Ana Stanojević

Fakultet za fizičku hemiju, Univerzitet u Beogradu, Studentski trg 12-16, 11158 Beograd, Srbija | +381 113336876 | ana.stanojevic@ffh.bg.ac.rs

Obrazovanje

1.10.2014 – 8.12.2017.
Doktor nauka – fizićkohemijske nauke || Fakultet za fizičku hemiju, Univerzitet u Beogradu, Beograd, Srbija

· Doktorska disertacija: Modeliranje mehanizma uticaja etanola na nelinearna dinamička stanja hipotalamo-hipofizno-adrenalnog sistema

1.10.2013 - 16.5.2014.
Master fizikohemičar || Fakultet za fizičku hemiju, Univerzitet u Beogradu, Beograd, Srbija

· Prosečna ocena: 10 (od 10)
· Naziv master rada: Promene dinamičkih stanja nelinearnog hipotalamo-hipofizno-adrenalnog sistema izazvane promenama koncentracije holesterola: matematičko modeliranje i numeričke simulacije

1.10.2009 - 5.7.2013. Diplomirani fizikohemičar | | Fakultet za fizičku hemiju, Univerzitet u Beogradu, Beograd, Srbija

· Prosečna ocena: 9.97 (od 10)
Naziv diplomskog rada: Modeliranje uticaja pojedinih stupnjeva reakcije Dushmana na dinamiku reakcije Bray-Liebhafsky

Radno iskustvo

1.6.2020 – Docent | Fakultet za fizičku hemiju, Univerzitet u Beogradu, Beograd, Srbija
· Predmeti:
Master studije: Metode i metodologija fizičkohemijskih istraživanja, Kataliza.

1.7.2015 – 31.5.2020. Asistent | Fakultet za fizičku hemiju, Univerzitet u Beogradu, Beograd, Srbija
· Predmeti:
Osnovne studije: Opšti kurs fizičke hemije 1, Opšti kurs fizičke hemije 2, Hemijska kinetika.

Master studije: Biofizička hemija i dinamika neravnotežnih procesa, Dinamika nelinearnih procesa, Neravnotežna termodinamika.

15.4.2015 – 1.7.2015. Istraživač saradnik | Fakultet za fizičku hemiju, Univerzitet u Beogradu, Beograd, Srbija |

15.1.2015 – 15.4.2015. Istraživač pripravnik | Fakultet za fizičku hemiju, Univerzitet u Beogradu, Beograd, Srbija |

Stručna usavršavanja

13.6.2019 – 15.7.2019. Newcastle University, School of Engineering, u Njukaslu na Tajnu (Newcastle upon Tyne), Ujedinjeno Kraljevstvo Velike Britanije i Severne Irske, u grupi prof. dr Katarine Novaković

3.7.2018 – 4.9.2018. Newcastle University, School of Engineering, u Njukaslu na Tajnu (Newcastle upon Tyne), Ujedinjeno Kraljevstvo Velike Britanije i Severne Irske, u grupi prof. dr Katarine Novaković

18.6.2017 – 17.9.2017. Erasmus+ program razmene | Departman za kliničke neuronauke Karolinska Instituta u Stokholmu, Švedska, u grupi prof. dr Vladane Vukojević

Oblasti naučnog interesovanja

Dinamika nelinearnih procesa; modeliranje složenih procesa u biologiji, medicini i hemiji; oscilatorni procesi u hemijskim, fizičkohemijskim i biološkim sistemima

Projekti i naučna saradnja

1. Projekat bilateralne saradnje sa Slovenijom | Modeling of the oscillatory systems in chemistry, physical chemistry and biology | Januar 2018 – Decembar 2019
2. Personalised Pulsatile Materials (PPM) | EPSRC Reference: EP/N033655/1 | Decembar 2016 - Decembar 2018
3. KI-Mayo collaboration research grant, PI Vladana Vukojević/Osama Abulseoud Mathematical Modeling of the Neuroendocrine Signaling Network Dynamics in a Model of Mania | 2014
4. COST akcija CM1304 “Emergence and Evolution of Complex Chemical Systems” | Decembar 2013 – Decembar 2017
5. Projekat „Dinamika nelinearnih fizičkohemijskih i biohemijskih sistema sa modeliranjem i predviđanjem njihovih ponašanja pod neravnotežnim uslovima“ | Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije, Projekat br. 172015 | Januar 2011 – Decembar 2019.

Radovi

1. B. Milovanović, **A. Stanojević**, M. Etinski, M. Petković. Intriguing Intermolecular Interplay in Guanine Quartet Complexes with Alkali and Alkaline Earth Cations. The Journal of Physical Chemistry B, (2020) 124(15), 3002-3014.
   https://doi.org/10.1021/acs.jpcb.0c01165
   https://pubs.acs.org/doi/10.1021/acs.jpcb.0c01165

2. **A. Stanojević**, V. M. Marković, Ž. Čupić, Lj. Kolar-Anić, V. Vukojević. Advances in mathematical modelling of the Hypothalamic–Pituitary–Adrenal (HPA) axis dynamics and the neuroendocrine response to stress. Current Opinion in Chemical Engineering (2018) 21: 84-95.
   https://doi.org/10.1016/j.coche.2018.04.003
   https://www.sciencedirect.com/science/article/pii/S2211339817300795

3. **A. Stanojević**, V. M. Marković, Ž. Čupić, Lj. Kolar-Anić, V. Vukojević. Advances in mathematical modelling of the Hypothalamic–Pituitary–Adrenal (HPA) axis dynamics and the neuroendocrine response to stress. Current Opinion in Chemical Engineering (2018) 21: 84-95.
   https://doi.org/10.1016/j.coche.2018.04.003
   https://www.sciencedirect.com/science/article/pii/S2211339817300795

4. Ž. Čupić, **A. Stanojević**, V. M. Marković, Lj. Kolar-Anić, L. Terenius, V. Vukojević, The HPA axis and ethanol: a synthesis of mathematical modelling and experimental observations, Addiction Biology (2017) 22 (6):1486-1500 , doi:10.1111/adb.12409
   https://onlinelibrary.wiley.com/doi/abs/10.1111/adb.12409

5. O.A. Abulseoud, M.C. Ho, D.S. Choi, **A. Stanojević**, Ž. Čupić, Lj. Kolar-Anić, V. Vukojević. Corticosterone oscillations during mania induction in the lateral hypothalamic kindled rat - Experimental observations and mathematical modeling. PLOS ONE (2017) May 18;12(5):e0177551. https://doi.org/10.1371/journal.pone.0177551
   https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0177551

6. **A. Stanojević**, V.M. Marković, Ž. Čupić, V. Vukojević, Lj. Kolar-Anić. Modelling of the hypothalamic-pituitary-adrenal axis perturbations by externally induced cholesterol pulses of finite duration and with asymmetrically distributed concentration profile. Russian Journal of Physical Chemistry A (2017), 91(13): 112–119. DOI: 10.1134/S0036024417130027.
   https://link.springer.com/article/10.1134/S0036024417130027

7. Ž. Čupić, V. M. Marković, S. Maćešić, **A. Stanojević**, S. Damjanović, V. Vukojević, Lj. Kolar-Anić. Dynamic transitions in a model of the hypothalamic-pituitary-adrenal axis, Chaos (2016) 26, 033111, doi: 10.1063/1.4944040.
   https://aip.scitation.org/doi/abs/10.1063/1.4944040

8. V. M . Marković, Ž. Čupić, S. Maćešić, **A. Stanojević**, V. Vukojević, Lj. Kolar-Anić. Modelling cholesterol effects on the dynamics of the hypothalamic–pituitary–adrenal (HPA) axis, Mathematical Medicine and Biology (2016) 33: 1-28, doi:10.1093/imammb/dqu020. https://academic.oup.com/imammb/article-abstract/33/1/1/2363477

Naučne konferencije

L. B. Negrojević, **A. D. Stanojević**, Đ. Vukajlović, K. Novaković, Genipin crosslinked chitosan hydrogels for drug delivery of methylene blue, in: Seventh Conference of Young Chemists of Serbia, Belgrade, Serbia, 2nd November 2019, Serbian Young Chemists' Club and Serbian Chemical Society, Belgrade, Serbia, 2019, p.132.

M. M. Anđelković, **A. D. Stanojević**, Ž. D. Čupić, A. Z. Ivanović-Šašić, Lj. Z. Kolar-Anić, Influence of circadian function on the dynamical states of the hypothalamic-pituitary-adrenal axis, in: 8th International Conference on Computational Bioengineering (ICCB2019), 4-6 September 2019, Belgrade, Serbia (2019) p. 88-89.

Lj. Kolar-Anić, Ž. Čupić, V. M. Marković, **A. Stanojević**, M. Anđelković, S. Maćešić, V. Vukojević, Modelling the neuroendocrine hypothalamic-pituitary-adrenal (HPA) system, Big Brain 2019 Conference for Collaboration in EurAsia, Lomonosov Moscow State University Biokybernetika, 30 September - 04 October 2019, Moscow, Russia (2019) pp. 32-33.

S. R. Maćešić, Ž. D. Čupić, M. M. Anđelković, **A. D. Stanojević**, V. M. Marković, Lj. Z. Kolar-Anić, Reaction pathways in a model with two sources of the reactant, 7th International Congress of Serbian Society of Mechanics, Minisymposium – Nonlinear dynamics, June 24-26, 2019, Sremski Karlovci, Serbia (2019) pp. 131-132. ISBN 978-86-909973-7-4.

Lj. Z. Kolar-Anić, Ž. D. Čupić, **A. Stanojević**, J. W. Dietrich, On the modelling of complex nonlinear process: thyroid hormone syntesis, Minisymposium – Biomechanics and Mathematical Biology, June 24-26, 2019, Sremski Karlovci, Serbia (2019), pp. 215-216. ISBN 978-86-909973-7-4.

A. Stanojević, Đ. Vukajlović, J. Parker, K. Novaković, Synthesis and characterization of genipin-crosslinked chitosan hydrogels, in: Seventeenth Young Researchers' Conference - Materials Science and Engineering: Program and the Book of Abstracts, Belgrade, Serbia, 5-7 December 2018, Institute of Technical Sciences of Serbian Academy Of Sciences And Arts, Belgrade, Serbia (2018) p. 9.

M. Anđelković, **A. Stanojević**, V. M. Marković, Lj. Kolar-Anić, Modelling of cholesterol and ethanol cumulative effect on hypothalamic-pituitary-adrenal axis, in: Sixth Conference of Young Chemists of Serbia, Belgrade, Serbia, 27th October 2018, Serbian Young Chemists' Club and Serbian Chemical Society, Belgrade, Serbia, 2018.

M. Anđelković, **A. Stanojević**, V. M. Marković, Ž. Čupić, Lj. Kolar-Anić, Modelling of externally induced cholesterol pulses on hypothalamic-pituitary-adrenal axis perturbed with ethanol, in: Physical Chemistry 2018, 14th International Conference on Fundamental and Applied Aspects of Physical Chemistry, Belgrade, Serbia, 24-28 September 2018, Vol. 1, Society of Physical Chemists of Serbia, Belgrade, Serbia, 2018.

Ž. Čupić, V. Vukojević, **A. Stanojević**, V. M. Marković, S. Maćešić, Lj. Kolar-Anić, Decoupling the autocatalytic and the autoinhibitory steps in a stoichiometric model of the hypothalamic-pituitary-adrenal axis, in: Physical Chemistry 2018, 14th International Conference on Fundamental and Applied Aspects of Physical Chemistry, Belgrade, Serbia, 24-28 September 2018, Vol. 1, Society of Physical Chemists of Serbia, Belgrade, Serbia, 2018.

A. D. Stanojević, V. M. Marković, Ž. D. Čupić, Lj. Z. Kolar-Anić, V. B. Vukojević, Mathematical modeling of testosterone-related differences in the hypothalamic-pituitary-adrenal axis response to ethanol, 70 years of the Mathematical Institute of Serbian Academy of Sciences and Arts, Mini-symposium "Biomechanics and Modelling of Biological Systems", Belgrade, Serbia (2016) p. 34-35.

A. Stanojević, V. M. Marković, Ž. Čupić, V. Vukojević, Mathematical modeling of interleukin 6 effects on the hypothalamic-pituitary-adrenal axis, Physical Chemistry 2016, 13th International Conference on Fundamental and Applied Aspects of Physical Chemistry, The Society of Physical Chemists of Serbia, Belgrade, Serbia, Proceedings, Volume I, (2016) p. 323-326.

A. Stanojević, V. M. Marković, Lj. Kolar-Anić, V. Vukojević, Mathematical modeling of interactions between the central circadian clock, the hypothalamic-pituitary-adrenal (HPA) axis and alcohol, Physical Chemistry 2016, 13th International Conference on Fundamental and Applied Aspects of Physical Chemistry, The Society of Physical Chemists of Serbia, Belgrade, Serbia, Proceedings, Volume I, (2016) p. 351-354.

A. Stanojević, Ž. Čupić, V. M. Marković, V. Vukojević, Lj. Kolar-Anić, Modelling the effects of the cholesterol-rich food intake on the hypothalamic-pituitary-adrenal (HPA) axis dynamics, ECMTB - SMB 2016 - the joint meeting of the European Society for Mathematical and Theoretical Biology and the Society for Mathematical Biology, Nottingham, The United Kingdom of Great Britain and Northern Ireland (2016) CT-14-AM-06 (one page).

A. Stanojević, V. Marković , Ž. Čupić, S. Macešić, V. Vukojević, Lj. Kolar-Anić, Mathematical Modeling of the Hypothalamic-Pituitary-Adrenal Axis Dynamics in Rats, Belgrade Bioinformatics Conference (BelBi) 2016, Belgrade, Serbia, (2016) pp. 99.

A. Stanojević, Ž. Čupić, V. M. Marković, S. Macešić, V. Vukojević, Lj. Kolar-Anić, Modeling the effects of stress on adrenal progesterone dynamics, 2nd International Symposium on Advances in PCOS and Women's Health, Belgrade, Serbia, (2016) pp. 47.

A. Stanojević, Ž. Čupić, V. M. Marković, S. Maćešić, Lj. Kolar-Anić, V. Vukojević, Modelling Ethanol Influence on the Dynamics of the Hypothalamic-Pituitary-Adrenal (HPA) Axis, EMBO | EMBL Symposium: Biological Oscillators: Design, Mechanism, Function, Heidelberg, Germany, (2015) pp. 106.

A. Stanojević, Ž. Čupić, Lj. Kolar-Anić, V. Vukojević, Mathematical modelling of ethanol effects on the dynamics of the hypothalamic-pituitary-adrenal (HPA) system, The 5th International Congress of Serbian Society of Mechanics, Aranđelovac, Serbia, Proceedings, (2015) M3a (four pages).

S. Maćešić, **A. Stanojević**, Lj. KolarAnić, Ž. Čupić, Condition for appearance of Andronov-Hopf and saddle-node bifurcations in the model of neuroendorine system with five variables, The 5th International Congress of Serbian Society of Mechanics, Aranđelovac, Serbia, Proceedings, (2015) M2e (four pages).

A. Stanojević, S. Maćešić, Ž. Čupić, V. M. Marković, V. Vukojević, Lj. KolarAnić, Modelling perturbations of the hypothalamic-pituitary-adrenal axis with cholesterol pulses in the form of a normal distribution, International WE-Heraeus Physics School on "Model systems for understanding biological processes", Bad Honnef, Germany, (2015) P27 (one page).

S. Maćešić, **A. Stanojević**, Ž. Čupić, Lj. KolarAnić, Deriving conditions for appearance of Andronov-Hopf and saddle-node bifurcations in the model of the hypothalamic-pituitary-adrenal axis, International WE-Heraeus Physics School on "Model systems for understanding biological processes", Bad Honnef, Germany, (2015) P18 (one page).

A. Stanojević, Lj. Kolar-Anić, Ž. Čupić, V. M. Marković, V. Vukojević, Effects of gradual cholesterol pulses with normally distributed intensity profiles on the hypothalamic-pituitary-adrenal (HPA) axis dynamics, Physical Chemistry 2014, 12th International Conference on Fundamental and Applied Aspects of Physical Chemistry, The Society of Physical Chemists of Serbia, Belgrade, Serbia, Proceedings, Volume I, (2014) p. 340-343.

A. Stanojević, N. Pejić, Lj. Kolar-Anić, S. Anić, D. Stanisavljev, Ž. Čupić, Determination of paracetamol in pharmaceuticals by pulse perturbation of the Bray-Liebhafsky oscillatory reaction, Thirteenth Young Researchers' Conference – Materials Sciences and Engeneering, Belgrade, Serbia, The Book of Abstracts, (2014) p. 23.

A. Stanojević, Lj. KolarAnić, Ž. Čupić, V. M. Marković, V. Vukojević, Mathematical modelling of the influence of distribution of cholesterol concentration on the perturbations of hypothalamic-pituitary-adrenal axis, 3rd Congress of physiological sciences of Serbia with international participation - Molecular, Cellular and Integrative Basis of Health and Disease: Transdisciplinary Approach, Serbian Physiological Society, Belgrade, Serbia, Abstract Book , (2014) p. 192.

A. Stanojević, J. Maksimović, Ž. Čupić, Lj. Kolar-Anić, S. Anić, The influence of poly-4-vinylpyridine-co-divinylbenzene-Co^{2+} catalyst on the reaction pathways of the Bray-Liebhafsky reaction, Twelfth Young Researchers' Conference – Materials Sciences and Engeneering, Belgrade, Serbia, The Book of Abstracts, (2013) p. 14.

A. Stanojević, V. M. Marković, S. Maćešić, V. Vukojević, Ž. Ćupić and Lj. Kolar-Anić, Bifurcation analysis of HPA axis dynamic states under cholesterol regulation, Theoretical Approaches to BioInformation Systems - TABIS 2013, Belgrade, Serbia, Book of Abstracts, (2013) p. 30.

V. Marković, **A. Stanojević**, Ž. Čupić, V. Vukojević, Lj. Kolar-Anić, Dynamic states of cortisol in function of cholesterol concentration, 4th International Congress of Serbian Society of Mechanics, Vrnjačka Banja, Serbia, Proceedings, (2013) p. 889-894.

A. Stanojević, S. Anić, One free radical model of the Bray-Liebhafsky oscillatory reaction, Physical Chemistry 2012, 11th International Conference on Fundamental and Applied Aspects of Physical Chemistry, The Society of Physical Chemists of Serbia, Belgrade, Serbia, Proceedings, Volume I, (2012) p. 297-299.

A. D. Stanojević, Ž. D. Čupić, S. R. Anić, New variant of the model of the Bray-Liebhafsky analytical matrix, Tenth Young Researchers' Conference – Materials Sciences and Engeneering, Belgrade, Serbia, The Book of Abstracts, (2011) p. 18.

Članstva u stručnim društvima

- Društvo fizikohemičara Srbije
- Američko udruženje za unapređenje nauke (The American Association for the Advancement of Science (AAAS))
- Evropsko udruženje za matematičku i teorijsku biologiju (European Society for Mathematical and Theoretical Biology)

Nagrade i priznanja

- Specijalno priznanje Srpskog hemijskog društva namenjeno najboljim diplomiranim studentima hemije i hemijske tehnologije na Univerzitetima u Srbiji | Srpsko hemijsko društvo| 2014
- Nagrada za najbolji diplomski rad | Fondacija „Sestre Bulajić“, Srbija| 2014
- Diploma „Pavle Savić” za odličan uspeh postignut na studijama fizičke hemije | Društvo fizikohemičara Srbije | 2014
- Nagrada Kluba SUPERSTE u kategoriji prirodnih nauka i tehničko tehnološke oblasti | Erste Banka, Srbija | 2014
- Nagrada za najbolji stručni i naučno-istraživački studentski rad u 2012. godini na prirodno-matematičkoj grupaciji Univerziteta u Beogradu | Univerzitet u Beogradu, Srbija | 2013
- Stipendija za najbolje studente prirodnih nauka | Hemofarm fondacija, Srbija | 2013
- Stipendija | Fond za mlade talente „Dositeja” Ministarstva omladine i sporta Srbije | 2012 - 2014
- Stipendija | Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije | 2010 – 2012

Veštine i sposobnosti

RAD NA RAČUNARU

· MATLAB; ImageJ; Origin; E-Z Solve; MS Office; Internet.

JEZICI

· Engleski B2

· Nemački A1

· Ruski A1

· Španski A1

· Srpski (maternji jezik)

Dodatne aktivnosti i usavršavanja

Sekretar Sekcije za nelinearne fenomene i kompleksne sisteme Društva fizikohemičara Srbije | Od jula 2018.

14. Međunarodna konferencija o fundamentalnim i primenjenim aspektima fizičke hemije | Društvo fizikohemičara Srbije, Beograd, Srbija | Januar 2018 - Septembar 2018
· Potpredsednica organizacionog odbora

13. Međunarodna konferencija o fundamentalnim i primenjenim aspektima fizičke hemije | Društvo fizikohemičara Srbije, Beograd, Srbija | Januar 2016 - Septembar 2016
· Član organizacionog odbora

Nauka oko nas | Fakultet za fizičku hemiju, Univerzitet u Beogradu, Beograd, Srbija | Od 2010 -
· Promocija nauke i posticanje studenata srednjih škola da se bave naukom

TRAIN (Training & Research for Academic Newcomers) | Univerzitet u Beogradu, Beograd, Srbija | 2015
· Kroz program TRAIN novozaposleni na Univerzitetu izgrađuju svoje znanje, veštine, motivaciju i samopouzdanje kako bi poboljšali svoje praktično znanje i liderske veštine, što im omogućava da izgrade svoju profesionalnu mrežu, pozitivno utiču na svoje studente, osnaže svoje istraživanje i povećaju doprinos društvu i industriji.

Evropska Noć istraživača | Septembar 2015, Septembar 2017, Septembar 2018, Septembar 2019.
· Javni događaj posvećen popularizaciji nauke i učenju kroz zabavu

Online program mentorstva "Srbija na vezi" čiji je cilj promocija inovativnih praksi u poslovanju i obrazovanju | iSerbia.rs, uz podršku Kluba privrednih novinara i Udruženja za jugoistčnu Evropu Univerziteta Oksford, Beograd, Srbija | Marth 2014 - Septembar 2014
· Mentor: Vladana Vukojević, vanredni profesor, Departman za kliničke neuronauke, Karolinska Institute, Centar za molekularnu medicinu CMM L8:01, 17176 Stokholm, Švedska