

Listă lucrări

Teze de doctorat

- 1) Adrian M.V. Brânzanic, Theoretical studies in cluster chemistry – OR – Synthesis – a Ph adjustment of Ph.D., supervised by prof. univ. dr. Radu-Lucian Silaghi-Dumitrescu, Babeş-Bolyai University, Cluj-Napoca, 449 pages, issued by the Minister of Education and Research as per order number 6245 of 21.12.2020 – awarded Summa Cum Laude.

Articole publicate

- (1) Brânzanic, A. M. V.; Lupan, A.; King, R. B. Six-Vertex Hydrogen-Rich $Cp_2M_2B_4H_8$ Dimetallaboranes of the Second- and Third-Row Transition Metals: Effects of Skeletal Electron Count on Preferred Polyhedra. *Organometallics* **2014**, *33*, 6433–6451. <https://doi.org/10.1021/om500801e>.
- (2) Brânzanic, A. M. V.; Lupan, A.; King, R. B. Dimetallaborane Analogues of Pentaborane. *Dalt. Trans.* **2015**, *44* (16), 7355–7363. <https://doi.org/10.1039/C5DT00143A>.
- (3) Brânzanic, A. M. V.; Lupan, A.; King, R. B. The Wade-Mingos Rules in Seven-Vertex Dimetallaborane Chemistry: Hydrogen-Rich $Cp_2M_2B_5H_9$ Systems of the Second and Third Row Transition Metals. *J. Organomet. Chem.* **2015**, *792*, 74–80. <https://doi.org/10.1016/j.jorganchem.2015.02.030>.
- (4) Brânzanic, A. M. V.; Lupan, A.; King, R. B. Dimetallaborane Analogues of the Octaboranes of the Type $Cp_2M_2B_6H_{10}$: Structural Variations with Changes in the Skeletal Electron Count. *Dalt. Trans.* **2016**, *45* (22), 9354–9362. <https://doi.org/10.1039/C6DT00985A>.
- (5) Surducan, M.; Brânzanic, A. M. V.; Silaghi-Dumitrescu, R. Heme Fe-SO₂– Intermediates in Sulfite Reduction: Contrasts with Fe-OO₂– Species from Oxygen–Oxygen Bond Activating Systems. *Int. J. Quantum Chem.* **2018**, *118* (19), 2–10. <https://doi.org/10.1002/qua.25697>.
- (6) Attia, A. A. A.; Brânzanic, A. M. V.; Munõz-Castro, A.; Lupan, A.; King, R. B.

- Cationic Gold Clusters with Eight Valence Electrons: Possible Spherical Aromatic Systems with Sigma Holes. *Phys. Chem. Chem. Phys.* **2019**, *21* (32), 17779–17785. <https://doi.org/10.1039/c9cp03440d>.
- (7) Dereven'kov, I. A.; Hannibal, L.; Molodtsov, P. A.; Brânzanic, A. M. V.; Silaghi-Dumitrescu, R.; Makarov, S. V. Kinetic, Spectroscopic and in Silico Characterization of the First Step of the Reaction between Glutathione and Selenite. *Inorganica Chim. Acta* **2019**, *499* (October 2019), 119215. <https://doi.org/10.1016/j.ica.2019.119215>.
- (8) Brânzanic, A. M. V; Ryde, U.; Silaghi-Dumitrescu, R. Importance of the Iron – Sulfur Component and of the Siroheme Modification in the Resting State of Sulfite Reductase. *J. Inorg. Biochem.* **2019**, *203*, 110928. <https://doi.org/10.1016/j.jinorgbio.2019.110928>.
- (9) Brânzanic, A. M. V.; Ryde, U.; Silaghi-Dumitrescu, R. Why Does Sulfite Reductase Employ Siroheme? *Chem. Commun.* **2019**, *55*, 14047–14049. <https://doi.org/10.1039/c9cc05271b>.
- (10) Carrascoza, F.; Brânzanic, A. M. V.; Silaghi-Dumitrescu, R. The Dynamics of Hemerythrin and Hemerythrin Derivatives. *Stud. Univ. Babeş-Bolyai Chem.* **2021**, *66* (4), 397–404. <https://doi.org/10.24193/subbchem.2021.4.29>.
- (11) Dereven'kov, I. A.; Makarov, S. V.; Brânzanic, A. M. V.; Silaghi-Dumitrescu, R.; Molodtsov, P. A.; Pokrovskaya, E. A. Formation of Hydroxyl Radical in Aqueous Solutions Containing Selenite and Glutathione. *Polyhedron* **2021**, *198*, 115072. <https://doi.org/10.1016/j.poly.2021.115072>.
- (12) Irsai, I.; Brânzanic, A. M. V.; Silaghi-dumitrescu, R. Polylactic Acid Interactions with Bioceramic Surfaces. *Stud. Univ. Babeş-Bolyai Chem.* **2021**, *LXVI* (3), 107–121. <https://doi.org/10.24193/subbchem.2021.3.06>.
- (13) Lehene, M.; Plesa, D.; Ionescu-Zinca, S.; Iancu, S. D.; Leopold, N.; Makarov, S. V; Brânzanic, A. M. V.; Silaghi-Dumitrescu, R. Adduct of Aquacobalamin with Hydrogen Peroxide. *Inorg. Chem.* **2021**, 1–4. <https://doi.org/10.1021/acs.inorgchem.1c01483>.

Proiecte de cercetare-dezvoltare-inovare pe bază de contract

- 1) Proiect de mobilitate - PN-III-P1-1.1-MC-2017-2121.
- 2) Explorarea teoretică a trei aspecte rămase neelucidate în situl activ al Sulfid Reductazei: cuplajul magnetic interfactorial, mecanismul de reducere a sulfitului la sulfură și mecanismul de reducere a nitritului la amoniac - GTC-32141/2020.
- 3) Reactivitatea hemului periferic către agenți de stres bazați pe sulf și oxigen - PN-III-P1-P1-1.1-PD-2021-0279.