases: structures and mechanisms**. Biochemistry (Moscow), 2012, 77(12), 1395-1407.

125. Lupan, Alexandru; Kun, Attila; Carrascoza, Francisco; **Silaghi-Dumitrescu, Radu**. **Performance of computational methods for modeling alpha helical structures**. Journal of Molecular Modeling, 2013, 19(1), 193-203. DOI: 10.1007/s00894-012-1531-z

124. Prejmerean, Cristina, Moldovan, Marioara, Petrea, C.M., Prodan, Doina, Silaghi-Dumitrescu, Laura, Vasile, E., Furtos, Gabriel, Boboia, Stanca, **Silaghi-Dumitrescu, Radu**. **Physico-chemical and mechanical characterization of some experimental dental nanocomposites**. Materiale Plastice, 2011, 48, 279-284.

123. Imre, Anamaria; Moț, Augustin C; **Silaghi-Dumitrescu, Radu**. **Exploring the possibility of high-valent copper in models of copper proteins with a three-histidine copper-binding motif**. Central European Journal of Chemistry, 2012, 10(5), 1527-1533. Doi:10.2478/s11532-012-0069-3

122. **Silaghi-Dumitrescu, Radu**. **Redox activation of small molecules at biological metal centers**. Structure & Bonding, 2013, 150, 97-118.

121. Salnikov, Denis S.; Dereven'kov, Ilya A.; Makarov, Sergei V.; Ageeva, Elena S.; Lupan, Alexandru; Surducun, Mihai; **Silaghi-Dumitrescu, Radu**. **Kinetics of reduction of cobalamin by sulfoxylate in aqueous solutions**. Revue Roumaine de Chimie, 2012, 57 (4-5), 353-359.

120. Moț, Augustin C.; Pârnu, Marcel; Damian, Grigore; Irimie, Florin D.; Darula, Zsuzsanna; Medzihradzky, Katalin F.; Brem, Balazs; **Silaghi-Dumitrescu, Radu**. **A “yellow” laccase with “blue” spectroscopic features, from *Sclerotinia sclerotiorum***. Process Biochemistry, 2012, 47(6), 968–975.

119. **Silaghi-Dumitrescu, Radu**. **DFT vibrational analysis of metal-hydroperoxo bleomycin complexes**. Studia Universitatis Babes-Bolyai Chemia, 2012, 57(1), 213-217.

118. Cioloboc, Daniela; Tomsa, Adrian-Raul; Damian, Grigore; **Silaghi-Dumitrescu, Radu**. **High spin to low spin change induced by reductive chemistry with iron-substituted Dawson polyoxometalate**. Inorganic Chemistry Communications, 2012, 20, 70-72. DOI: 10.1016/j.inoche.2012.02.019

117. Kozma, Ágnes; Ibáñez, Susana; **Silaghi-Dumitrescu, Radu**; Sanz Miguel, Pablo J.; Gupta, Deepali; Lippert, Bernhard. **7-Methylguanine: protonation, formation of linkage isomers with trans-(NH₃)₂Pt^{II}, and base pairing properties**. Dalton Transactions, 2012, 41 (20), 6094 – 6103. (assigned as „hot article” by the journal)

116. Lupan, Alexandru; Matyas, Csongor; Moț, Augustin; **Silaghi-Dumitrescu, Radu**. **Can geometrical distortions make a laccase change color from blue to yellow?** Studia Universitatis Babes-Bolyai Chemia, 2011, 56(3), 201-206.

115. Prodan, Doina; Silaghi-Dumitrescu, Laura; Prejmerean, Cristina; **Silaghi-Dumitrescu, Radu**; Bolojan, Laura; Damian, Grigore. **Evaluation of free radical concentration in some new dental composite materials by ESR spectroscopy**. Studia Universitatis

Babes-Bolyai Chemia, 2011, 56(3), 231-238.

114. Mot, Augustin C.; Syrbu, Sergei A.; Makarov, Sergei V.; Damian, Grigore; **Silaghi-Dumitrescu, Radu. Axial ligation in water-soluble copper porphyrinates: contrasts between EPR and UV-vis.** Inorganic Chemistry Communications, 2012, 18(4), 1-3.

113. Iacob, Bianca; Deac, Florina; Cioloboc, Daniela; Damian, Grigore; **Silaghi-Dumitrescu, Radu. Hemoglobin-albumin crosslinked copolymers: reduced prooxidant reactivity.** Artificial Cells Blood Substitutes And Biotechnology, 2011, 39(5), 293-297.

112. **Silaghi-Dumitrescu, Radu; Mich, Mihaela; Matyas, Csongor; Cooper, Chris E. Nitrite and nitrate reduction by molybdenum centers of the nitrate reductase type: computational predictions on the catalytic mechanism.** Nitric Oxide, 2012, 26(1), 27-31

111. **Silaghi-Dumitrescu, Radu; Ghinga, Radu. A computational investigation of the decay mechanism of the reaction product of anthranilate dioxygenase (anthranilic acid diol).** Studia Universitatis Babes-Bolyai Chemia, 2011, 56(4), 49-54.

110. Bischin, Cristina; Taciuc, Vicentiu; **Silaghi-Dumitrescu, Radu. Cisplatin effect on hemoglobin and myoglobin autooxidation.** Studia Universitatis Babes-Bolyai Chemia, 2010, 55(4), 313-318.

109. Irsai, Izabella ; Majdik, Cornelia; Lupan, Alexandru; **Silaghi-Dumitrescu, Radu. Secondary structure elements in polylactic acid models.** Journal of Mathematical Chemistry, 2011, 50(4), 703-733.

108. Salnikov, Denis S.; **Silaghi-Dumitrescu, Radu; Makarov, Sergei V.; van Eldik R, Boss GR Cobalamin reduction by dithionite. Evidence for the formation of a six-coordinate cobalamin(II) complex.** Dalton Transactions, 2011, 40(38), 9831-4.

107. Prejmorean, Cristina; Moldovan, Marioara; Silaghi-Dumitrescu, Laura; Prodan, Doina; Furtos, Gabriel; Trif, Marcela; Popescu, Violeta; Pascalau, Violeta; Petrea, Celina-Maria; **Silaghi-Dumitrescu, Radu. Composition versus physico-mechanical properties of some dental experimental polymers.** Materiale Plastice, 2011, 48(1), 27-32.

106. **Silaghi-Dumitrescu, Radu; Makarov, Sergei V.; Uta, Matei-Maria Dereven'kov, Ilia A.; Stuzhin Pavel A. Redox non-innocence of a nitrido bridge in a methane-activating dimer of iron phthalocyanine.** New Journal of Chemistry, 2011, 35(5), 1140-1145.

105. **Silaghi-Dumitrescu, Radu. What causes iron-sulphur bonds in active sites of one-iron superoxide reductase and two-iron superoxide reductase to differ?** Chemical Papers, 2011, 65 (4), 559–565.

104. Bischin, Cristina; Lupan, Alexandru; Taciuc, Vicentiu; **Silaghi-Dumitrescu, Radu. Interactions between proteins and platinum-containing anti-cancer drugs.** Mini-Reviews in Medicinal Chemistry, 2011, 11, 214-224.

103. Fischer-Fodor, Eva; Mot, Augustin; Deac, Florina; Arkosi, Mariann; **Silaghi-Dumitrescu, Radu. Towards hemerythrin-based blood substitutes: comparative performance to hemoglobin on human leukocytes and umbilical vein endothelial cells.** Journal of Biosciences, 2011, 36(2), 215-221.

102. **Silaghi-Dumitrescu, Radu; Makarov, Sergei. Siroheme-containing sulfite reductase: a density functional investigation of the mechanism.** International Journal of Quantum Chemistry, 2012, 112(3), 900-908.

101. **Silaghi-Dumitrescu, Radu. Assays for peroxidase activity: the HRP case,** Studia Universitatis Babes-Bolyai Chemia, 2010, 55(3), 207-222.

100. Kun, Attila; Lupan, Alexandru; **Silaghi-Dumitrescu, Radu. PM6 modeling of alpha helical polypeptide structures,** Studia Universitatis Babes-Bolyai Chemia, 2010, 55(1), 31-36.

99. Zolog, Oana; Mot, Augustin; Deac, Florina; Roman, Alina; Fischer-Fodor, Eva; **Silaghi-Dumitrescu, Radu. A new polyethyleneglycol-derivatized hemoglobin derivative with decreased oxygen affinity and limited toxicity.** The Protein Journal, 2010, 30(1), 27–31.

98. Deac, Florina-Violeta; Bolfa, Ana Maria; Magdas, Cristian; Sevastre, Bogdan; Turc, Silvia; **Silaghi-Dumitrescu, Radu. Hemoglobin-based blood substitutes: which hemoglobin to use?** Romanian Journal of Biochemistry, 2010, 47(2), 135–141.

97. Mot, Augustin; **Silaghi-Dumitrescu, Radu; Sarbu, Costel. Rapid and effective evaluation of antioxidant capacity of propolis extracts using DPPH bleaching kinetic profiles, FT-IR and UV-vis spectral data.** Journal of Food Composition and Analysis, 2011, 516–522.

96. Deac, Florina; Cotolan, Nicoleta; Kis, Zoltan; **Silaghi-Dumitrescu, Radu. A dithionite-induced six-coordinated species at the heme in deoxy-hemoglobin,** Metal Elements in Environment, Medicine and Biology Tome X, Radu Silaghi-Dumitrescu, Gabriela Garban, Eds., 2010, Eurobit Publishing House, Timisoara, Romania, pp 121-126.

95. Lupan, Alexandru; Kun, Attila; **Silaghi-Dumitrescu, Radu. Computational modeling metal-protein interactions: cisplatin,** Metal Elements in Environment, Medicine and Biology Tome X, Radu Silaghi-Dumitrescu, Gabriela Garban, Eds., 2010, Eurobit Publishing House, Timisoara, Romania, pp 199-204.

94. Bischin, Cristina; Taciuc, Vicentiu; **Silaghi-Dumitrescu, Radu. Effects of antioxidants in cisplatin toxicology,** Metal Elements in Environment, Medicine and Biology Tome X, Radu Silaghi-Dumitrescu, Gabriela Garban, Eds., 2010, Eurobit Publishing House,

Timisoara, Romania, pp 265-270.

93. **Silaghi-Dumitrescu, Radu**; Seff, Amalia-Laura. **Superoxide reductase: a debated mechanism, comparison with superoxide dismutases**, Metal Elements in Environment, Medicine and Biology Tome X, Radu Silaghi-Dumitrescu, Gabriela Garban, Eds., 2010, Eurobit Publishing House, Timisoara, Romania, pp 21-26.
92. Bischin, Cristina; Deac, Florina; **Silaghi-Dumitrescu, Radu**; Worrall, Jonathan A. R.; Rajagopal, Badri S.; Damian, Grigore; Cooper, Chris E. **Ascorbate peroxidase activity of cytochrome c**, Free Radical Research, 2010, 45(4), 439-444.
91. Deac, Florina; Iacob, Bianca; Fischer-Fodor, Eva; Damian, Grigore; **Silaghi-Dumitrescu, Radu**. **Derivatization of hemoglobin with periodate-generated reticulation agents: evaluation of oxidative reactivity for potential blood substitutes**. Journal of Biochemistry, 2010, 149(1), 75-82.
90. Mot, Augustin C.; Roman, Alina; Lupan, Iulia; Kurtz, Jr. Donald M.; **Silaghi-Dumitrescu, Radu**. **Towards the development of hemerythrin-based blood substitutes**. The Protein Journal, 2010, 29(6), 387-393.
89. **Silaghi-Dumitrescu, Radu**. **High-valent metalloporphyrins in hydrocarbon activation: metal(V)-oxo or metal(V)-hydroxo?** New Journal of Chemistry, 2010, 34(9), 1830-1833.
88. **Silaghi-Dumitrescu, Radu**, Uta, Matei-Maria; Makarov, Sergei V. **Nitrite linkage isomerism in hemes and related complexes: modulation by metal, oxidation state, macrocycle, and medium polarity**. Revue Roumaine de Chimie, 2010, 55(11-12), 897-903.
87. **Silaghi-Dumitrescu, Radu**. **Computational analysis of bonding in PhIO and related 'hypervalent' iodine complexes**. Studia Universitatis Babes-Bolyai Chemia, 2010, 55(2), 63-67.
86. **Silaghi-Dumitrescu, Radu**; Makarov, Sergei V. **A computational analysis of electromerism in hemoprotein Fe(II) models**. Journal of Biological Inorganic Chemistry, 2010, 15(6), 977-986.
85. Tomşa, Adrian-Raul; Cioloboc, Daniela; Todea, Ana Maria; **Silaghi-Dumitrescu, Radu**; Damian, Grigore; Rusu, Mariana. **Synthesis, spectroscopic and electrochemical characterization of a new chromium (III) substituted Dawson polyoxometalate**. Studia Universitatis Babes-Bolyai, Chemia, 2009, 54(4), 95-105.
84. **Silaghi-Dumitrescu, Radu**. **A density functional investigation of hydrogen peroxide activation by high-valent heme centers: implications for the catalase catalytic cycle**. Journal of Porphyrins and Phthalocyanines, 2010, 14(5), 371-374.
83. **Silaghi-Dumitrescu, Radu**. **Computational description of peptide architectures based on hydrogen bonds**. Studia Universitatis Babes-Bolyai Chemia, 2010, LV(1), 31-36.
82. Kis, Zoltan; Makarov, Sergei V; **Silaghi-Dumitrescu, Radu**. **Computational investigations on the electronic structure and reactivity of thiourea dioxide: sulfoxylate formation, tautomerism, dioxygen liberation**. Journal of Sulfur Chemistry, 2010, 31(1), 27-39.
81. **Silaghi-Dumitrescu, Radu**; Makarov, Sergei V. **Hydrocarbon oxygenation by metal-nitrite adducts: a theoretical comparison with ferryl-based oxygenation agents**. European Journal of Inorganic Chemistry, 2010, 39(6), 1464-6.
80. Mot, Augustin; Kis, Zoltan; Svistunenko, Dimitri A.; Damian, Grigore; Makarov, Sergei V.; **Silaghi-Dumitrescu, Radu**. **'Super-reduced' iron under physiologically-relevant conditions**. Dalton Transactions, 2010, 39(6), 1464-6.
79. Deac, Florina-Violeta; Todea, Anamaria; Bolfa, Ana Maria; Podea, Paula; Petrar, Petronela; **Silaghi-Dumitrescu, Radu**. **Ascorbate binding to globins**. Romanian Journal of Biochemistry, 2009, 46(2), 115-121.
78. Mot, Augustin Catalin; Damian, Grigore; Sarbu, Costel; **Silaghi-Dumitrescu, Radu**. **Redox reactivity in propolis: direct detection of free radicals in basic medium and interaction with hemoglobin**. Redox Report, 2009, 14(6), 267-74.
77. Arkosi, Mariann-Kinga; Deac, Florina; **Silaghi-Dumitrescu, Radu**. **Hemoglobin peroxidase activity: interaction with hydroquinone and anthracene**. Metal Elements in Environment, Medicine and Biology Tome IX, Radu Silaghi-Dumitrescu, Gabriela Garban, Eds., 2009, Cluj University Press, Cluj-Napoca, Romania, pp 99-110.
76. Mot, Augustin; Roman, Alina; **Silaghi-Dumitrescu, Radu**. **Blood substitutes: can we do without hemoglobin?** Metal Elements in Environment, Medicine and Biology Tome IX, Radu Silaghi-Dumitrescu, Gabriela Garban, Eds., 2009, Cluj University Press, Cluj-Napoca, Romania, pp 122-125.
75. Taciuc, Vicentiu; Bischin, Cristina; **Silaghi-Dumitrescu, Radu**. **A novel mechanism for platinum-based drugs: cisplatin and related compounds as pro-oxidants in blood**. Metal Elements in Environment, Medicine and Biology Tome IX, Radu Silaghi-Dumitrescu, Gabriela Garban, Eds., 2009, Cluj University Press, Cluj-Napoca, Romania, pp 130-134.
74. Deac, Florina; Todea, Anamaria; **Silaghi-Dumitrescu, Radu**. **Glutaraldehyde derivatization of hemoglobin: a potential blood substitute**. Metal Elements in Environment, Medicine and Biology Tome IX, Radu Silaghi-Dumitrescu, Gabriela Garban, Eds., 2009, Cluj University Press, Cluj-Napoca, Romania, pp 165-173.
73. **Silaghi-Dumitrescu, Radu**; Bischin, Cristina; Deac, Florina; Kis, Zoltan; Mot, Augustin; Makarov, Sergei V. **Unusual metal oxidation states in metalloproteins and related complexes: from degenerate orbitals to apoptosis**. Metal Elements in

Environment, Medicine and Biology Tome IX, Radu Silaghi-Dumitrescu, Gabriela Garban, Eds., 2009, Cluj University Press, Cluj-Napoca, Romania, pp 174-182.

72. **Silaghi-Dumitrescu, Radu. Superoxide interaction with nickel and iron superoxide dismutases.** Journal of Molecular Graphics and Modelling, 2009, 28(2), 156-61.

71. Haiduc, Ionel; Silaghi-Dumitrescu, Ioan; Garban, Zeno; Fischer-Fodor, Eva; **Silaghi-Dumitrescu, Radu. Metallomics.** Metal Elements in Environment, Medicine and Biology Tome VIII, Corneliu Davidescu, Gabriela Garban, Iosif Gergen, Simona Dragan, Nicolae Vaszilcsin, Adina Avacovici, Eds., 2008, Eurobit Publishing House, Timisoara, Romania, pp 5-14.

70. **Silaghi-Dumitrescu, Radu;** Deac, Florina. **The redox reactivity of globins: the chicken and egg paradox.** Metal Elements in Environment, Medicine and Biology Tome VIII, Corneliu Davidescu, Gabriela Garban, Iosif Gergen, Simona Dragan, Nicolae Vaszilcsin, Adina Avacovici, Eds., 2008, Eurobit Publishing House, Timisoara, Romania, pp 271-276.

69. Kis, Zoltan; **Silaghi-Dumitrescu, Radu. The Electronic Structure of Biologically Relevant Fe(0) Systems.** International Journal of Quantum Chemistry 2010, 110(10), 1848-1856.

68. Pogorelova, Anna S.; Makarov, Sergei V.; Ageeva, Tatiana; **Silaghi-Dumitrescu, Radu. Cobalt tetrasulfophthalocyaninate – a catalyst for nitrite reduction by thiourea dioxide.** Russian Journal of Physical Chemistry A, 2009, 83(12), 2250-2254.

67. Makarov, Sergei V.; Salnikov Denis S.; Pogorelova, Anna S.; Kis, Zoltan; Silaghi-Dumitrescu, Radu. **A new route to carbon monoxide adducts of heme proteins.** Journal of Porphyrins and Phthalocyanines, 2008, 12, 1096-1099.

66. **Silaghi-Dumitrescu, Radu;** Kallay, Andras. **Carbon dioxide hydration: mechanistic lessons from enzymatic systems.** Studia Universitatis Babes-Bolyai Chemia, 2008, (3), 47-50.

65. **Silaghi-Dumitrescu, Radu. Halide activation by heme peroxidases: theoretical predictions on putative adducts of halides with Compound I.** European Journal of Inorganic Chemistry, 2008, 5404-5407.

64. **Silaghi-Dumitrescu, Radu;** Uță, Matei-Maria; Kallay, Andras; Bodis, Jenő. **Carbon dioxide activation: hydration by carbonic anhydrase and related systems - what makes a good catalyst?** Journal of Molecular Structure THEOCHEM, 2010, 942(1-3), 15-18.

63. **Silaghi-Dumitrescu, Radu. An alternative mechanism for catalase activity.** Studia Universitatis Babes-Bolyai Chemia, 2007, (4), 127-130.

62. **Silaghi-Dumitrescu, Radu. Bonding in biologically-relevant high-valent iron centers.** International Journal of Chemical Modeling, 2008, 1 (4).

61. **Silaghi-Dumitrescu, Radu. Nitric oxide and nitrite reduction by metalloenzymes.** Revue Roumaine de Chimie, 2009, 54(6), 513–522.

60. Reeder, Brandon J.; Grey, Marie; **Silaghi-Dumitrescu, Radu;** Svistunencko, Dimitri A.; Bülow, L; Cooper, Chris E.; Wilson, Michael T. **Tyrosine residues as redox cofactors in human hemoglobin: implications for engineering non toxic blood substitutes.** Journal of Biological Chemistry, 2008, 283, (45), 30780-30787.

59. **Silaghi-Dumitrescu, Radu. The ferric-oxo moiety in porphyrin complexes – a ferryl in disguise?** Macroheterocycles, 2008, 1, 79-81.

58. **Silaghi-Dumitrescu, Radu;** Uta, Matei-Maria. **Nitrite linkage isomerism in bioinorganic chemistry – a case for mechanistic promiscuity.** Studia Universitatis Babes-Bolyai Chemia, 2008, (2), 61-65.

57. Cooper, Chris E.; **Silaghi-Dumitrescu, Radu;** Rukengwa, Martine; Alayash, Abdu I.; Buehler, Paul W.. **Peroxidase-activity of hemoglobin towards ascorbate and urate: a synergistic protective strategy against toxicity of hemoglobin-based oxygen carriers (HBOC).** Biochimica Biophysica Acta – Proteins and Proteomics, 2008, 1784, 1415–1420.

56. **Silaghi-Dumitrescu, Radu. Halide activation by heme peroxidases: theoretical predictions on putative adducts of halides with Compound I.** Journal of Biological Inorganic Chemistry, 2007, 12(S1), S229.

55. **Silaghi-Dumitrescu, Radu. The “push” effect of the thiolate axial ligand in superoxide reductase: a density functional study.** Revue Roumaine de Chimie, 2008, 53(12), 1149–1156.

54. **Silaghi-Dumitrescu, Radu. A density functional study of aromatic ring oxygenation by Rieske dioxygenase active sites. 2. Energetics of the proposed reaction mechanisms.** Studia Universitatis Babes-Bolyai Chemia, 2007, (2), 127-139.

53. **Silaghi-Dumitrescu, Radu. Dioxygen activation by Rieske dioxygenases – computational studies. 1. Possible catalytic intermediates.** Studia Universitatis Babes-Bolyai Chemia, 2007, (2), 103-126.

52. **Silaghi-Dumitrescu, Radu. A paradigm for O-O bond cleavage in ferric-hydroperoxo complexes.** Studia Universitatis Babes-Bolyai Chemia, 2007, 52, 47-54.

51. **Silaghi-Dumitrescu, Radu. Electronic structures of Fe(IV) and Fe(V) systems with oxo, sulfido and nitrido ligands in octahedral environments.** Revista de Chimie, 2007, 58(5), 461-464.

50. Svistunenko, Dimitri A.; Reeder, Brandon J.; Wankasi, Mieebi M.; **Silaghi-Dumitrescu, Radu**; Cooper, Chris E. Rinaldo, Serena; Cutruzzolà, Francesca; Wilson, Michael T. **Interaction of *Aplysia limacina* metmyoglobin with hydrogen peroxide**. Dalton Transactions, 2007, 840-50.
49. **Silaghi-Dumitrescu, Radu**; Reeder, Brandon; Nicholls, Peter; Cooper, Chris E.; Wilson, Michael T. **Ferryl haem protonation gates peroxidatic reactivity in globins**. Biochemical Journal, 2007, 403, 391–395.
48. Schwartz, Jennifer K.; Liu XF; Albetel Angela Nadia; **Silaghi-Dumitrescu, Radu**, Kurtz, Donald M, Jr.; Theil, Elizabeth C; Solomon, Edward I; **Structure/function correlations in binuclear non-heme ferrous sites: Specific characterization of the active sites in m-Ferritin and nitric oxide reductases**. Abstracts of Papers, 231st ACS National Meeting, United States, March 26, 2006 (2006), INOR-89.
47. **Silaghi-Dumitrescu, Radu. Hemes Revisited by Density Functional Approaches. 2. A Paradigm for Axial Ligation In Hemoproteins**. Studia Universitatis Babes-Bolyai Chemia, 2006, 51, 167-174.
46. **Silaghi-Dumitrescu, Radu. Fe(IV)-Fe(II) electromerism in hemoprotein complexes: implications for ferryl chemistry**. Proceedings of the Romanian Academy Series B, 2006, 2-3, 95-101.
45. **Silaghi-Dumitrescu, Radu**; Silaghi-Dumitrescu, Ioan. **Editorial – special issue on Computational Inorganic Chemistry**. Chemtracts – Inorganic Chemistry, 2005, 50, 11-16.
44. **Silaghi-Dumitrescu, Radu**; Silaghi-Dumitrescu, Ioan. **Computational Inorganic Chemistry – a useful tool, and more**. Chemtracts – Inorganic Chemistry, 2005, 684-708.
43. Isaza, Clara E.; **Silaghi-Dumitrescu, Radu**; Iyer, Ramesh B.; Kurtz, Donald M. Jr.; Chan, Michael K. **Structural basis for O₂ sensing by the hemerythrin-like domain of a bacterial chemotaxis protein: substrate tunnel and fluxional N terminus**. Biochemistry 2006, 45(30), 9023-9031.
42. Dunne, Jacqueline; Caron, Alexis; Menu, Patrick; Alayash, Abdu I.; Buehler, Paul W.; Wilson, Michael T.; **Silaghi-Dumitrescu, Radu**; Faivre, Beatrice; Cooper, Chris E. **Ascorbate removes key precursors to oxidative damage by cell free hemoglobin in vitro and in vivo**. Biochemical Journal, 2006, 399(3), 513-24.
41. **Silaghi-Dumitrescu, Radu; Copper-containing nitrite reductase: a DFT study of nitrite and nitric oxide adducts**. Journal of Inorganic Biochemistry, 2006, 100(3), 396-402.
40. **Silaghi-Dumitrescu, Radu**; Silaghi-Dumitrescu, Ioan; **DFT and the electromerism in complexes of iron with diatomic ligands**. Journal of Inorganic Biochemistry, 2006, 100(1), 161-166.
39. **Silaghi-Dumitrescu, Radu**; Cooper, Chris E. **Transient species involved in catalytic dioxygen/peroxide activation by hemoproteins: possible involvement of protonated compound I species**. Dalton Transactions, 2005, 3477-3482.
38. Iyer, Ramesh B.; **Silaghi-Dumitrescu, Radu**; Lanzilotta, William N.; Kurtz, Donald M. **Novel non-heme diiron bacterial peroxidases**. Abstracts of Papers, 229th ACS National Meeting, San Diego, CA, United States, March 13-17, 2005 (2005), INOR-556.
37. Iyer, Ramesh;* **Silaghi-Dumitrescu, Radu**;* Lanzilotta, William N.; Kurtz, Donald M. Jr. **High-resolution crystal structures of *Desulfovibrio vulgaris* (Hildenborough) nigerythrin: facile, redox-dependent iron movement, domain interface variability, and peroxidase activity in the rubrerythrin**. Journal of Biological Inorganic Chemistry, 2005, 10, 407-416. (*authors marked “contributed equally to this work”)
36. **Silaghi-Dumitrescu, Radu**, Kurtz, Donald M. Jr., Ljungdahl, Lars G., Lanzilotta, William N. **X-ray Crystal Structures of *Moorella thermoacetica* FprA. Novel Diiron Site Structure and Mechanistic Insights into a Scavenging Nitric Oxide Reductase**. Biochemistry, 2005, 44(17), 6492-6501.
35. **Silaghi-Dumitrescu, Radu. A density functional study of heme-peroxynitrite adducts**. Journal of Molecular Structure THEOCHEM, (2005), 722, 233-237.
34. **Silaghi-Dumitrescu, Radu. “High-valent” ferryl-oxo complexes: how “high” are they really?** Studia Universitatis Babes-Bolyai Chemia, 2005, 50, 17-21.
33. **Silaghi-Dumitrescu, Radu. Discontinuum between ferrous-superoxo and ferric-peroxo in heme [FeO₂]⁹ complexes?** Studia Universitatis Babes-Bolyai Chemia, 2005, 11-16.
32. **Silaghi-Dumitrescu, Radu. Nitrile hydration by the cobalt-containing nitrile hydratase. DFT investigation of the mechanism**. Revista de Chimie, 2005, 56(4), 359-362.
31. **Silaghi-Dumitrescu, Radu**; Ng, Kim Yong; Viswanathan, Rathinam, Kurtz, Donald M. Jr. **A Flavo-diiron protein from *Desulfovibrio vulgaris* with oxidase and nitric oxide reductase activities. Evidence for an *In vivo* nitric oxide scavenging function**. Biochemistry, 2005, 44(9), 3572-9.
30. Das, Amaresh; **Silaghi-Dumitrescu, Radu**; Ljungdahl, Lars G.; Kurtz, Donald M., Jr. **Cytochrome bd oxidase, oxidative stress and dioxygen tolerance of the strictly anaerobic bacterium, *Moorella thermoacetica***. Journal of

Bacteriology, 2005, 187(6), 2020-2029.

29. Kurtz, Donald M.; Lanzilotta, William N.; **Silaghi-Dumitrescu, Radu**. **How microbes detoxify superoxide, hydrogen peroxide, and nitric oxide: The non-heme iron reductive paradigm**. Abstracts of Papers, 227th ACS National Meeting, Anaheim, CA, United States, March 28-April 1, 2004 (2004), INOR-418.

28. **Silaghi-Dumitrescu, Radu**. **Factors controlling O-O bond cleavage in ferric-hydroperoxo complexes**. Proceedings of the Romanian Academy Series B 2004, 3, 155-163.

27. **Silaghi-Dumitrescu, Radu**. **Bioorganometallic complexes relevant to the "push effect" in hemoproteins**. Proceedings of the Romanian Academy Series B, 2004, 3, 149-154.

26. **Silaghi-Dumitrescu, Radu**. **Bonding in ferric-oxo complexes**. Studia Universitatis Babeş-Bolyai Chemia, 2004, 49(2), 235-240.

25. **Silaghi-Dumitrescu, Radu**. **Linkage isomerism in nitrite reduction by cytochrome *cd*₁ nitrite reductase**. Inorganic Chemistry, 2004, 43(12), 3715-3718.

24. **Silaghi-Dumitrescu, Radu**. **The nature of the "high-valent" complexes in the catalytic cycles of hemoproteins**. Journal of Biological Inorganic Chemistry, 2004, 9, 471-476.

23. **Silaghi-Dumitrescu, Radu**. **The nitric oxide adducts of cytochrome *cd*₁ nitrite reductase**. Revista de Chimie, 2004, 55, 496-498.

22. **Silaghi-Dumitrescu, Radu**. **On the performance of the PM3 semiempirical method with heme complexes relevant to dioxygen and peroxide activation**. Revista de Chimie, 2004, 55, 304-307.

21. **Silaghi-Dumitrescu, Radu**. **Heme ferrous-hydroperoxo complexes: some theoretical considerations**. Archives of Biochemistry and Biophysics, 2004, 424, 137-140.

20. **Silaghi-Dumitrescu, Radu**; Silaghi-Dumitrescu, Ioan. **Hemes revisited by density functional approaches. 1. The axial ligand and the dioxygen-peroxo chemistry**. Revue Roumaine de Chimie, 2004, 3-4, 257-268.

19. **Silaghi-Dumitrescu, Radu**; Amthor, Stephan; Paizs, Csaba; Majdik, Cornelia; Tosa, Monica; Moldovan, Paula; Sas, Angela; Tamas, Liana; Irimie, Florin-Dan. **Horseradish peroxidase - catalyzed oxidation of water - insoluble phenothiazines**. Studia Universitatis Babeş-Bolyai Chemia, 2003, 48, 165.

18. Kurtz, Donald M., Jr.; Emerson, Joseph P; **Silaghi-Dumitrescu, Radu**; Kung, Irene; Das, Amaresh; Ljungdahl, Lars. **How microbes detoxify superoxide, hydrogen peroxide and nitric oxide. The non-heme iron reductive paradigm**. Journal of Inorganic Biochemistry, 2003, 96, 69.

17. Kurtz, Donald M., Jr.; **Silaghi-Dumitrescu, Radu**; Das, Amaresh; Jameson, Guy; Ljungdahl, Lars; Huynh, Boi Hanh. **A non-heme iron nitric oxide reductase that protects against nitrosative stress in acetogenic bacteria**. Journal of Inorganic Biochemistry, 2003, 96, 174.

16. **Silaghi-Dumitrescu, Radu**; Kurtz, Donald M., Jr. **High-resolution crystal structures and spectroscopy of native and Compound I Cytochrome *c* Peroxidase**. Chemtracts – Inorganic Chemistry, 2003, 16, 722-728 – *Commentary*.

15. **Silaghi-Dumitrescu, Radu**;* Irimie, Florin-Dan; Paizs, Csaba; Majdik, Cornelia; Tosa, Monica; Moldovan, Paula; Sas, Angela; Tamas, Liana. **Horseradish peroxidase catalyzed oxidation of some benzyl-type alcohols**. Studia Universitatis Babeş-Bolyai Chemia, 2003, 48, 177-182.

14. **Silaghi-Dumitrescu, Radu**; Kurtz, Donald M., Jr. **Tuning the electronic structure of octahedral iron complexes {FeL(X)} (L = 1-alkyl-4,7-bis(4-tert-butyl-2-mercaptobenzyl)-1,4,7-triazacyclononane, X = Cl, CH₃O, CN, NO): the S = 1/2 - S = 3/2 spin equilibrium of {FeLPr(NO)}**. Chemtracts – Inorganic Chemistry, 2003, 16(8), 468-473 – *Commentary*.

13. **Silaghi-Dumitrescu, Radu**. **Nitric oxide reduction by heme-thiolate enzymes (P450_{nor}): A reevaluation of the mechanism**. European Journal of Inorganic Chemistry, 2003, (6), 1048-1052.

12. **Silaghi-Dumitrescu, Radu**; Coulter, Eric D.; Das, Amaresh; Ljungdahl, Lars G.; Jameson, Guy N. L.; Huynh, Boi Hanh; Kurtz, Donald M., Jr. **A flavodiiron protein and high molecular weight rubredoxin from *Moorella thermoacetica* with nitric oxide reductase activity**. Biochemistry, 2003, 42(10), 2806-2815.

11. **Silaghi-Dumitrescu, Radu**; Silaghi-Dumitrescu, Ioan; Coulter, Eric D.; Kurtz, Donald M., Jr. **Computational study of the non-heme iron active site in superoxide reductase and its reaction with superoxide**. Inorganic Chemistry, 2003, 42(2), 446-456.

10. Silaghi-Dumitrescu, Luminita; **Silaghi-Dumitrescu, Radu**; Blake, Alexander J; Cooke, Paul A.; Sowerby, D. Bryan. **Chlorination of (AsPh₂)₂O: Supramolecular structure of dihydroxodiphenylarsonium hydrogensulfate [AsPh₂(OH)₂] [HOSO₃]**. Revue Roumaine de Chimie, 2002, 47(10-11), 1063-1068.

9. Irimie, Florin-Dan; Paizs, Csaba; Majdik, Cornelia; Tosa, Monica; Misca, Radu; **Silaghi-Dumitrescu, Radu**. **Bioorganic synthesis of some (5-benzothiazol-2-yl-furan-2-yl)-methanols in cell catalysis using *Saccharomyces cerevisiae***.

Heterocyclic Communications, 2002, 8(5), 489-492.

8. **Silaghi-Dumitrescu, Radu**; Silaghi-Dumitrescu, Ioan; Coulter, Eric D.; Emerson, Joseph P; Kurtz, Donald M., Jr. **Computational study of the non-heme iron active site in superoxide reductase and its reaction with superoxide**. Journal of Inorganic Biochemistry 2001, 86(1), 432.

7. Silaghi-Dumitrescu, Luminita; Silaghi-Dumitrescu, Ioan; **Silaghi-Dumitrescu, Radu**; Haiduc, Ionel; Blake, Alexander J.; Sowerby, D. Bryan. **Bromination of (AsPh₂)₂O: the structure of tribromo-diphenylarsenic(V)**. Revista de la Sociedad Quimica de Mexico 2000, 44(2), 134-138.

6. Irimie, Florin-Dan; Paisz, Csaba; Joo, Francisc; **Silaghi-Dumitrescu, Radu**; Tosa, Monica; Majdik, Cornelia. **Biocatalytic reduction of some 5-(carboxyethyl-phenyl)-furyl-2-carboxaldehydes mediated by baker's yeast**. Progress in Catalysis 1999, 8(2), 71-73.

5. Irimie, Florin-Dan; Paisz, Csaba; Joo, Francisc; **Silaghi-Dumitrescu, Radu**; Tosa, Monica; Majdik, Cornelia. **Bioorganic reduction of some 5-phenyl-furyl-2-carboxaldehydes mediated by bakers' yeast**. Roumanian Biotechnological Letters, 1999, 4(1), 71-74.

4. Irimie, Florin-Dan; Paisz, Csaba; **Silaghi-Dumitrescu, Radu**; Damian, G.; Majdik, Cornelia; Tosa, Monica. **Mass spectrometry of some new 2-hydroxymethyl-5-phenyl-furans obtained through cell catalysis**. Studia Universitatis Babes-Bolyai Chemia, 1998, 43(1-2), 173-177.

3. Majdik, Cornelia; Irimie, Florin-Dan; Paisz, Csaba; **Silaghi-Dumitrescu, Radu**; Joo, Francisc; Tosa, Monica. **Synthesis and reduction of some nitro-benzofurans**. Studia Universitatis Babes-Bolyai Chemia, 1998, 43(1-2), 115-120.

2. Irimie, Florin-Dan; Paisz, Csaba; Chender, C.; Joo, Francisc; **Silaghi-Dumitrescu, Radu**; Majdik, Cornelia; Tosa, Monica. **Furyl-benzothiazoles. Synthesis and reactivity**. Studia Universitatis Babes-Bolyai Chemia, 1998, 43(1-2), 109-114.

1. **Silaghi-Dumitrescu, Radu**; Paisz, Csaba; Irimie, Florin-Dan; Joo, Francisc; Majdik, Cornelia; Tosa, Monica. **Biotransformation of nitroso naphthols bioassisted by Baker's yeast**. Studia Universitatis Babes-Bolyai Chemia, 1998, 43(1-2), 83-90.

Cărți și capitole de cărți de specialitate:

1. **Radu Silaghi-Dumitrescu, Horseradish peroxidase – a versatile catalyst**. 2006, Research Signpost, India

2. **Radu Silaghi-Dumitrescu, Bonding in biologically-relevant high-valent iron centers**, in „Quantum Frontiers of Atoms and Molecules”, Ed. Mihai V. Putz, NOVA Publishing Inc. (New York), 22pp, 2010

3.

a. Radu Silaghi-Dumitrescu, **Metalele in sistemele vii**, 2011, Presa Universitara Clujeana, Cluj-Napoca.

b. **Radu Silaghi-Dumitrescu**, Mariann Kinga Árkosi, **Fémek az elő rendszerekben**. 2014, Presa Universitara Clujeana, Cluj-Napoca. (traducere în limba maghiară)

c, **Radu Silaghi-Dumitrescu**, Daniela Cioloboc. **An introduction to bioinorganic chemistry**, 2015, Presa Universitara Clujeana, Cluj-Napoca. (traducere în engleză)

d. Radu Silaghi-Dumitrescu, Daniela Cioloboc, Mariann Kinga Árkosi, Nicoleta Tomoioagă, **Metalele in sistemele vii – ediția a II-a**, 2023, Presa Universitara Clujeana, Cluj-Napoca, ISBN 978-606-37-1937-0.

4. Radu Ghinga, Iulia Ghinga, **Radu Silaghi-Dumitrescu, Noțiuni de bază în chimia organică**, 2012, Presa Universitară Clujeană, Cluj-Napoca.

5. **Radu Silaghi-Dumitrescu**, Luminița Silaghi-Dumitrescu, **On binary logic in Chemistry and beyond**, in “On psychology and beyond”, Ed. Enikő Batiz, 2012, Presa Universitara Clujeana, Cluj-Napoca

6. **Radu Silaghi-Dumitrescu**, Cristina Bischin, **Interactions Between Proteins and Platinum-Containing Anticancer Drugs**, in V.N. Uversky, R.H. Kretsinger, E.A. Permyakov (eds.), Encyclopedia of Metalloproteins, Springer Science+Business Media, LLC 2012. DOI 10.1007/978-1-4614-1533-6

7. Sergei V. Makarov, Anna S. Makarova, **Radu Silaghi-Dumitrescu, Sulfoxylic and Thiosulfurous Acids and their Dialkoxy Derivatives**, in 'The Chemistry of Peroxides' - Patai's Chemistry of Functional Groups, Eds. Alexander Greer and Joel Liebman, John Wiley & Sons Ltd, Chichester, England, 2014, pp 265-306. DOI: 10.1002/9780470682531.pat0829

8. Cristina Bischin, Violeta-Florina Scurtu, Radu Ghinga, Daniela Cioloboc, **Radu Silaghi-Dumitrescu. O scurtă introducere in biochimie**, 2015, Presa Universitara Clujeana, Cluj-Napoca.

9. Sergei V Makarov, Attila K Horvath, **Radu Silaghi-Dumitrescu**, Qingyu Gao. **Sodium Dithionite, Rongalite and Thiourea Oxides**, World Scientific, London, 2016, 244 pp, ISBN: 978-1-78634-095-5.

10. **Radu Silaghi-Dumitrescu**, Flavia-Malina Oana (Gadina), Maria Lehene. **The Action of Antioxidants in Clinical Treatments - A Case Study with Vitamin C: Antioxidants in Clinical Treatments - Vitamin C**. In **Clinical Treatments - Vitamin C**. In

Fundamental and Biomedical Aspects of Redox Processes. Eds. Gheorghe Duca, Ashok Vaseashta, 2023, IGI Global, ISBN13: 9781668471982|ISBN10: 1668471981|EISBN13: 9781668472002, pp 315-326, DOI: 10.4018/978-1-6684-7198-2.ch014.

11. Alexandru Lupan, Adrian M. V. Branzanic, **Radu Silaghi-Dumitrescu. Elemente de chimie computațională**, 2024, Presa Universitară Clujeană, Cluj-Napoca ISSN 978-606-37-2255-4 <http://www.editura.ubbcluj.ro/bd/ebooks/pdf/4322.pdf> .

Brevete:

1. Prejmerean Cristina, Mușat Olga, Moldovan Marioara, Prodan Doina, Silaghi-Dumitrescu Laura, Furtos Gabriel, Trif Marcela, Iovu Horia, Damian Celina Maria, Sarosi LianaCodruta, 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.

Eseuri, interviuri de opinie:

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 adevărului în presa.** Cotidianul, 2016: <http://www.cotidianul.ro/un-semafor-al-adevarului-in-presa-297101/>

7. **Silaghi-Dumitrescu, Radu. Curajul de a cerceta și răspunderea 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-freziei-regicide-pentre-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

11. **Silaghi-Dumitrescu, Radu. Corectitudinea politică – când ești nemernic și mândru de asta.** contributors.ro 2021, <https://www.contributors.ro/corectitudinea-politica-cand-esti-nemernic-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-trebui-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/>

23. Silaghi-Dumitrescu, Radu. Ar trebui interzise reclamele exagerate la „suplimente alimentare” și „produse naturiste”? contributors.ro 2022, <https://www.contributors.ro/ar-trebuie-interzise-reclamele-exagerate-la-suplimente-alimentare-si-produse-naturiste/>

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/>

26. Silaghi-Dumitrescu, Radu. Universitățile amenințate de Inteligența Artificială. contributors.ro 2023, <https://www.contributors.ro/universitatile-amenintate-de-inteligența-artificiala/>

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-revoluție-bolșevică-in-știința-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>

Prezentări la conferințe, seminarii:

91. Beyond the coordination chemistry of metal-corrin / cobalamin derivatives with oxidizing agents: exploring the scope and the physiological relevance

EUROBIC 17 - The European Biological Inorganic Chemistry Conference, Munster, Germany, August 2024

90. Binding of biomedically relevant agents to hemoglobin and related proteins

16th Symposium New Trends in Chemistry Research, Timisoara, Romania, 2024

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

37th Conference of the Romanian chemical society, September 2024, Targoviste, Romania

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-Macrocycle Complexes: Contrasts between Heme and Vitamin B₁₂

3rd 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 în parteneriat cu Primăria Cluj-Napoca, Romania, 2024

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

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 B₁₂

15th 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, Octombrie 2022, Calimanesti-Caciulata, Romania

75. Virusurile și vaccinarea

Universitatea vârstei a treia – U3a, UBB în parteneriat cu Primăria Cluj-Napoca, Romania, 2020

74. Sistemul imunitar și virusurile

Ziua Porților Deschise – Facultatea de Chimie și Inginerie Chimică, Cluj-Napoca, Romania, 2021

73. Metalele din noi

Studium Generale UBB, Cluj-Napoca, Romania, 2021

72. Structura materiei (vii)

Studium Generale UBB, Cluj-Napoca, Romania, 2020

71. Minoritatea cercetătorilor

Conferința Raționalilor ed. XI a Asociației Secular-Umaniste din Romania, 2022, Alba-iulia, Romania, Septembrie 2022

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

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

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

18th Central European Symposium on Theoretical Chemistry, Balatonszárszó, Ungaria, Septembrie 2022

68. Linkage isomerism in bioinorganic chemistry

12th European Conference on Computational and Theoretical Chemistry, Perugia, Italy, Septembrie 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, Septembrie 2019

66. Linkage isomerism in bioinorganic chemistry

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

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

35th Conference of the Romanian chemical society, Octombrie 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, iunie 2017, Cluj-Napoca, Romania

61. Evaluarea academică: între numerologie și substanță

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

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

XXI conference of the Serbian crystallographic society, Iunie 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, Noiembrie 2016, Cluj-Napoca, Romania

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

34th conference of the Romanian chemical society, octombrie 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, Constanta, Septembrie 2016

56. Shedding Blood Over Magnets – invited lecture

9th International Physics Conference of the Balkan Physical Union – BPU9 , 24-27 August 2015 , Istanbul University, Istanbul , Turkey

55. Hemoglobin/hemerythrin based oxygen carriers – invited lecture

Molecular Biology – Current Aspects and Prospects, Cluj-Napoca, Noiembrie 2015

54. Probing supramolecular interactions in oxygen-carrying proteins

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

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

Conferința Națională ”Acces la literatură științifică: Rolul structurilor informaționale pentru dezvoltarea cunoașterii, inovare și sisteme de inovare” – Ediția a III-a – 29-31 Octombrie 2015, Timișoara, România

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

COST Action CM1307 Meeting Belgrade, Serbia, Octombrie 2015

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

COST Action CM1201 Meeting Lodz, Poland, Septembrie 2015

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

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

49. Something old, something new, something borrowed, something blue: some bonding considerations based on DFT results
Molecular modeling in chemistry and biochemistry MOLMOD 2011, Cluj-Napoca, November 2011
48. Modeling transition-metal biological centers
Molecular modeling in chemistry and biochemistry MOLMOD 2011, Cluj-Napoca, November 2011
47. Substitute de sânge: stadiul actual – invited lecture
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, 2014, Calimanesti-Caciulata, România
45. Exploring unusual ligands at biological metal centers: from molecular nitrogen to peroxochlorate
Molecular modeling in chemistry and biochemistry MOLMOD 2014, Cluj-Napoca, November 2014
44. ***
Serile Fundatiei Miscarea Populara, Cluj-Napoca 2013
43. Lead, follow, or get out of the way
Serile de leadership, Cluj-Napoca, Fundatia Leaders România, 2014
42. Hemoglobin/hemerythrin-based blood substitutes (HBOC)
YES (Young European Scientists) Meeting, University of Porto, Septembrie 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 Iunie 2014, Sheffield, UK, invited lecture
39. ***
Fostering Innovation at Cluj Napoca, USAMV Cluj-Napoca, Martie 2014
38. Developing the artificial blood
Healthcare, Education And Research Talks, Iuliu Hatieganu University of Medicine and Pharmacy Cluj-Napoca, 2014
37. Regele Soare, vile Moldovei și sângele 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, Iunie 2014
34. Weak interactions dictating secondary and tertiary structure in proteins
1st Symposium on Weak Molecular Interactions, Martie 2013, Pecs, Hungary
33. Shedding blood over magnets. Since 1456TM
COST Action CM1201 / 1st Meeting, Bologna, Italy, Mai 2013
32. Fast reactions of nitrite with globins: linkage isomerism and redox processes
European Colloquium on Inorganic Reaction Mechanisms, Debrecen, Iunie 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, Noiembrie 2013, invited lecture
29. Biocatalysis
SOE (“Stability Pact for South-Eastern Europe, sponsored by Germany”) Workshop „From Molecules to Functionalised

Materials“, Octombrie 2013, Cluj-Napoca, România

28. O-X (X=O, N, S, halide) bond activation catalysed by transition metal centers: suicidal vs. productive pathways
COST Action CM1201 / 1st WG1 Meeting, Newcastle upon Tyne, UK, Octombrie 2013

27. Shedding blood over magnets: some applications on unusual valence states in biological metal centers
EUCMOS 31, August 2012, Cluj-Napoca, România – 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, România, Septembrie 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, România

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, România

21. Superoxide reductase: a debated mechanism, comparison with superoxide dismutases
Metal Elements in Environment, Medicine and Biology 2010, Timisoara, România

20. Walking the plank in small molecule activation by metalloenzymes and related centers
Molecular modeling in chemistry and biochemistry MOLMOD 2010, Cluj-Napoca, Mai 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, Septembrie 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, Mai 2009

16. Fe(I) states in biologically-relevant systems
The 30th National Chemistry Conference, Calimanesti-Caciulata, România, Octombrie 2008

15. Bioinorganic spectroscopy
SOE Workshop “From Molecules to Functionalised Materials“ – Cluj-Napoca, Octombrie 2009

14. The redox reactivity of globins: the chicken and egg paradox
Metal Elements in Environment, Medicine and Biology, 8th edn., Timisoara, România, 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, România, 2009

12. Sang et orbitales
Le Cinquième Colloque Franco – Roumain De Chimie Appliquée (COFrRoCA), Bacau, România, 2008

11. The Sarajevo train: stress and unusual valence
Exploratory workshop in Chemistry with the Scientific Romanian Diaspora, Bucharest, România, 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, România, 2007

6. Artificial blood: how and why do we make it?
Workshop in Material Science and Engineering, Cluj-Napoca, România, 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, România, 2007

3. Ferryl heme protonation gates reactivity in hemoproteins

The 29th National Chemistry Conference, Calimanesti-Caciulata, România, Octombrie 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

Young Researchers Forum, 8th European Biological Chemistry Conference, EUROBIC 8, Aveiro, Portugal, 2006

Experiența acumulată (inclusiv managerială) în programe/proiecte naționale/internaționale de cercetare finanțate de foruri de specialitate:

1. Izomeria nitro/nitrito in metalocomplecsi cu relevanta biocatalitica, CEEX-ET Director 2006-2008, 120000 RON
2. Bacterial Proteins Containing Novel Iron Sites, NIH, SUA membru 2000-2004, 1000000 USD
3. Genomics and Blood Substitutes for 21st Century Europe, European Union 6th Framework Programme, Marea Britanie membru 2004-2007, 1000000 EUR
4. Metalloprotein-based blood substitutes – PNII Idei Director 2007-2010, 1000000 RON
5. Superoxid dismutaze si superoxid reductase – Academia Romana Director 2007-2008, 5000 RON
6. Centru de modelare moleculara si chimie cuantica computationala - PNII Capacitati Partener 2007-2010, 1000000 RON
7. Metalocomplecsi cu relevanta biologica ai azotitului - Rusia + Acad. Romana Co-director 2008-2009, 5000 RON
8. Reactivi si intermediari organometalici in sinteze stereocontrolate cu derivati de relevanta biologica - CEEX membru 2006-2008, 500000 RON
9. Aplicatiile bio-medicale ale compusilor metalelor – metallomics – PCCE Director partener 2010-2013, 700000 RON
10. Nanomanipularea biomoleculelor cu ajutorul microscopiei de forta atomica PCCE Director partener 2010-2013, 700000 RON
11. Activarea redox a moleculelor mici de catre centri metalici cu relevanta biologica – PCE Director 2013-2016, 1000000 RON
12. Molecular Modeling in Chemistry and Biochemistry –conferinte internationale Director 2011, 5000 RON
13. Noi generatii de biomateriale pentru stomatologia cosmetica – PCCA (“Parteneriate”) membru 2012-2015, 2000000 RON
14. Biomateriale compozite bazate pe noi sisteme de monomeri fluorurati armati cu nano si micro umpluturi bioactive cu proprietati anticariogenice remanente si adeziune superioara la tesuturile dure dentare – PCCA Director 2008-2011, 2000000 RON
15. Noi biomateriale avansate, inteligente de tip giomer cu diverse aplicatii in stomatology - PCCA membru 2012-2015, 2000000 RON
16. Biomateriale complexe cu grad avansat de specificitate utilizate in tratamentele endodontice - PCCA membru 2008-2011, 2000000 RON
17. Elaborarea strategiei nationale in domeniul cercetarii, dezvoltarii tehnologice si inovarii pentru perioada 2014-2020, -membru - 2013-2014
18. CNFIS-FDI-2017- 0539 „Susținerea complexă a internaționalizării la Universitatea Babeș-Bolyai” – 2017 – director proiect, 400000 RON
19. Reprezentant România, COST Action CM1201 - Biomimetic Radical Chemistry, European Cooperation in Science and Technology
20. Reprezentant România, COST Action CM1307 - Targeted chemotherapy towards diseases caused by endoparasites, European Cooperation in Science and Technology
21. Susținerea cercetării de excelență la Universitatea Babes-Bolyai pe direcții aferente programelor de studii – 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 pentru grant postdoctoral

23. PN-III-P1-1.1-PD-2021-0279 2022 - 2024 Heme edge reactivity towards sulfur- and oxygen-based stress agents – mentor pentru grant postdoctoral

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, membru

25. CNFIS-FDI-2018-0447 2018 - Susținerea cercetării de excelență la Universitatea Babeș-Bolyai

26. Proiect de dezvoltare instituțională națională - finanțarea excelenței în CDI Infrastructura strategică la Universitatea Babeș-Bolyai în contextul dezvoltării de tehnologii noi și emergente 2018-2020, 33PFE/2018, membru

27. Proiect de dezvoltare instituțională națională - Rețeaua academică de cercetare de excelență STAR-UBB – STAR-UBB-N, 21PFE/30.12.2022, 2022-2024, membru

28. CNFIS-FDI-2019-0351 - Susținerea cercetării de excelență la Universitatea Babeș-Bolyai la centenar 1919-2019, membru

29. CNFIS-FDI-2021-0061 - Susținerea capacității instituționale pentru cercetare la Universitatea Babeș-Bolyai (UBB) prin proiecte/teme de cercetare multi-și transdisciplinare în cadrul Școlii Academice de Știință ale UBB, membru

30. CNFIS-FDI-2022-0179 - Promovarea și susținerea practicilor Open Science în cercetarea de excelență la Universitatea Babeș-Bolyai din Cluj-Napoca, membru

31. CNFIS-FDI-2023-F-0214 - Consolidarea practicilor Open Science în cercetarea științifică de excelență la Universitatea Babeș-Bolyai din Cluj-Napoca, membru

Premii:

Științifice:

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

Premiul de excelență în cercetarea științifică la Universitatea Babeș-Bolyai, 2021, 2022, 2023

Premiul de excelență pentru dezvoltarea instituțională la Universitatea Babeș-Bolyai, 2018

Premiul de excelență pentru dezvoltarea instituțională la Universitatea Babeș-Bolyai, 2016

Premiul pentru cercetare științifică la Universitatea Babeș-Bolyai, 2014

Premiul cercetării științifice la Universitatea Babeș-Bolyai, 2010

Nominalizare în top 100 evaluatori la nivel internațional pentru domeniul chimie în clasamentul Sentinels of Science al Publons, 2016 (<https://publons.com/community/sentinels-of-science-recipient-2016/>)

Premiul anual Costin D. Nenițescu al Academiei Române, 2013

1st prize, 2004 Procter & Gamble Poster Competition (University of Georgia, 2004)

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

Altele:

Candidatură la alegeri locale (consiliu local Floresti – Cluj), parlamentare, europarlamentare (2016-2019)

“Senior al cetății”, Cluj-Napoca 2014

Trofeu VIP – Oamenii schimbării, București 2014

“Onoare pentru Cluj” – premiu anual pentru cercetare al Prefecturii Cluj, 2013

Premiu anual pentru cercetare din partea asociației “Pro Familia”, 2013

Trofeu “Prețuiește Viața” - TVR1, București, 2013

Trofeu “Ce se întâmplă doctore”, București 2013

Premii și mențiuni la Olimpiade școlare faza județeană și națională, și alte concursuri, diverse discipline (chimie, istorie, matematică, etc) –1988-1992