Jelena Tošović

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Employment

POST-DOC | LABORATORY OF PHYSICAL CHEMISTRY AND CHEMICAL THERMODYNAMICS, UNIVERSITY OF MARIBOR, SLOVENIA | 2019 - NOW

- Funded by Project "*Exclusion of antibiotics from the food chain–ABFREE*", supported by the Ministry of Education, Science and Sport of Republic of Slovenia

TEACHING ASSISTANT | DEPARTMENT OF CHEMISTRY, UNIVERSITY OF KRAGUJEVAC, SERBIA | 2015 - NOW

- Courses: Physical Chemistry, Application of Computers in Chemistry, Molecular Modelling
- Funded by the Faculty of Science

Education

DOCTOR OF CHEMISTRY | MARCH 2019 | UNIVERSITY OF KRAGUJEVAC, SERBIA

- Faculty of Science
- Study program: Organic Chemistry
- GPA 10.0/10.0
- Thesis: *"Structural and antioxidative features of chlorogenic acid"*
- Partially funded by Project "*Synthesis, modelling, physicochemical and biological properties of organic compounds and related metal complexes*", supported by the Ministry of Education, Science and Technological Development of Serbia: 2015 – 2019

MASTER OF CHEMISTRY | OCTOBER 2014 | UNIVERSITY OF KRAGUJEVAC, SERBIA

- GPA 10.0/10.0
- Thesis: *"Comparative investigation of aromaticity of naphto derivatives of fluorantene"*

BACHELOR OF CHEMISTRY | OCTOBER 2013 | UNIVERSITY OF KRAGUJEVAC, SERBIA

- GPA 9.9/10.0

Research stays

- January–February 2018, University of Greenwich, Department of Pharmaceutical, Chemical & Environmental Sciences, United Kingdom, Group of Dr Milan Antonijevic
- September 2017, University of Zagreb, Department of Chemistry, Croatia, Group of Professor Vladislav Tomisic, Funded by Bilateral Project Serbia–Croatia: "*Investigation of chemical and antioxidant activity of the complexes of polyphenolic compounds with essential metals*"
- April 2013, University of Greenwich, Department of Pharmaceutical, Chemical & Environmental Sciences, United Kingdom, Group of Dr Milan Antonijevic, Funded by TEMPUS Project

Scholarships and awards

- Award for the best conference paper on the 15th International Conference on BioInformatics and BioEngineering (BIBE), IEEE Computer Society, Belgrade, 2015
- Award for remarkable master thesis, Kostić Foundation, 2015
- Excellence Award for studies, Serbian Chemical Society, 2014, awarded to students with GPA>9.5
- University of Kragujevac scholarship for best students, 2013, awarded to the best final year student in sciences division
- Scholarship of Foundation for young talents - Dositeja, Ministry of Youth and Sports of the Republic of Serbia, 2013/2014, awarded to the best students of the final year of master studies
- Scholarship of Foundation for young talents - Dositeja, Ministry of Youth and Sports of the Republic of Serbia, 2012/2013, awarded to the best students of the final year of bachelor studies
- Scholarship of the Fund Dragoslav Srejovic, City of Kragujevac, 2010/2011 and 2011/2012, awarded to best students with GPA>9.0
- Awards for the best student on 2nd, 3rd and 4th year of bachelor studies, Faculty of Science, 2010–2012

Publications

SCIENTIFIC PUBLICATIONS

- **J. Tošović**, S. Marković, Antioxidative activity of chlorogenic acid relative to trolox in aqueous solution – DFT study, Food Chem. 278 (2019) 469–475.
  DOI: 10.1016/j.foodchem.2018.11.070
- **J. Tošović**, S. Marković, Reactivity of chlorogenic acid toward hydroxyl and methyl peroxy radicals relative to trolox in nonpolar media, Theor. Chem. Acc. 137 (2018) 76.
  DOI: 10.1007/s00214-018-2251-y
- A. Burmudžija, S. Marković, J. Muškinja, A. Pejović, **J. Tošović**, Influence of counterion on methylation of some ambident nucleophiles. DFT study, React. Kinet. Mech. Cat. 123(1) (2018) 201–214. DOI:10.1007/s11144-017-1263-2
- **J. Tošović**, S. Marković, J. M. Dimitrić Marković, M. Mojović, D. Milenković, Antioxidative mechanisms in chlorogenic acid, Food Chem. 237 (2017) 390–398. DOI: 10.1016/j.foodchem.2017.05.080
- **J. Tošović**, S. Marković, Reproduction and interpretation of the UV-vis spectra of some flavonoids, Chem. Pap., 71 (2017) 543–552. DOI: 10.1007/s11696-016-0002-x
- **J. Tošović**, S. Marković, Structural and antioxidative features of chlorogenic acid, Croat. Chem. Acta, 89 (2016) 535–541. DOI: 10.5562/cca3026
- S. Marković, **J. Tošović**, Comparative study of the antioxidative activities of caffeoylquinic and caffeic acids, Food Chem., 210 (2016) 585–592. DOI: 10.1016/j.foodchem.2016.05.019
- S. Marković, **J. Tošović**, J. M. Dimitrić Marković, Synergic application of spectroscopic and theoretical methods to the chlorogenic acid structure elucidation, Spectrochim. Acta A 164 (2016) 67–75. DOI: 10.1016/j.saa.2016.03.044
- Z. Marković, **J. Tošović**, D. Milenković, S. Marković, Revisiting the solvation enthalpies and free energies of the proton and electron in various solvents, Comput. Theor. Chem., 1077 (2016) 11–17. DOI: 10.1016/j.comptc.2015.09.007
- S. Marković, **J. Tošović**, Application of Time-Dependent Density Functional and Natural Bond Orbital Theories to the UV–vis Absorption Spectra of Some Phenolic Compounds, J. Phys. Chem. A, 119 (2015) 9352–9362. DOI: 10.1021/acs.jpca.5b05129

- S. Marković, Lj. Mitrović, J. Đurđević, **J. Tošović**, Z. Petrović, Alkylation of potassium ethyl acetoacetate: HSAB versus Marcus theory, Comput. Theor. Chem., 1066 (2015) 14–19. DOI: 10.1016/j.comptc.2015.05.005
- S. Radenković, **J. Tošović**, J. Đurđević Nikolić, Local aromaticity in naphtho-annelated fluoranthenes: Can the five-membered rings be more aromatic than the six-membered rings?, J. Phys. Chem. A, 19 (2015) 4972–4982. DOI: 10.1021/acs.jpca.5b01817
- S. Radenković, **J. Tošović**, R. W. A. Havenith, P. Bultinck, Ring currents in benzo- and benzocyclobutadieno-annelated biphenylene derivatives, Chem. Phys. Chem. 16 (2015) 216–222. DOI: 10.1002/cphc.201402468
- M. D. Antonijević, M. Arsović, J. Čáslavský, V. Cvetković, P. Dabić, M. Franko, G. Ilić, M. Ivanović, N. Ivanović, M. Kosovac, D. Medić, S. Najdanović, M. Nikolić, J. Novaković, T. Radovanović, Đ. Ranić, B. Šajatović, G. Špijunović, I. Stankov, **J. Tošović**, P. Trebše, O. Vasiljević, J. Schwarzbauer, Actual contamination of the Danube and Sava Rivers at Belgrade (2013), J. Serb. Chem. Soc. 79 (2014) 1169–1184. DOI: 10.2298/JSC131105014A
- I. Gutman, **J. Tošović**, Testing the quality of molecular structure descriptors. Vertex–degree-based topological indices, J. Serb. Chem. Soc. 78 (2013) 805–810. DOI: 10.2298/JSC121002134G
- I. Gutman, **J. Tošović**, S. Radenković, S. Marković, On atom-bond connectivity index and its chemical applicability, Indian J. Chem. 51A (2012) 690–694.

PARTICIPATION IN SCIENTIFIC CONFERENCES

- **Jelena Tošović**, Svetlana Marković (poster), Reactivity of chlorogenic acid toward hydroxyl radical relative to Trolox in benzene, Physical Chemistry 2018, 14th International Conference on Fundamental and Applied Aspects of Physical Chemistry, Belgrade, September 24-28, 2018, 125-128.
- **Jelena Tošović**, Svetlana Marković, Behavior of chlorogenic acid dianion towards free radicals in water solution, The 30th International Course and Conference on the Interfaces among Mathematics, Chemistry and Computer Sciences (Math/Chem/Comp, MC2-30), Dubrovnik, June 18-23, 2018, Book of Abstracts.
- **Jelena Tošović**, Svetlana Marković, Determination of chlorogenic acid structure using combined experimental and theoretical NMR study, AdriaticNMR, Mali Ston, June 15-18, 2018, Book of Abstracts, 38.
- I. Redžepović, S. Marković, **J. Tošović**, Theoretical investigation of antioxidative activity of caffeic acid, 4th South-East European Conference on Computational Mechanics (SEECCM), Kragujevac, July 03–04, 2017, Book of Abstracts T.2.1., 24.
- **J. Tošović**, S. Marković, D. Milenković, Antioxidative activity of chlorogenic acid: DFT study, The 29th International Course and Conference on the Interfaces among Mathematics, Chemistry and Computer Sciences (Math/Chem/Comp, MC2-29), Dubrovnik, June 19–24, 2017.
- S. Marković, **J. Tošović**, Hydrogen atom transfer mechanism in chlorogenic acid, Physical Chemistry 2016, 13th International Conference on Fundamental and Applied Aspects of Physical Chemistry, Belgrade, September 26–30, 2016, 67-70.
- **J. Tošović**, S. Marković, J. M. Dimitrić Marković, Structural and antioxidative features of chlorogenic acid, The 28th International Course and Conference on the Interfaces among Mathematics, Chemistry and Computer Sciences (Math/Chem/Comp, MC2-28), Dubrovnik, June 20–25, 2016.
- **J. Tošović**, S. Marković, J. M. Dimitrić Marković, The structure of chlorogenic acid: spectroscopic and quantum mechanical approach, XXI Symposium on biotechnology with international participation, Čačak, March 11–12, 2016, 809- 814.

- **J. Tošović**, Ž. Milošević, S. Marković, Simulation of the UV-Vis Spectra of Flavonoids, 15th International Conference on BioInformatics and BioEngineering (BIBE), Belgrade, November 2–4, 2015, Published in: 2015 IEEE 15th International Conference on Bioinformatics and Bioengineering (BIBE), 1–6. DOI: 10.1109/BIBE.2015.7367646
- **J. Tošović**, S. Marković (poster), Antioxidative mechanisms of chlorogenic acid: a thermodynamic approach, Third conference of young Serbian chemists, Beograd, October 24th, 2015, Book of Abstracts TH P 07, 94.

OTHER PUBLICATIONS

- Ž. Milanović, **J. Tošović**, S. Marković, Quantum mechanics – based test for overall free radical scavenging activity – QM-ORSA protocol, Hemijski pregled (Serbian Chemical Society), 60 (2019) 32–36.
- **J. Tošović**, Spectroscopic features of caffeic acid: Theoretical study, Kragujevac J. Sci., (2017) 99-108.
- I. Redžepović, S. Marković, **J. Tošović**, Antioxidative activity of caffeic acid – mechanistic DFT study, Kragujevac J. Sci. (2017) 109–122.
- I. Gutman, **J. Tošović**, Second law of thermodynamics and attempts in dodging it, Hemijski pregled (Serbian Chemical Society), 57 (2016) 155–159.
- **J. Tošović**, I. Gutman, Artificial molecular machines, Hemijski pregled (Serbian Chemical Society), 57 (2016) 142–148.
- **J. Tošović**, S. Marković, D. Milenković, Z. Marković, Solvation enthalpies and Gibbs energies of the proton and electron – influence of solvation models, J. Serb. Soc. Comp. Mech., 2 (2016) 66–76.
- D. Milenković, **J. Tošović**, S. Marković, Z. Marković, Electron transfer reactions: Marcus theory, Hemijski pregled (Serbian Chemical Society), 57 (2016) 92–97.

Certificates

- Thermal Analysis Techniques – An Overview, University of Greenwich, United Kingdom, Certificate number: TMG13TACO35, April 8th, 2013

Memberships

- Serbian Chemical Society

Other activities

- salsa dance instructor, dancing Serbian national dance, reading, travelling, adrenaline adventurist