

# Dr Željko Vitnik,

## Naučni saradnik



	IHTM, Centar za hemiju, Studentski trg 12-16, 11000 Beograd Laboratorija.523
Telefon:	+381113336735
Faks:	+381112636061
Mobilni telefon:	
Elektronska pošta:	zvitnik@chem.bg.ac.rs
<b>Obrazovanje:</b>	<b>1994</b> Diplomirani hemičar, Hemijski fakultet, Univerzitet u Beogradu. <b>2001</b> Magistar hemijskih nauka, Hemijski fakultet, Univerzitet u Beogradu. <b>2011</b> Doktor hemijskih nauka, Hemijski fakultet, Univerzitet u Beogradu.
<b>Zvanja:</b>	<b>1994</b> Istraživač pripravnik, Hemijski fakultet, Univerzitet u Beogradu. <b>1996</b> Asistent pripravnik, Hemijski fakultet, Univerzitet u Beogradu. <b>2001</b> Asistent, Hemijski fakultet, Univerzitet u Beogradu. <b>2013</b> Naučni saradnik, IHTM, Centar za hemiju, Beograd
<b>Članstva u društvima:</b>	Srpsko hemijsko društvo,
<b>Profesionalno iskustvo:</b>	<b>1994-2013</b> - Hemijski fakultet, <b>2013 – IHTM</b> – Centar za hemiju, <b>2013-2014.</b> Studijski boravak (Institut za hemiju, Karl-Franzens Univerzitet u Gracu, Grac, Austrija)
<b>Oblasti interesovanja:</b>	Organska hemija, Fizičko-organska hemija, Računarska hemija
<b>Znanje jezika:</b>	Engleski,
<b>Najznačajniji projekti:</b>	<b>Međunarodni:</b> <b>2010– 2013</b> - Deployment of e-Infrastructures for scientific communities/ HP-SEE / High-Performance Computing Infrastructure for South East Europe's Research Communities <b>Osnovna istraživanja:</b> <b>2004 – 2005</b> - Sintesa i struktura potencijalno antikancerogenih platina(IV) kompleksa i srodnih koordinacionih

	<p>jedinjenja kao prekursora nanostrukturnih materijala / ON111235</p> <p><b>2006 – 2010</b> - Sinteza, karakterizacija i aktivnost organskih i koordinacionih jedinjenja i njihova primena u (bio)nanotehnologiji / ON142010</p> <p><b>2011 – 2015</b> - Racionalni dizajn i sinteza biološki aktivnih i koordinacionih jedinjenja i funkcionalnih materijala, relevantnih u (bio)nanotehnologiji / ON 172035</p>
<b>Izabrane publikacije:</b>	<ol style="list-style-type: none"> <li>1. Milica M. Rajković, Ljubinka B. Lorenc, Ivan O. Juranić, Željko J. Vitnik, Mihailo Lj. Mihailović, "Acid-catalyzed rearrangement of some steroidal isoxazolidines", <i>Tetrahedron</i>, 1999, <b>55</b>, 6681-6690.</li> <li>2. B. Jovanović, I. Juranić, M. Mišić-Vuković, D. Brkić, Ž. Vitnik, "Kinetics and mechanism of the reaction of substituted 4-pyrimidine carboxylic acids with diazodiphenylmethane in dimethylformamide", <i>J. Chem. Research (S)</i>, 2000, 506-507; <i>J. Chem. Research (M)</i>, 2000, 1257-1264.</li> <li>3. Rade Marković, Željko Vitnik, Marija Baranac, Ivan Juranić, "Mechanism of stereoselective synthesis of push-pull (Z)-4-oxothiazolidine derivatives containing an exocyclic double bond. A MNDO-PM3 Study", <i>J. Chem. Research (S)</i>, 2002, 485-489.</li> <li>4. Ćirić-Marjanović, B. Marjanović, V. Stamenković, Ž. Vitnik, V. Antić, I. Juranić, "Structure and stereochemistry of electrochemically synthesized poly-(1-naphthylamine) from neutral acetonitrile solution", <i>J. Serb. Chem. Soc.</i>, 2002, <b>67</b>, 867-877.</li> <li>5. N. V. Valentić , Ž. Vitnik, S. I. Kozhushkov, A. De Majere, G. S. Ušćumlić , I. O. Juranić, "Effect of substituents on the <sup>13</sup>C-NMR chemical shifts of 3-methylene-4-substituted-1,4-pentadienes. Part I", <i>J. Serb. Chem. Soc.</i>, 2003, <b>68</b>, 67.</li> <li>6. L. Pfendt, B. Dražić, G. Popović, B. Drakulić, Ž. Vitnik , I. Juranić, "Determination of all pKa values of some di- and tricarboxylic unsaturated and epoxy acids and their polylinear correlation with the carboxylic group atomic charges", <i>J. Chem. Research (S)</i>, 2003, 247-248; <i>J. Chem. Res. (M)</i>, 2003, 0501-0504.</li> <li>7. N. V. Valentić , Ž. Vitnik, S. I. Kozhushkov, A. De Majere, G. S. Ušćumlić, I. O. Juranić, "Linear free energy relationships of the <sup>1</sup>H and <sup>13</sup>C NMR chemical shifts of 3-methylene-2-substituted-1,4-pentadienes", <i>J. Mol. Struct.</i> 2005, <b>744–747</b>, 901–908.</li> <li>8. Miodragović, Djenana U.; Vitnik, Željko J.; Milosavljević, Slobodan M.; Malinar, Mijat J.; Juranić, Ivan O; "NH···π interactions stabilize the most-hindered rotamer of the (S)-tyrosinato side group in bis[(S)-tyrosinato](diamine)cobalt(III) complexes: An NMR spectroscopic and DFT study", <i>Eur. J. Inorg. Chem.</i> 2005, <b>15</b>, 3172-3178.</li> <li>9. Željko J. Vitnik, Vesna D. Kiricojević, Milovan D. Ivanović, Ivan O. Juranić, "Molecular-orbital Investigation of Various Reaction Pathways in Reaction of Ketones with Bromoform", <i>Int. J. Quantum Chem.</i>, 2006, <b>106</b>, 1323-1329.</li> <li>10. Jovanović, Bratislav Z.; Marinković, Aleksandar D.; Vitnik, Željko; Juranić, Ivan O, "Substituent and structural effects on the kinetics of the reaction of N-(substituted phenylmethylene)-m- and -p-aminobenzoic acids with diazodiphenylmethane", <i>J. Serb. Chem. Soc.</i>, 2007, <b>72</b>, 1191-1200.</li> <li>11. Miodragović, Djenana U.; Mitić, Dragana M.; Miodragović, Zoran M.; Bogdanović, Goran A.; Vitnik, Željko J.; Vitorović, Maja D.; Radulović, Milanka D.; Nastasijević, Branislav J.; Juranić, Ivan O.; Andelković, Katarina K. "Syntheses, characterization and antimicrobial activity of the first complexes of Zn(II), Cd(II) and Co(II) with N-benzoyloxycarbonylglycine", <i>Inorg. Chim. Acta</i>, 2008, <b>361</b>, 86-94.</li> <li>12. Mitić, Dragana M.; Miodragović, Denana U.; Sladić, Dušan M.; Vitnik, Željko J.; Miodragović, Zoran M.; Andelković, Katarina K.; Radulović, Milanka D.; Juranić, Nenad O. "Synthesis, NMR, DFT and antimicrobial studies of Zn(II) complexes with N-benzoyloxycarbonyl-S-alanine", <i>J. Serb. Chem. Soc.</i>, 2008, <b>73</b>, 815-824.</li> <li>13. Vitnik, V. D.; Ivanović, M. D.; Vitnik, Ž. J.; Đorđević, J. B.; Žižak, Ž. S.; Juranić Z. D.; Juranić, I. O. "One-step conversion of ketones to conjugated acids using bromoform", <i>Synthetic Commun.</i>, 2009, <b>39</b>, 1457-1471.</li> <li>14. Valentić, N.V.; Vitnik, Ž.J.; Mijin, D.Ž.; Ušćumlić, G.S.; Todorović, N.; Juranić, I.O. "Linear Free Energy Relationships of the <sup>13</sup>C NMR chemical shifts in 5-(3- and 4-substituted arylazo)-4,6-dimethyl-3-cyano-2-pyridones", <i>ARKIVOC</i>, 2009 (xiii), 227-240.</li> <li>15. Vitnik, Vesna D.; Milenković, Marina T.; Dilber, Sanda P.; Vitnik, Željko J.; Juranić, Ivan O. "Improved synthesis and in vitro study of antimicrobial activity of α,β-unsaturated and α-bromo carboxylic acids", <i>J. Serb. Chem. Soc.</i>, 2012, <b>77</b>, 741-750.</li> <li>16. Vitnik Vesna D; Vitnik Željko J; Juranić Ivan O.; "Carbenic vs. ionic mechanistic pathway in reaction of cyclohexanone with bromoform", <i>Journal of Molecular Modeling</i>, 2012, 18(10), 4721-4728.</li> <li>17. Alimmari Adel; Mijin Dušan; Vukičević Radovan; Božić Bojan; Valentić Nataša; Vitnik Vesna; Vitnik</li> </ol>

	<p>Željko; Ušćumlić Gordana; "Synthesis, structure and solvatochromic properties of some novel 5-arylazo-6-hydroxy-4-phenyl-3-cyano-2-pyridone dyes", <i>Chemistry Central journal</i>, 2012, <b>6</b>, 71-78.</p> <p>18. Nebojša Banjac, Nemanja Trišović, Željko Vitnik, Vesna Vitnik, Nataša Valentić, Gordana Ušćumlić, Ivan Juranić, "Solvatochromic and quantum chemical investigations of newly synthesized succinimides: substituent effect on intramolecular charge transfer", <i>Monatshefte für Chemie - Chemical Monthly</i>, 2013, <b>144</b>, 1525–1535.</p> <p>19. Vesna D. Vitnik, Željko J. Vitnik, Nebojša R. Banjac, Nataša V. Valentić, Gordana S. Ušćumlić, Ivan O. Juranić, "Quantum mechanical and spectroscopic (FT-IR, <math>^{13}\text{C}</math>, <math>^1\text{H}</math> NMR and UV) investigations of potent antiepileptic drug 1-(4-chloro-phenyl)-3-phenyl-succinimide", <i>Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy</i>, 2014, <b>117</b>, 42–53.</p> <p>20. Jelena Mirković, Jelena Rogan, Dejan Poleti, Vesna Vitnik, Željko Vitnik, Gordana Ušćumlić, Dušan Mijin, "On the structures of 5-(4-, 3- and 2-methoxyphenylazo)-3-cyano-1-ethyl-6-hydroxy-4-methyl-2-pyridone: An experimental and theoretical study", <i>Dyes and Pigments</i>, 2014, <b>104</b>, 160-168.</p> <p>21. Sleem Hmuda, Nemanja Trišović, Jelena Rogan, Dejan Poleti, Željko Vitnik, Vesna Vitnik, Nataša Valentić, Biljana Božić, Gordana Ušćumlić, "New derivatives of hydantoin as potential antiproliferative agents: biological and structural characterization in combination with quantum chemical calculations", <i>Monatshefte für Chemie - Chemical Monthly</i>, 2014, <b>145</b>, 821-833.</p> <p>22. Veselinovic, Jovana B.; Veselinovic, Aleksandar M.; Vitnik, Zeljko J.; Vitnik, Vesna D.; Nikolic, Goran M., "Antioxidant properties of selected 4-phenyl hydroxycoumarins: Integrated in vitro and computational studies", <i>Chemico-Biological Interactions</i>, 2014, <b>214</b>, 49-56.</p> <p>23. Assaf, Zeinab; Eger, Elisabeth; Vitnik, Zeljko; Fabian, Walter M. F.; Ribitsch, Doris; Guebitz, Georg M.; Faber, Kurt; Hall, Melanie, "Identification and Application of Enantiocomplementary Lactamases for Vince Lactam Derivatives", <i>ChemCatChem</i>, 2014, <b>6</b>, 2517-2521.</p> <p>24. Arsovski, Violeta M.; Bozic, Bojan Dj.; Mirkovic, Jelena M.; Vitnik, Vesna D.; Vitnik, Zeljko J.; Fabian, Walter M. F.; Petrovic, Slobodan D.; Mijin, Dusan Z. "Spectroscopic and quantum mechanical investigation of N,N'-bisarylmalonamides: solvent and structural effects", <i>Journal of Molecular Modeling</i>, 2014, <b>20</b>, 1-16.</p> <p>25. Željko J. Vitnik; Walter M.F. Fabian; "Ring- and side-group conformational properties of di-O-acylated xylopyranosides: A computational study", <i>Computational and Theoretical Chemistry</i>, 2015, <b>1051</b>, 104–109.</p> <p>26. Nemanja P. Trišović, Bojan Dj. Božić, Jelena D. Lović, Vesna D. Vitnik, Željko J. Vitnik, Slobodan D. Petrović, Milka L. Avramov Ivić; "Electrochemical characterization of phenytoin and its derivatives on bare gold electrode", <i>Electrochimica Acta</i>, 2015, <b>161</b>, 378–387.</p> <p>27. Vesna D. Vitnik; Željko J. Vitnik; "The spectroscopic (FT-IR, FT-Raman, <math>^{13}\text{C}</math>, <math>^1\text{H}</math> NMR and UV) and NBO analyses of 4-bromo-1-(ethoxycarbonyl)piperidine-4-carboxylic acid", <i>Spectrochimica Acta, Part A: Molecular and Biomolecular Spectroscopy</i>, 2015, <b>138</b>, 1–12.</p> <p>28. Arsovski Violeta M, Bozic Bojan Dj, Mirkovic Jelena M, Vitnik Vesna D, Vitnik Zeljko J, Petrovic Slobodan D, Uscumlic Gordana S, Mijin Dusan Z, "Computational and spectroscopic data correlation study of N,N'-bisarylmalonamides (Part II)", <i>Journal of Molecular Modeling</i>, 2015, <b>21</b>, 239.</p> <p>29. Popović-Đorđević J. B.; Vitnik V. D., Vitnik Ž. J., Ivanović M. D.; "Glutarimidi: biološka aktivnost, opšti postupci za sintezu i fizičko-hemijske karakteristike", <i>Hemispska industrija</i>, 2015, <b>69</b>, 523-536.</p>