Curriculum Vitae

Milena Petković

datum rođenja: 10.06.1976. god.

Obrazovanje:

- Diplomirani fizikohemičar (2000), Fakultet za fizičku hemiju, Univerzitet u Beogradu, prosek ocena 9,74.
- Doktor prirodnih nauka (2004), Institut für Chemie, Freie Universität u Berlinu, SR Nemačka. Doktorat je odbranjen sa ocenom *magna cum laude*. Diploma je nostrifikovana kao *doktorat fizičkohemijskih nauka* na Fakultetu za fizičku hemiju, Univerziteta u Beogradu.

Radno iskustvo:

- 2000. asistent pripravnik, Fakultet za fizičku hemiju, Univerzitet u Beogradu
- 2001-2004. naučni saradnik, Institut für Chemie, Freie Universität u Berlinu, SR Nemačka
- 2005. asistent pripravnik, Fakultet za fizičku hemiju, Univerzitet u Beogradu
- Decembar 2005. asistent, Fakultet za fizičku hemiju, Univerzitet u Beogradu
- 2007. docent, Fakultet za fizičku hemiju, Univerzitet u Beogradu
- 2014. vanredni profesor, Fakultet za fizičku hemiju, Univerzitet u Beogradu
- 2019. redovni profesor, Fakultet za fizičku hemiju, Univerzitet u Beogradu

Nastavna delatnost:

Kao asistent pripravnik i asistent na Fakultetu za fizičku hemiju, bila je zadužena za izvođenje vežbi na predmetima:

- Kvantna hemija i molekulske strukture (studentima Fakulteta za fizičku hemiju)
- Opšta i fizička hemija (studentima Molekularne biologije)
- Fizička hemija 2 (studentima Hemijskog fakulteta, studijski programi Diplomirani hemičar i Profesor hemije)
- Fizička hemija 1 (studentima Hemijskog fakulteta, studijski program Hemičar za životnu sredinu)
- Hemijska kinetika (studentima Fakulteta za fizičku hemiju)

Kao naučni saradnik na Freie Universität-u u Berlinu, bila je zadužena za izvođenje vežbi na predmetima:

- Kvantna hemija
- Kvantna hemija na računaru 1
- Kvantna hemija na računaru 2
- Kinetika na računaru sa uvodom u UNIX i Fortran

Kao docent, vanredni profesor i redovni profesor na Fakultetu za fizičku hemiju, bila je zadužena za predavanja na predmetima:

- Opšti kurs fizičke hemije 2 (studentima osnovnih studija Fakulteta za fizičku hemiju)
- Fizička hemija fluida (studentima osnovnih studija Fakulteta za fizičku hemiju)
- Fizička hemija 1 (studentima osnovnih studija Hemijskog fakulteta, studijski programi Hemičar za životnu sredinu, Diplomirani hemičar i Profesor hemije)
- Matematičke metode u fizičkoj hemiji, jedan od četvoro nastavnika (studentima osnovnih studija Fakulteta za fizičku hemiju)
- Modeliranje i procena uticaja na životnu sredinu (studentima master studija Fakulteta za fizičku hemiju)
- Primenjena kvantna hemija, jedan od četvoro nastavnika (studentima master studija Fakulteta za fizičku hemiju)
- Na master studijama Fakulteta za fizičku hemiju jedan je od četvoro nastavnika koji učestvuju u izvođenju nastave na predmetu *Odabrana poglavlja fizičke hemije životne sredine*
- Na master studijama Fakulteta za fizičku hemiju jedan je od većeg broja nastavnika koji učestvuju u izvođenju nastave na predmetu *Metode i metodologija fizičkohemijskih istraživanja*
- Na doktorskim studijama Fakulteta za fizičku hemiju jedan je od većeg broja nastavnika koji učestvuju u izvođenju nastave na predmetu *Nove fizičkohemijske metode*

Objavljeni udžbenici:

1. *Primenjena kvantna hemija*, Milena Petković, Fakultet za fizičku hemiju, Beograd, 2013.
2. *Fizička hemija fluida*, Milena Petković, Fakultet za fizičku hemiju, Beograd, 2017.
3. *Zbirka zadataka iz opšteg kursa fizičke hemije*, Ana Stanojević, Miroslav Ristić, Milena Petković, Ivanka Holclajtner Antunović, Fakultet za fizičku hemiju, Beograd, 2021.

Publikacije:

1. *Multidimensional hydrogen bond dynamics in salicylaldimine: Coherent nuclear wave packet motion versus intramolecular vibrational energy redistribution*, M. Petković, O. Kühn, *J. Phys. Chem. A* 107 (2003) 8458-8466
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2. *Ultrafast wave packet dynamics of an intramolecular hydrogen transfer system: From vibrational motion to reaction control*, M. Petković, O. Kühn, *Chem. Phys.* 304 (2004) 91-102
http://www.sciencedirect.com/science/article/pii/S0301010404002794

3. *Cascaded energy redistribution upon O-H stretching excitation in an intramolecular hydrogen bond*, K. Heyne, E.T.J. Nibbering, T. Elsaesser, M. Petković, O. Kühn, *J. Phys. Chem. A* 108 (2004) 6083-6086
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4. *Multidimensional quantum dynamics and infrared spectroscopy of hydrogen bonds*, K. Giese, M. Petković, H. Naundorf, O. Kühn, *Phys. Rep.* 430 (2006) 211-276
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5. *Infrared spectroscopy of $ClONO_2$ and $BrONO_2$ investigated by means of anharmonic force fields*, M. Petković, *Chem. Phys.* 331 (2007) 438-446
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6. *Are the program packages for molecular structure calculations really black boxes?*, A. Mraković, M. Drvendžija, A. Samolov, M. Petković, M. Perić, *J. Serb. Chem. Soc.* 72 (2007) 1329-1341
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7. *Renner-Teller effect in five-atomic molecules: Ab initio investigation of the spectrum of C_5^-*, M. Perić, M. Petković, S. Jerosimić, *Chem. Phys.* 343 (2008) 141-157
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8. *Proton and protonic entities in solid heteropoly compounds: An ab initio calculation of the environmental effect on the $H_5O_2^+$ ion*, U.B. Mioč, M. Petković, M. Davidović, M. Perić, T. Abdul-Redah, *J. Mol. Struc.* 885 (2008) 131-138
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9. *Shaping the infrared spectrum of the acetic acid dimer in the OH-stretching range: Multiple conformers and anharmonic coupling*, M. Petković, J. Novak, N. Došlić, *Chem. Phys. Lett.* 474 (2009) 248-252
http://www.sciencedirect.com/science/article/pii/S0009261409004436

10. *IR spectrum of the O-H···O hydrogen bond of phthalic acid monomethylester in gas phase and in CCl_4 solution*, Y.-a. Yan, M. Petković, G.M. Krishnan, O. Kühn, *J. Mol. Struc.* 972 (2010) 68-74
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11. *Vibrational spectroscopy: Can density functional theory cope with highly electronegative atoms?*, M. Petković, *Spec. Acta - Part A* 77 (2010) 942-947
http://www.sciencedirect.com/science/article/pii/S1386142510004142

12. *Localization of the counterion of the protonated schiff base of n-butylretinal in solution*, N. Biliškov, J. Novak, M. Petković, G. Zgrablić, G. Baranović, N. Došlić, *Cro. Chem. Acta* 84 (2011) 221-231
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13. *O-H stretch in phenol and its hydrogen-bonded complexes: Band position and relaxation pathways*, M. Petković, *J. Phys. Chem. A* 116 (2012) 364-371
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15. *Study on vibrational relaxation dynamics of phenol-water complex by picosecond time-resolved IR-UV pump-probe spectroscopy in a supersonic molecular beam*, Y. Miyazaki, Y. Inokuchi, T. Ebata, M. Petković, *Chem. Phys.* 419 (2013) 205-211
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20. *Intramolecular OHO bonding in dibenzoylmethane: symmetry and spectral manifestations*, M. Petković, M. Etinski, *RSC Advances.* 4 (2014) 38517-38526
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40. *New hybrid cluster-continuum model for pKa values calculations: Case study of neurotransmitters' amino group acidity*, M. M. Ristić, M. Petković, B. Milovanović, J. Belić, M. Etinski, *Chem. Phys.* 516 (2019) 55-62
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45. *Excited Electronic States' Properties of Guanine Quartet Complexes with Alkali Metal Cations*, B. Milovanović, M. Petković, M. Etinski, *J. Serb. Chem. Soc.* 85 (2020) 1021-1032
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46. *Intriguing Intermolecular Interplay in Guanine Quartet Complexes with Alkali and Alkaline Earth Cations*, B. Milovanović, A. Stanojević, M. Etinski, M. Petković, *J. Phys. Chem B* 124 (2020) 3002-3014
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