

Marko Mitić

Curriculum Vitae

Faculty of Physical Chemistry
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Education

- 2015–2020 **PhD in Physical Chemistry - Quantum Chemistry**, *University of Belgrade*, Faculty of Physical Chemistry.
- PhD Thesis: "The study of Renner-Teller effect in linear polyatomic molecules with variational method"
 - PhD Thesis Advisors: Dr Miljenko Perić, Professor Emeritus and Full member of the Serbian Academy of Sciences and Arts; Dr Stanka Jerosimić, Associate Professor
- 2014–2015 **MSc in Physical Chemistry - Spectrochemistry**, *University of Belgrade*, Faculty of Physical Chemistry, *GPA – 10.00/10.00*.
- MSc Thesis: "*Ab initio* calculation of the vibronic spectrum in the $X^2\Pi_u$ electronic state of $C_2H_2^+$ "
 - MSc Thesis Advisors: Dr Stanka Jerosimić, Associate Professor
- 2010–2014 **BSc in Physical Chemistry**, *University of Belgrade*, Faculty of Physical Chemistry, *GPA – 9.59/10.00*.
- BSc Thesis: "Investigation of geometry and stability of small potassium bromide K_nBr_m clusters with *ab initio* methods"
 - BSc Thesis Advisors: Dr Stanka Jerosimić, Assistant Professor
- 2006–2010 **Technician in Environmental Protection**, *Secondary School of Chemistry*.

Teaching Experience

- Feb 2017–Present **Teaching Assistant**, UNIVERSITY OF BELGRADE - FACULTY OF PHYSICAL CHEMISTRY, Belgrade, Serbia.
- Courses:
- Atomic Spectroscopy - *Autumn Semesters 2017–2019*
 - Molecular Spectroscopy - *Spring Semesters 2017–2020*
 - Mathematical Methods in Physical Chemistry - *Autumn Semester 2020*
 - Physical Chemistry 1 (Faculty of Chemistry) - *Autumn Semesters 2017–2020*
 - Physical Chemistry 2 (Faculty of Chemistry) - *Spring Semesters 2017–2020*
 - Instrumental Methods of Analysis (Faculty of Pharmacy) - *Autumn Semester 2019*

Additional Employment

- Oct 2016–Present **Online Tutor**, 24HOURANSWERS.COM, Freelance remote job.

Research Interests

- Quantum Chemistry
- Theoretical Molecular Spectroscopy
- Astrochemistry
- Small molecules

Research Projects

Dec 2016–Dec 2019 **Structure and dynamics of molecular systems in the ground and excited electronic states (Contract No. 172040)**, *National project*, Ministry of Education, Science and Technological Development, Republic of Serbia.

Scholarships and Awards

Apr–Dec, 2016 Scholarship of Ministry of Education, Science and Technological Development, Republic of Serbia

2016 Award for the best Master's thesis, Fund of Nenad M. Kostić for Chemical Sciences

2016 Award from Society of Physical Chemists of Serbia for great success during studies of physical chemistry

2015 Special award from Serbian Chemical Society for great success during studies in year 2015

2015 Award of the Fund of Sister Bulajić for the best bachelor's thesis at Faculty of Physical Chemistry

2012–2014 Award of the Municipality Obrenovac to the Best Students in Obrenovac Territory

2012, 2014 Scholarship of Thermal Power Plants "Nikola Tesla" from Obrenovac

2012, 2013 Scholarship of City of Belgrade

Computer skills

Operational Systems Windows, Linux (Manjaro, Debian, Linux Mint, openSUSE, Ubuntu)

Programming Languages (level) PYTHON (intermediate), FORTRAN (beginner), MATLAB (intermediate), L^AT_EX(advanced), HTML & CSS (beginner)

Software Packages ORCA, Gaussian, Molpro, Wolfram Mathematica, OriginLab

Other Relevant Informations

2013–2015 Administrator of Faculty of Physical Chemistry Student Web Page

2012–2014 President of the Center for Scientific Research of Students at Faculty of Physical Chemistry University of Belgrade

2008–2010 Petnica Science Center, Department of Chemistry

Languages

Serbian	Mothertongue	<i>Native speaker</i>
English	Advanced	<i>Conversationally fluent</i>
German	Beginner	<i>Basic words and phrases only</i>

Interests and Activities

- Guitar	- Reading novels
- Cooking	- Cycling
- Kickboxing	

Workshops, Schools and Symposiums

Sep 9–12, 2019 **17th Central European Symposium on Theoretical Chemistry**, *Symposium in Burg Schlaining, Austria*, Institute of Theoretical Chemistry from the Faculty of Chemistry at the University of Vienna.

- Apr 16–20, 2018 **Joint ICTP-IAEA School and Workshop on Fundamental Methods for Atomic, Molecular and Materials Properties in Plasma Environments**, *Spring school in Trieste, Italy*, The Abdus Salam International Centre for Theoretical Physics (ICTP) and the International Atomic Energy Agency (IAEA).
- Aug 31–Sep 6, 2017 **New avenues in molecular theories: From the lab to beyond the Earth**, *Summer school in Belgrade, Serbia*, Joint Training School of COST actions CM1401 and CM1405.
- Aug 29–Sep 9, 2016 **Astrochemistry: from Space to Earth**, *Summer school in Grenoble, France*, Université Grenoble Alpes and COST Action CM1401.

Seminar Talks

- April 15, 2016 **Ab initio study of non-adiabatic effects in small molecules**, *Astronomy and Physics Colloquium/Seminar*, Physics Department, Faculty of Sciences, University of Novi Sad.

Publications

1. Milovanović, M. & **Mitić, M.** *Ab initio* investigation of dicyanoacetylene cation in the ground electronic state: Vibronic coupling and photoionization selection rules. *Journal of Molecular Spectroscopy* **372**, 111330 (2020).
2. **Mitić, M.**, Milovanović, M., Veljković, F., Perić-Grujić, A., Veličković, S. & Jerosimić, S. Theoretical and experimental study of small potassium-bromide $K_nBr^{(0,1+)}$ ($n = 2 - 6$) and $K_nBr_{n-1}^{(0,1+)}$ ($n = 3 - 5$) clusters. *Journal of Alloys and Compounds* **835**, 155301 (2020).
3. Jerosimić, S., **Mitić, M.** & Milovanović, M. SCCS[−] radical: Renner-Teller effect and spin-orbit coupling in the $X\ ^2\Pi_u$ electronic state. *Journal of the Serbian Chemical Society* **84**, 801–817 (2019).
4. **Mitić, M.**, Milovanović, M., Ranković, R., Jerosimić, S. & Perić, M. Topological study of nonadiabatic effects in Π electronic states of tetra-atomic molecules. *Molecular Physics* **116**, 2671–2685 (2018).
5. **Mitić, M.**, M., M., Ranković, R., Jerosimić, S. & Perić, M. Variational calculation of the vibronic spectrum in the $X\ ^2\Pi_u$ electronic state of C_6^- . *Journal of the Serbian Chemical Society* **83**, 439–448 (2018).
6. **Mitić, M.**, Ranković, R., M., M., Jerosimić, S. & Perić, M. Underlying theory of a model for the Renner–Teller effect in any-atomic linear molecules on example of the $X\ ^2\Pi_u$ electronic state of C_5^- . *Chemical Physics* **464**, 55–68 (2016).
7. Perić, M., Jerosimić, S., **Mitić, M.**, Milovanović, M. & Ranković, R. Underlying theory of a model for the Renner–Teller effect in tetra-atomic molecules: $X\ \Pi_u$ electronic state of $C_2H_2^+$. *The Journal of Chemical Physics* **142**, 174306 (2015).