

Curriculum Vitae

David Pahovnik

Personal information:

David Pahovnik Ph.D.

Date and place of birth: 08. 11. 1984, Slovenj Gradec, Slovenia
Nationality: Slovenian

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Education:

Postdoc:

- 6/2013 – present: King Abdullah University of Science and Technology, Saudi Arabia
- Field of work: Polymer Chemistry
- Supervisor: Prof. Dr. Nikos Hadjichristidis

Ph.D. Study:

- 10/2007 – 4/2012: National Institute of Chemistry, Slovenia
- Title of doctoral dissertation: Ionic-liquid-induced formation of polyaniline nanostructures
- Field of work: Polymer Chemistry
- Supervisor: Prof. Dr. Majda Žigon

Undergraduate Study:

- 9/2003 – 9/2007: University of Ljubljana, Faculty of Chemistry and Chemical Technology, Slovenia
- Title of the undergraduate thesis: Synthesis of dimethyl 1-aryl- in 1-heteroaryl-4-oxo-1,4-dihydropyridazine-3,5-dicarboxylates from dimethyl acetondicarboxylate
- Field of work: Organic synthesis
- Supervisor: Acad. Prof. Dr. Branko Stanovnik

Professional profile:

6/2013 – present: Postdoctoral Fellow, King Abdullah University of Science and Technology, Saudi Arabia

4/2012 – 5/2013: Researcher, National Institute of Chemistry, Slovenia

10/2007 – 4/2012: Young Researcher, National Institute of Chemistry, Slovenia

Technical Skills and Experiences:

- Organic synthesis and characterization of heterocyclic compounds
- Synthesis of nanostructured conjugated polymers and their characterization
- Polypeptide synthesis by ring opening polymerization of α -amino acid *N*-carboxyanhydrides for biomedical applications
- Synthesis of polyesteramide dendrimers and polyamide-hybrid dendritic polymers
- Characterization of biopharmaceuticals using MALDI-TOF-TOF
- Determination of polymer chemical composition and structure by NMR, FTIR, UV-vis, Raman, MS, molar mass by SEC, SEC-MALS and MS, thermal properties by DSC and TGA, morphology by SEM and AFM and solution properties by DLS and SLS.

Publications:

1. PAHOVNIK, David, ŽAGAR, Ema, VOHLÍDAL, Jiří, ŽIGON, Majda. Effect of cations on polyaniline morphology. *Chem. Pap.*, 2013, 67, 946-951.

2. PAHOVNIK, David, ŽAGAR, Ema, KOGEJ, Ksenija, VOHLÍDAL, Jiří, ŽIGON, Majda. Polyaniline nanostructures prepared in acidic aqueous solutions of ionic liquids acting as soft templates. *Eur. Polym. J.*, 2013, 49, 1381-1390.

3. REBOLJ, Katja, PAHOVNIK, David, ŽAGAR, Ema. Characterization of a protein conjugate using an asymmetrical-flow field-flow fractionation and a size-exclusion chromatography with multi-detection system. *Anal. chem.*, 2012, 84, 7374-7384.

4. ŠMIGOVEC LJUBIČ, Tina, REBOLJ, Katja, PAHOVNIK, David, HADJICHRISTIDIS, Nikos, ŽIGON, Majda, ŽAGAR, Ema. Utility of chromatographic and spectroscopic techniques for a detailed characterization of poly(styrene-*b*-isoprene) miktoarm star copolymers with complex architecture. *Macromolecules*, 2012, 45, 7574-7582.

5. ŠMIGOVEC LJUBIČ, Tina, PAHOVNIK, David, ŽIGON, Majda, ŽAGAR, Ema. Separation of Poly(styrene-*block*-*t*-butyl methacrylate) Copolymers by Various Liquid Chromatography Techniques. *The scientific world journal*, 2012, 932609-1-932609-9.

6. PAHOVNIK, David, REVEN, Sebastjan, GRDADOLNIK, Jože, BORŠTNAR, Rok, MAVRI, Janez, ŽAGAR, Ema. Determination of the interaction between glimepiride and hyperbranched polymers in solid dispersions. *J. pharm. sci.*, 2011, 100, 4700-4709.

7. MAV GOLEŽ, Ida, **PAHOVNIK, David**, BLÁHA, Michal, ŽIGON, Majda, VOHLÍDAL, Jiří. Copolymers of 2-methoxyaniline with 2- and 3-aminobenzenesulfonic and 2- and 3-aminobenzoic acids: Relationships between the polymerization conditions, structure, spectroscopic characteristics and conductivity. *Synth. met.*, 2011, 161, 1845-1855.

8. PAHOVNIK, David, ŽAGAR, Ema, VOHLÍDAL, Jiří, ŽIGON, Majda. Ionic liquid-induced formation of polyaniline nanostructures during the chemical polymerization of aniline in an acidic aqueous medium. *Synth. met.*, 2010, 160, 1761-1766.

9. PAHOVNIK, David, URŠIČ, Uroš, GROŠELJ, Uroš, MEDEN, Anton, SVETE, Jurij, STANOVNIK, Branko. Synthesis of dimethyl 1-(hetero)aryl-4-oxo-1, 4-dihydropyridazine-3,5-dicarboxylates from dimethyl 3-oxopentane-1,5-dioates. *Z. Nat.forsch., B J. chem. sci.*, 2008, 63b, 407-414

Awards:

Prešern Award for undergraduate thesis at the University of Ljubljana, Faculty of Chemistry and Chemical Technology.

Current Research Interests:

- Synthesis of polypeptides by ring-opening polymerization of α -amino acid *N*-carboxyanhydrides
- Synthesis and modification of multifunctional polypeptides for biomedical applications
- Characterization of polymer molecular structure using advanced instrumental techniques