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📅 Date of birth 1974 | 🇷🇴 Nationality Romanian

WORK EXPERIENCE

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

EDUCATION AND TRAINING

- 1993–1997 **B. Sc. in Chemistry** EQF level 6

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

PERSONAL SKILLS

Mother tongue(s) Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
French	B1	B1	B1	B1	B1

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

Communication skills ~19 years teaching experience, with laboratories, seminars and lectures
 >50 oral presentations at scientific meetings
 >20 interviews to mass media, including live TV and radio

Organisational / managerial skills

Supervised research and dissertations for ~120 undergraduate and graduate students, won and completed several research grants.

Member of the Biochemistry and Molecular Biology Commissions of the Romanian National Council for Scientific Research (2011-2013) and of the National Council for Accreditation of University Degrees and Titles (2011-2012).

President of the Scientific Council of the Babes-Bolyai University (2012-).

Director of the Center for University Strategies, Babes-Bolyai University (2020-).

Member of the Senate of the Babes-Bolyai University (2016-).

Editor in chief, Acta Metallomica <http://chem.ubbcluj.ro/acta-metallomica/> (2014-2017) Review-Editor, Frontiers in Cell and Developmental Biology.

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

Reviewer Editorial Board of Frontiers in Molecular Medicine (2013-2020).

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

Organized international workshops/conferences in molecular modelling and in bioinorganic chemistry, as co-president of the committees.

Reviewer/ expert evaluator – within a project aimed at evaluating academic integrity in Romanian universities, organized by Societatea Academică din România (SAR), Alianța Națională a Organizațiilor

Studentești din România (ANOSR) and Federația Studenților din Elveția (VSS-UNES-USU) (2016-2017).

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

Job-related skills

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

Computer skills

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

ADDITIONAL INFORMATION

Scientific publications in journals and conference proceedings ($h_{\text{WoS}}=31$, Times cited $_{\text{WoS}}\sim 2900$):

279. Carrascoza, Francisco; Branzanic, Adrian M. V.; **Silaghi-Dumitrescu, Radu**. **The dynamics of hemerythrin and hemerythrin derivatives**. *Studia Universitatis Babeș-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, <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, in press.

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

275. Lehene, Maria; Plesa, Diana; Ionescu-Zinca, Stefania; Iancu, Stefania D.; Leopold, Nicolae; Makarov, Sergei V.; Brânzanic, Adrian M.V.; **Silaghi-Dumitrescu, Radu. Adduct of aquacobalamin with hydrogen peroxide.** Inorganic Chemistry, 2021, 60(17), 12681-12684.
274. Irsai, Izabella; Branzanic, Adrian M. V.; **Silaghi-Dumitrescu, Radu. Polylactic acid interactions with bioceramic surfaces.** Studia Universitatis Babeş-Bolyai Seria Chemia, 2021, 66(3), 107-121.
273. Carrascoza, Francisco; **Silaghi-Dumitrescu, Radu. The dynamics of hemoglobin-haptoglobin complexes. Relevance for oxidative stress.** Journal of Molecular Structure, 2022, 1250(1), 131703.
272. Cîrjeu, Victoria; Puşcaş, Cristina; **Silaghi-Dumitrescu, Radu. Vincristine affects the redox reactivity of hemoglobin.** Studia UBB Chemia, 2021, in press.
271. **Silaghi-Dumitrescu, Radu. Measuring pseudoscience in online media: a case study on Romanian websites.** Journal of Romanian Studies, 2021, in press.
270. Dereven'kov, Iliia 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; Surducun, 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; Puşcaş, Cristina; **Silaghi-Dumitrescu, Radu; Oprean, Radu. Free radical scavenging activity and total polyphenol content of Securidaca longipedunculata roots and leaves extracts.** Farmacia, 2020, 68(1), 116-120.
261. Puscas, Cristina; Moldovan, Marioara; Silaghi-Dumitrescu, Laura; Ungureanu, Lavinia; **Silaghi-Dumitrescu Radu. On the apparent redox reactivity of "oxygen-enriched water".** Biological Trace Element Research, 2020, 198, 350–358. doi.org/10.1007/s12011-020-02056-4.
260. **Silaghi-Dumitrescu, Radu. Redox reactivity in globins: modulation by covalent and non-covalent modifications with biomedical relevance.** Journal of Experimental and Molecular Biology, 2019, XX(3), 1-2.
259. Attia, Amr A.; Lupan, Alexandru; **Silaghi-Dumitrescu, Radu; King, R. Bruce. Neutral rhenadecaboranes with Re(CO)2(NO) vrices: 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 Babeş-Bolyai Seria Chimia, 2019, 64(2), 49-60.

247. Scurtu, Florina; Tebrean, Bogdan; Árkosi, Mariann Kinga; Ionele, Adrian; **Silaghi-Dumitrescu, Radu.** **Hemoglobin-albumin co-polymers for blood substitutes: increasing the reproducibility of the polymerization reaction.** Studia Universitatis Babeş-Bolyai Seria Chimia, 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; Septelean, 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; Puşcaş, 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; Puşcaş, Cristina; **Silaghi-Dumitrescu, Radu**; Duma, Mihaela; Tiperciuc, Brînduşa; 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; Cocevaska, 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](https://doi.org/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. Surducian, Mihai; Branzanic, Adrian; **Silaghi-Dumitrescu, Radu.** **Heme Fe-SO² intermediates in sulfite reduction:**

- contrasts with Fe-OO^{2-} 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 Babes-Bolyai Seria Chemia*, 2018, LXIII, 55-62.
232. Irsai, Izabella; Lupan, Alexandru; Majdik, Cornelia; **Silaghi-Dumitrescu, Radu**. **Computational investigation of spectroscopic parameters in putative secondary structure elements for polylactic acid and comparison with experiment**. *Studia Universitatis Babes-Bolyai Seria Chemia*, 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 Babes-Bolyai Seria Chemia*, 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 naftifine-induced carotenoid depigmentation in *Rhodotorula mucilaginosa* (A. Jörg.) F.C. Harrison causing onychomycosis**. *Scientific Reports*, 2017, 7(1), 11125.
222. **Silaghi-Dumitrescu, Radu**; Luminita; Attia, Amr A. A.; **Silaghi-Dumitrescu, Radu**; Blake, Alexander J.; Sowerby, D. Bryan. **Supramolecular architecture of $[\text{AsPh}_2\text{Br}_2]_2[(\text{Br}_3)\dots(\text{Br}_2)\dots(\text{Br}_3)]$ obtained by bromination of $(\text{AsPh}_2)_2\text{S}$** . *Inorganica Chimica Acta*, 2018, 475, 120-126.
221. Hanganu, Dandniela; 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, Iliia; 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.
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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 cd₁ nitrite reductase.** Inorganic Chemistry, 2004, 43(12), 3715-3718.
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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.
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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*.
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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. Radu Silaghi-Dumitrescu, **Metalele in sistemele vii**, 2011, Presa Universitara Clujeana, Cluj-Napoca.
4. Radu Ghinga, Iulia Ghinga, **Radu Silaghi-Dumitrescu, Notiuni de baza in chimia organica**, 2012, Presa Universitara Clujeana, Cluj-Napoca.
5. **Radu Silaghi-Dumitrescu**, Luminita 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, Sulfoxylates**, 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. **Radu Silaghi-Dumitrescu**, Mariann Kinga Árkosi, **Fémek az élő rendszerekben**. 2014, Presa Universitara Clujeana, Cluj-Napoca.
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10. Cristina Bischin, Violeta-Florina Scurtu, Radu Ghinga, Daniela Cioloboc, **Radu Silaghi-Dumitrescu. O scurtă introducere in biochimie**, 2015, Presa Universitara Clujeana, Cluj-Napoca.
11. 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.

Patents

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.

General essays, opinion interviews:

1. **Silaghi-Dumitrescu, Radu**. **Trenul de Sarajevo și repatrierea academică din Diaspora**. PressOne, 2015: <http://pressone.ro/trenul-de-sarajevo-si-repatrierea-academica-din-diaspora/>
2. **Silaghi-Dumitrescu, Radu**. Contribuție la interviul " Ce resetare? Ce schimbări sunt esențiale în politică și în societate – sunt și în economie? Foreign Policy Romania Decembrie 2015/Ianuarie 2016, 26-27.
3. **Radu Silaghi-Dumitrescu**. **Considerations on public perceptions within Romanian public discourse**. Lambert Academic Publishing, 2017, Saarbrücken, 49 pp. ISBN 978-3-330-03040-4.
4. Radu Silaghi-Dumitrescu, **Crima la sugestia unei oi vorbitoare**, 2016, Lulu Press, Inc., 87 pp. ISBN 978-1-329-99360-0 <http://www.lulu.com/shop/radu-silaghi-dumitrescu/crim%C4%83-la-sugestia-unei-oi-vorbitoare/ebook/product-22618659.html>
5. **Silaghi-Dumitrescu, Radu**. **Fără dovezi materiale pentru diluarea de zece ori a dezinfectanților Hexi Pharma**. Romania Curata, 2017: <http://www.romaniacurata.ro/fara-dovezi-materiale-pentru-diluarea-de-zece-ori-a-dezinfectantilor-hexi-pharma/>
6. **Silaghi-Dumitrescu, Radu**. **Un semafor al adevarului in presa**. Cotidianul, 2016: <http://www.cotidianul.ro/un-semafor-al-adevarului-in-presa-297101/>
7. **Silaghi-Dumitrescu, Radu**. **Curajul de a cerceta si raspunderea de a comunica**. In CERCETĂM, ANALIZĂM, EXPERIMENTĂM, APLICĂM ȘI COMUNICĂM, Editura Viața Arădeană, 2017, Arad, 98 pp. ISBN 978973161213-3
8. **Silaghi-Dumitrescu, Radu**. **Evaluarea academică: între numerologie și substanță**. In EDUCAȚIA ȘI CERCETAREA ROMĂNEASCĂ - Starea prezentă și perspectiva, Editura Casa Cartii de Stiinta 2017, Bucharest, Romania. ISBN: 978-606-17-1284-7
9. **Silaghi-Dumitrescu, Radu**. **Mitul freneziei regicide a valahilor**. Matricea Românească, 2018, <https://matricea.ro/mitul-frezeziei-regicide-printre-valahi-o-replica-la-afirmatia-lui-georg-reicherstorffer-despre-romani-si-asasinate-politice/>
10. Cercetător celebru de la UBB: „Cei care spun că virusul este o exagerare fac propagandă pentru crimă” – Adevărul 2020 https://adevarul.ro/locale/cluj-napoca/cercetator-celebru-ubb-cei-spun-virusul-exagerare-fac-propaganda-crima-1_5ef70cc75163ec42715f690a/index.html

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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/>

Talks at conferences, seminars:

68. Linkage isomerism in bioinorganic chemistry
12th European Conference on Computational and Theoretical Chemistry, Perugia, Italy, September 2019
67. Redox reactivity in globins: modulation by covalent and non-covalent modifications with biomedical relevance
Annual International Conference of the Romanian Society of Biochemistry and Molecular Biology, Iasi, Romania, September 2019
66. Linkage isomerism in bioinorganic chemistry
Molecular modeling in chemistry and biochemistry MOLMOD 2018, Cluj-Napoca, October 2018
65. Antioxidant and prooxidant reactivity in natural compounds: mechanisms, interactions with (metallo)proteins, and practical applications
35th CONFERENCE OF THE ROMANIAN CHEMICAL SOCIETY, October 2018, Calimanesti-Caciulata, Romania
64. Substitute de sânge: cât de artificiali putem fi?
Atelierul De Filosofie Si Antropologie Medicală, 2016, Cluj-Napoca, Romania
63. Fără număr: traficul informației și democrația biochimică
Atelierul De Filosofie Si Antropologie Medicală, 2015, Cluj-Napoca, Romania
62. Hemoglobin versus hemerythrin - based blood substitutes
Bio-Nano-Math-Chem 2017, June 2017, Cluj-Napoca, Romania
61. Evaluarea academică: între numerologie și substanță
EDUCAȚIA ȘI CERCETAREA ROMÂNEASCĂ - Starea prezentă și perspectiva, March 2017, Bucharest, Romania
60. Metal-induced protein and DNA radical chemistry: the cases of bleomycin and haptoglobin
XXI CONFERENCE OF THE SERBIAN CRYSTALLOGRAPHIC SOCIETY, June 2017, Vrsac, Serbia
59. Hemoglobin versus hemerythrin - based blood substitutes: data from top-up and hemorrhagic shock models
Nanomateriale și dispozitive inovative cu aplicații biomedicale – symposium, November 2016, Cluj-Napoca, Romania
58. Sulfite reductase and nitrite reductase chemistry: similarities in linkage and redox isomerism
34th CONFERENCE OF THE ROMANIAN CHEMICAL SOCIETY, October 2016, Calimanesti-Caciulata, Romania
57. Hemoglobin versus hemerythrin - based blood substitutes: data from top-up and hemorrhagic shock models
7th International Conference “Biomaterials, Tissue Engineering & Medical Devices” BIOMMEDD’2016, September 2016, Constanta, Romania
56. Shedding Blood Over Magnets – invited lecture

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

55. Hemoglobin/hemerythrin based oxygen carriers – invited lecture

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

54. Probing supramolecular interactions in oxygen-carrying proteins

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

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

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

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

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

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

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

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

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

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

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

48. Modeling transition-metal biological centers

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

47. Substitute de sânge: stadiul actual

Filiala Timișoara a Academiei Române, ianuarie 2015

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

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

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

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

44. ***

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

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

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

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

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

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

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

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

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

39. ***

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

38. Developing the artificial blood

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

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

TEDx Iasi, 2014, invited lecture

36. Aplicații ale tehnicilor stopped-flow și RES asupra unor specii chimice cu durată de viață limitată
Zilele Academice Clujene, Cluj-Napoca 2014
35. Activation of oxides and oxyanions of halides and sulfur at biologically-relevant iron centers
European Colloquium on Inorganic Reaction Mechanisms, Debrecen, June 2014
34. Weak interactions dictating secondary and tertiary structure in proteins
1st Symposium on Weak Molecular Interactions, March 2013, Pecs, Hungary
33. Shedding blood over magnets. Since 1456TM
COST Action CM1201 / 1st Meeting, Bologna, Italy, May 2013
32. Fast reactions of nitrite with globins: linkage isomerism and redox processes
European Colloquium on Inorganic Reaction Mechanisms, Debrecen, July 2013
31. Biological metal centers and supramolecular interactions: some methodology considerations
Summer School on Supramolecular Chemistry, University of Belgrade, August 2013, invited lecture
30. Hai sa te ReFaci
TEDxCluj, November 2013, invited lecture
29. Biocatalysis
SOE ("Stability Pact for South-Eastern Europe, sponsored by Germany") Workshop „From Molecules to Functionalised Materials“, October 2013, Cluj-Napoca, Romania
28. O-X (X=O, N, S, halide) bond activation catalysed by transition metal centers: suicidal vs. productive pathways
COST Action CM1201 / 1st WG1 Meeting, Newcastle upon Tyne, UK, October 2013
27. Shedding blood over magnets: some applications on unusual valence states in biological metal centers
EUCMOS 31, August 2012, Cluj-Napoca, Romania – invited lecture
26. The silk, the spin, and the tunnel to China
Advanced Structure-Property Correlation, the Gate for Special Properties at Molecular and Nano Level. Bucharest, Romania, September 2012
25. Biological high-valent metal states: electromerism within them, and en route to their formation
EUROBIC 11 – European Congress on Biological Inorganic Chemistry, Granada, Spain, 2012
24. Molecular modeling of supramolecular interactions in protein structure
32nd CONFERENCE OF THE ROMANIAN CHEMICAL SOCIETY, 2012, Calimanesti-Caciulata, Romania
23. Molecular modeling of supramolecular interactions in protein structure
XIX CONFERENCE OF THE SERBIAN CRYSTALLOGRAPHIC SOCIETY, 2012, Bela Crkva, Serbia
22. Molecular modeling of supramolecular interactions in protein structure
BiomMedD 2012 – 5th Conference on biomaterials, tissue engineering and biomedical devices, 2012, Constanta, Romania
21. Superoxide reductase: a debated mechanism, comparison with superoxide dismutases
Metal Elements in Environment, Medicine and Biology 2010, Timisoara, Romania
20. Walking the plank in small molecule activation by metalloenzymes and related centers
Molecular modeling in chemistry and biochemistry MOLMOD 2010, Cluj-Napoca, May 2010
19. Unusual metal oxidation states in metalloproteins and related complexes: from degenerate orbitals to blood substitutes
7th International Conference of the Chemical Societies of the South-Eastern European Countries – Bucharest, September 2010
18. Walking the plank in small molecule activation by metalloenzymes and related centers
Humboldt Conference on non-covalent interactions, Vrsac, Serbia, 2009
17. Fe(I) and Fe(0) states in biologically-relevant systems
Molecular modeling in chemistry and biochemistry MOLMOD 2009, Cluj-Napoca, May 2009
16. Fe(I) states in biologically-relevant systems
The 30th National Chemistry Conference, Calimanesti-Caciulata, Romania, October 2008
15. Bioinorganic spectroscopy
SOE Workshop “From Molecules to Functionalised Materials“ – Cluj-Napoca, October 2009
14. The redox reactivity of globins: the chicken and egg paradox
Metal Elements in Environment, Medicine and Biology, 8th edn., Timisoara, Romania, 2008
13. Unusual metal oxidation states in metalloproteins and related complexes: from degenerate orbitals to apoptosis
Metal Elements in Environment, Medicine and Biology, 9th edn., Cluj-Napoca, Romania, 2009
12. Sang et orbitales

Le Cinquième Colloque Franco – Roumain De Chimie Appliquée (COFrRoCA), Bacau, Romania, 2008

11. The Sarajevo train: stress and unusual valence

Exploratory workshop in Chemistry with the Scientific Romanian Diaspora, Bucharest, Romania, 2008

10. The reactivity of myoglobin towards sulfoxylate

The Fifth International Conference on Porphyrins and Phthalocyanines (ICPP5), Moscow, 2008

9. Drawing blood over computational arguments: the ferryl case

From Molecular Informatics to Bioinformatics – an International Symposium, Budapest, Hungary, 2008

8. Nitrite linkage isomerism in hemoproteins and related complexes: experimental and theoretical evidence

37th Inorganic Reaction Mechanisms Group Meeting, 37IRMG, Barcelona, Spain, 2008

7. Nitrite linkage isomerism in hemoproteins and related complexes: experimental and theoretical evidence

Molecular and supramolecular chemistry of multimetallic systems, Bucharest, Romania, 2007

6. Artificial blood: how and why do we make it?

Workshop in Material Science and Engineering, Cluj-Napoca, Romania, 2007

5. Nitrite linkage isomerism in hemoproteins and related complexes – a case for mechanistic promiscuity

From Molecular Informatics to Bioinformatics – an International Symposium, Budapest, Hungary, 2007

4. Nitrite linkage isomerism in hemoproteins and related complexes: experimental and theoretical evidence

Molecular Modelling in Chemistry and Biochemistry – MolMod, Arcalia, Romania, 2007

3. Ferryl heme protonation gates reactivity in hemoproteins

The 29th National Chemistry Conference, Calimanesti-Caciulata, Romania, October 2006

2. Transient species involved in catalytic dioxygen/peroxide activation by hemoproteins: possible involvement of protonated Compound I species

Dalton Discussions 8, Metals: Centers of Biological Activity, Nottingham, UK, 2005

1. Ferryl heme protonation gates reactivity in hemoproteins

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

Grants:

1. Izomeria nitro/nitrito in metalocomplecsi cu relevanta biocatalitica, CEEX-ET Director 2006-2008
2. Bacterial Proteins Containing Novel Iron Sites, NIH, SUA team member 2000-2004
3. Genomics and Blood Substitutes for 21st Century Europe, European Union 6th Framework Programme, Marea Britanie team member 2004-2007
4. Metalloprotein-based blood substitutes – PNII Idei Director 2007-2010
5. Superoxid dismutaze si superoxid reductase – Academia Romana Director 2007-2008
6. Centru de modelare moleculara si chimie cuantica computationala - PNII Capacitati Partner 2007-2010
7. Metalocomplecsi cu relevanta biologica ai azotitului - Rusia + Acad. Romana Co-director 2008-2009
8. Reactivi si intermediari organometalici in sinteze stereocontrolate cu derivati de relevanta biologica - CEEX team member 2006-2008
9. Aplicatiile bio-medicale ale compusilor metalelor – metallomics – PCCE Director of one of 6 teams within the project 2010-2013
10. Nanomanipularea biomoleculelor cu ajutorul microscopiei de forta atomica PCCE Director of one of 6 teams within the project 2010-2013
11. Activarea redox a moleculelor mici de catre centri metalici cu relevanta biologica – PCE Director 2013-2016
12. Molecular Modeling in Chemistry and Biochemistry –conferinte internationale Director 2011
13. Noi generatii de biomateriale pentru stomatologia cosmetica – PCCA (“Parteneriate”) team member 2012-2015
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
15. Noi biomateriale avansate, inteligente de tip giomer cu diverse aplicatii in stomatology – PCCA -team member - 2012-2015
16. Biomateriale complexe cu grad avansat de specificitate utilizate in tratamentele endodontice – PCCA - team member - 2008-

2011

17. Elaborarea strategiei nationale in domeniul cercetarii, dezvoltarii tehnologice si inovarii pentru perioada 2014-2020, -membru - 2013-2014

18. CNFIS-FDI-2017- 0539 cu titlul „Susținerea complexă a internaționalizării la Universitatea Babeș-Bolyai” – 2017 – director proiect, 400000 RON

19. Country delegate for România, COST Action CM1201 - Biomimetic Radical Chemistry, European Cooperation in Science and Technology

20. Country delegate for România, COST Action CM1307 - Targeted chemotherapy towards diseases caused by endoparasites , European Cooperation in Science and Technology

Awards:

Annual Costin D Nenitescu prize of the Romanian Academy, 2013

Other awards:

Included in Publons' 2016 Sentinels of Science report for reviewer activity in chemistry, top 100

(<https://publons.com/community/sentinels-of-science-recipients-2016/>)

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

“Senior al cetatii”, on behalf of the Cluj-Napoca Municipality, 2014

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

“Pro Familia” annual prize for research, December 1st 2013, Bucharest

“Pretuieste Viata” trophy, National (government-funded) Romanian Television - TVR1, Bucharest, December 2013

“Oameni care misca Romania in directii bune” – Gala Foreign Policy Romania, 2014

Gala Superlativelor VIP 2013 – premiul “Stiinta si viata”

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

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

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

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