

Curriculum Vitae

Personal Details

Name: Ivan S. Stefanović
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Born: 8 June 1987
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Bachelor degree: From October 2006 to September 2011, University of Belgrade, Faculty of Chemistry. GPA 8.45 out of 10.

Diploma work: “Synthesis and thermal properties of thermoplastic poly(urethane-siloxanes)”

Master degree: From October 2011 to September 2012, University of Belgrade, Faculty of Chemistry. GPA 9.25 out of 10.

Diploma work: “Characterization of thermoplastic polyurethanes based on α,ω -hydroxypropyl-polydimethylsiloxanes”

PhD thesis: From October 2012 to December 2017, University of Belgrade, Faculty of Chemistry. GPA 10.00 out of 10.

PhD title: “Synthesis and characterization of polyurethane copolymers based on poly(propylene oxide)-*block*-poly(dimethylsiloxane)-*block*-poly(propylene oxide) and their nanocomposites with organomodified clay”

Employment:

- From October 2011 to June 2012, Faculty of Agriculture, University of Belgrade, Nemanjina 6, Zemun, Serbia, as *Adjunct Assistant*.
- From October 2015 to February 2016, Faculty of Agriculture, University of Belgrade, Nemanjina 6, Zemun, Serbia, as *Adjunct Assistant*.
- From November 2012 to November 2018, ICTM, Department of Chemistry, University of Belgrade, Njegoševa 12, Belgrade, Serbia, as *Research Assistant*.
- From November 2018 to present, ICTM, Department of Chemistry, University of Belgrade, Njegoševa 12, Belgrade, Serbia, as *Assistant Research Professor*.
- From November 2019 to April 2020, Department of Chemical Sciences, University of Padova, Italy, as *Postdoctoral Research Fellow*.

Expertise:

- Synthesis of segmented polyurethane and poly(urethane-urea) copolymers based on poly(dimethylsiloxane) and other macrodiols
- Synthesis of cross-linked polyurethane networks based on hyperbranched poly(esters) and different macrodiols
- Synthesis and characterization of polymer nanocomposites
- Synthesis and characterization of macroporous copolymers based on glycidyl methacrylate.

Examination of the structure and properties of polymers by different methods:

¹H, ¹³C, 2D (COSY, HSQC, HMBC, ROESY) and solid state NMR spectroscopy, UV and FTIR spectroscopy, solution viscosity, gel-permeation chromatography (GPC), differential scanning calorimetry (DSC), thermogravimetric analysis (TGA), dynamic mechanical thermal analysis (DMTA), tensile test, small and wide X-ray diffraction scattering (SAXS, WAXS), X-ray photoelectron spectroscopy (XPS), mercury porosimetry, scanning electron microscopy (SEM), atomic force microscopy (AFM), transmission electron microscopy (TEM), hardness (Shore A and Shore D), determination of contact angles and water absorption measurements, surface free energy (SFE) analysis, Z-potential analysis, swelling tests in appropriate solvents.

Projects:

1. Synthesis and characterization of novel functional polymers and polymeric nanocomposites (172062); Ministry of Education, Science and Technological Development of Republic of Serbia, (*Participant*).
2. Synthesis and application of magnetic polymer/bentonite composite for removal of contaminated substances from aqueous solutions (19/6-020/961-58/18); The Ministry of Science and Technological Development, Higher Education and Information Society of Republic of Srpska, (*Participant*).

Languages:

English, fluent (both spoken and written)
Serbian, native

Membership:

Serbian Chemical Society,
Serbian Young Chemists' Club

Publications (Scientific papers):

1. Marija V. Pergal, **Ivan S. Stefanović**, Dejan Godevac, Vesna V. Antić, Vesna Milačić, Sanja Ostojić, Jelena Rogan, Jasna Djonlagić, Structural, thermal and surface characterization of thermoplastic polyurethanes based on poly(dimethylsiloxane), *J. Serb. Chem. Soc.*, 79 (7) 843-866 (2014).
2. **Ivan S. Stefanović**, Jasna Djonlagić, Gordana Tovilović, Jelena Nestorov, Vesna V. Antić, Sanja Ostojić, Marija V. Pergal, Poly(urethane-dimethylsiloxane) copolymers displaying a range of soft segment contents, noncytotoxic chemistry, and nonadherent properties toward endothelial cells, *J. Biomed. Mater. Res. A.*, 103 (4) 1459-1475 (2014).
3. **Ivan S. Stefanović**, Bojana M. Ekmešćić, Danijela D. Maksin, Aleksandra B. Nastasović, Zoran P. Miladinović, Zorica M. Vuković, Darko M. Micić, Marija V. Pergal, Structure, thermal and morphological properties of novel macroporous amino-functionalized glycidyl methacrylate based copolymers, *Ind. Eng. Chem. Res.*, 54 (27) 6902-6911 (2015).
4. **Ivan S. Stefanović**, Milena Špirkova, Rafał Poręba, Miloš Steinhart, Sanja Ostojić, Vele Tešević, Marija V. Pergal, Study of the Properties of Urethane–Siloxane Copolymers Based on Poly(propylene oxide)-*b*-poly (dimethylsiloxane)-*b*-poly(propylene oxide) Soft Segments, *Ind. Eng. Chem. Res.*, 55 (14) 3960-3973 (2016).

5. **Ivan S. Stefanović**, Dejan Godevac, Milena Špírková, Petar Jovančić, Vele Tešević, Vesna Milačić, Marija V. Pergal, Impact of the poly(propylene oxide)-*b*-poly(dimethylsiloxane)-*b*-poly(propylene oxide) macrodiols on the surface related properties of polyurethane copolymers, *Hem. Ind.*, 70 (6) 725-738 (2016).
6. Bojana M. Marković, **Ivan S. Stefanović**, Radmila V. Hercigonja, Marija V. Pergal, Jelena P. Marković, Antonije E. Onjia, Aleksandra B. Nastasović, Novel hexamethylene diamine functionalized macroporous copolymer for chromium removal from aqueous solutions, *Polym. Int.*, 66 (5) 679-689 (2017).
7. Marija V. Pergal, **Ivan S. Stefanović**, Rafał Poręba, Miloš Steinhart, Petar Jovančić, Sanja Ostojić, Milena Špírková, Influence of the organoclay content on the structure, morphology and surface related properties of novel poly(dimethylsiloxane)-based polyurethane/organoclay nanocomposites, *Ind. Eng. Chem. Res.*, 56 (17) 4970-4983 (2017).
8. **Ivan S. Stefanović**, Milena Špírková, Sanja Ostojić, Plamen Stefanov, Vladimir B. Pavlović, Marija V. Pergal, Montmorillonite/Poly(urethane-siloxane) Nanocomposites: Morphological, Thermal, Mechanical and Surface Properties, *Appl. Clay Sci.*, 149, 136-146 (2017).
9. **Ivan S. Stefanović**, Jasmina Dostanić, Davor Lončarević, Dana Vasiljević-Radović, Sanja Ostojić, Smilja Marković, Marija V. Pergal, Preparation and characterization of poly(urethane-siloxane)/titanium-dioxide nanocomposites, *Hem. Ind.*, 73 (1) 13-24 (2019).
10. Jasna V. Džunuzović, **Ivan S. Stefanović**, Enis S. Džunuzović, Aleksandra Dapčević, Sanja I. Šešlija, Bojana D. Balanč, Giuseppe C. Lama, Polyurethane networks based on polycaprolactone and hyperbranched polyester: structural, thermal and mechanical investigation, *Prog. Org. Coat.*, 137, 105305 (2019).
11. **Ivan S. Stefanović**, Jasna V. Džunuzović, Enis S. Džunuzović, Saša J. Brzić, Edita Jasiukaitytė-Grojzdek, Andrea Basagni, Carla Marega, Tailoring the properties of waterborne polyurethanes by incorporating different content of poly(dimethylsiloxane), *Prog. Org. Coat.*, 161, 106474 (2021).
12. **Ivan S. Stefanović**, Jasna V. Džunuzović, Enis S. Džunuzović, Aleksandra Dapčević, Sanja I. Šešlija, Bojana D. Balanč, Monika Dobrzyńska-Mizera, Composition-property relationship of polyurethane networks based on polycaprolactone diol, *Polym. Bull.*, 78, 7103-7128 (2021).
13. Bojana M. Marković, **Ivan S. Stefanović**, Aleksandra B. Nastasović, Zvezdana P. Sandić, Ljiljana Suručić, Aleksandra Dapčević, Jasna Džunuzović, Zvonko Jagličić, Zorica Vuković, Vladimir Pavlović, Antonije E. Onjia, Novel magnetic polymer/bentonite composite: characterization and application for Re(VII) and W(VI) adsorption, *Sci. Sinter.*, 53, 419-428 (2021).
14. **Ivan S. Stefanović**, Bojana M. Marković, Aleksandra B. Nastasović, Zorica M. Vuković, Aleksandra Dapčević, Vladimir B. Pavlović, Preparation and characterization of novel glycidyl methacrylate/clay nanocomposites, *Sci. Sinter.*, (2022). *Article in press*