

CURRICULUM VITAE

PETER KASÁK

PERSONAL DATA

PERMANENT WORK ADDRESS: Center for Advanced Materials, Qatar University,
P.O.Box 2713, Doha, Qatar

DATE OF BIRTH : May 16th, 1975

PLACE OF BIRTH : Námestovo, Slovakia

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EDUCATION & QUALIFICATIONS

- 1993 – 1998** Mag. study in Comenius University in Bratislava, Faculty of Natural Sciences (Synthesis and Characteristic of Chiral C₂-symmetric binaphthylferrocene).
- 1998 – 2002** PhD study in Comenius University in Bratislava, Faculty of Natural Sciences, (Study of Stereoconservation of the Stereogenic Information in Cross-coupling Reactions in the Positions 2 and 2' on 1,1'-Binaphthyl Derivatives) Prof. M. Putala.(20. 6. 2003)
- 2001 - 2002** Stay in Radboud Universiteit Nijmegen, Netherlands (EU project - Design and Synthesis of Phthalocyanines) Prof. Roeland Nolte.
- 2003 – 2004** Assistant professor in Comenius University in Bratislava, Faculty of Natural Sciences, Department of Organic Chemistry
- 11/2004 – 11/2006** Lisa Meitner fellow, Postdoctoral stay in University of Vienna, Department of Organic Chemistry.
- 11/2006-11/2007** Research fellow in the group of Dr. Lacík, Polymer Institute SAS, Bratislava
- 11/2007 - 2012** Senior researcher, AA- qualification equivalent Research Associate professor, Polymer Institute, Slovak Academy of the Sciences, Bratislava
- 2012- present** Technical manager, Center for Advanced Materials, Qatar University, Doha, Qatar

SCIENTIFIC TECHNIQUES & SKILLS

Organic synthesis: classical, polymeric, organometallic and stereoselective, inert condition, high pressure, complexation....

Material modification: extruder, brabender, autoclave, discharge plasma, spin coating, drilling, abraser, electro spinner, mounting press,

Spectroscopic methods: UV-VIS, Optical emission spectrometer, FT-IR, NMR, Circular Dichroism, polarimetry, MS fluorescence,

Electrochemistry : Electroimpedance spectroscopy, Cyclic voltamperometry, Broad dielectric spectroscopy...

Testing material methods: tensile and hardness testing machine, friction and peeling tester, microhardness, DSC, Dynamic mechanical properties, potentiostat/galvanostat, cyclic voltammetry, adhesion tester

Chromatografic techniques : HPLC, TLC, GPC, GC-MS, inverse GPC, software

Microscopic techniques: SEM, TEM, AFM, zoom microscopy, image analyser, optical image software

MANAGEMENT SKILLS

Project leadership: PI and co-PI several large projects (see below) international, national and industrial projects in cooperation with prestigious universities and institutions.

Supervision skills: supervision of 9 labs, manager of 9 labs, corrosive, mechanical testing, laser, non-destructive methods, organic synthesis and electrochemistry-fully equipped from obtained projects, managing and leading of 3 PhD`s, 3 undergraduated students, 4 young researchers and 7 technicians *and coordination lab activities for students and research*

Laboratory management: *SOP preparation for laboratory instruments, preparation, supervision and maintenance of record for accreditation by ASLA for ISO 17025 for lab management, coordination of operation from standard to advanced laboratory arrangements*

TEACHING & TUTORING:

Teaching:

Seminar of organic chemistry,
Laboratory technique,
Practicum of organic chemistry,
Introduction to biomaterials

PhD tutoring

Patrik Sobolčiak 2008-2012, (Synthesis and properties of materials based on water-soluble polymers)
Jana Riecka 2011- (Study of external stimuli on water-soluble polymers)

PhD co tutoring

Diana Búzová (tutor prof. Pavol Miškovský)

LANGUAGE SKILLS

Slovak (Native), English (Fluent written and oral), Czech (fluent),
Polish, German, Dutch and Russian (basic)

ADDITIONAL QUALIFICATIONS

Computer graphics, command of PC`s (Windows), MS Office,
Chemical and NMR packages, Origin, Chem Window, Omnic, etc.
Driving licence B
Sport (hiking, skiing, swimming, biking, jogging, football)

AWARDS

Award for Young scientist of the Year 2007 Jurnalisten Studio

Bioadhesive Research Group COST TD0906 national coordinator

Best poster award M. Stach, Z. Kroneková, P. Kasák, J. Kollár, M. Pentrák, M. Mičušík, D. Chorvát Jr., T.S. Nunney, I. Lacík
„Electrografting of zwitterionic polymer films on conducting surfaces for reduction of biofouling”, Polymers on the Odra river, Opole, Poland, 6.-7.7.2011, p. 62

Best poster award M. Ilčíková, M. Mrlík, V. Pavlínek, P. Kasák. „Graphene oxide with betaine moieties for enhancement of electrorheological properties”. Materials Science and Engineering Symposium 2015. A&T Texas University at Qatar. Doha, Qatar. 17.3.2015.

Member of the best research group of the year 2010 by Slovak Ministry of Education,

Slovak Chemical Society from 1996

PROJECTS

Lead PI

Study of conservation of stereogenic information in the cross coupling reaction in 2 and 2' on 1,1'-binaphthyl derivatives (2001-2003) University grant UK/53/01 37,500 SKK

Design, synthesis and application of the new chiral binaphthyl derivatives in material and supramolecular chemistry (2004-2005) UK/119/2004, 45,000 SKK

Lisa Meitner program FWF M852-N11 Novel monocoordinating phosphorus ligands for catalysis (2004-2006) 126,000 Euro

Zwitterionic polymers: from kinetics to thin films and hydrogels form biomedicine (2010-2012) VEGA 2/0152/10 29,500 Euro

National coordinator COST-TD0906- Biologic adhesives: from biology to biomimetics (2011-2014)

Biological adhesives MVTs Project , Slovakia, 16,000 Euro 2011-2014.

Preparation, characterisation and application of lectin biochips in cancer diagnosis and in discovery of cancer biomarkers. (2014-2016) NPRP 6 - 381 - 1 – 078, \$1,020,968.00

Monitoring of biofouling and corrosion in Qatar coastal areas on modified metal, alloys and polymers, Maersk Oil R&TC Qatar, 2015-2017. \$ 105,000.00

Design, synthesis and evaluation of low cost and highly activity fuel-cell catalysts for direct methanol fuel cells NPRP9-219-2-105. 1.11. 2016. \$660,681.00

Advanced Techniques for coatings Towards Prevention of Corrosion and Fouling. Qatar University grant. QUUG-CAM-2017-1, 8. 1. 2017-31.12.2017. QAR 149,200.

Deputy PI

Photochemical, photophysical and biophysical characterization of transport systems

based on low density lipoproteins with incorporated photosensitisers hypericin and Foscan® (01/2009 – 12/2011) VEGA 1/0164/09 5,285 Euro

Targeted photodynamic treatment of cancer: from transport drugs over cell signalling roads to *in vivo* model (2007-2011) APVV-0449-07

NANOBIOROZ: Preparation of nanostructured films, their integration with biorecognized elements and their further application. 01/2010 – 12/2012 APVV-0282-11 201,159 Euro

NanoTechPDT: Utilization of biophotonic nanotechnologies to mechanism study of cell death for enhancement of detection sensitivity and selectivity of tumor treatment. 01/2010 – 12/2012 APVV-0242-11 186000 Euro

Development of medical scaffolds with enhanced infection resistance using electrospinning/plasma technology UREP22-076-1-011

Member

Rational Design of Environmentally-Friendly Polymer-Carbon Dot-Based Color Light Emitting Diode for Displays and Solid State Lighting NPRP No.: 8-878-1-172 (2016-2018) 680,755 \$

The Chicago Diabetes Project: A global cooperation for functional cure .2006-present
European TMR Phthalocyanine Network HPRN-CT-2000-00020

6 framework European project P. Cezanne IP-031867 Development of an implantable bio-sensor for continuous care and monitoring of diabetic patients (2006-2011)

BASF AG grant Determination of rate coefficients of water-soluble monomers with special emphasis on charged/ionizable monomers (2006-present)

EPFL Optimization of microcapsules used for immunoprotection of transplanted islets by whole blood assay. (2011-2012)

7th framework EU project FP7-NMP-2008-SMALL-2, NOMS: Nano-Optical Mechanical Systems, (2009-2011),

APVV-51-004904 Novel aromatic nitroxides and alkoxyamines

APVV-0486-10 DIASOLVE Progresívne polymérne technológie v biomedicíne:
(2010-2013)

APVV-0658-11CA(IX)NCER: Carbonic anhydrase IX as a functional component of cancer progression: the role in epithelial-mesenchymal transition and intercellular signalling. Karbonická anhydráza IX ako funkčný komponent nádorovej progresie: úloha v epitelovo-mezenchymálnej tranzícii a v prenose medzibunkových signálov 7/2012 – 12/2015

APVV LPP-0072-07 Active targeted transport of drugs in photodynamic therapy to enhance effectively treatment cancer diseases (2007-2010)

APVV NanoTechPDT - Towards increased sensitivity of cancer detection and selectivity of cancer treatment: biophotonic nanotechnology applications

VEGA projects

RESEARCH OUTCOMES:

PATENTS:

- 1) **Kasák, P.**; Widhalm, M. *European patent application 1. 6. 2006*, Nr. 06011319.8, Patent Nr. PCT/AT20007/000263 from **1.6.2007** "A Method for preparing di(sec. alkyl)phosphines, as well as novel di(sec. alkyl)phosphines and tertiary mono- and diphosphines."

PUBLICATIONS:

- 2) M. Danko, Z. Kroneková, M. Mrlik, J. Osicka, A. bin Yousaf, A. Mihálová, J. Tkac, P. Kasak Sulfobetaines meet carboxybetaines: Modulation of thermo- and ion responsivity, water structure, mechanical properties and cell adhesion. *Langmuir*, 2018, Accepted, **DOI:** 10.1021/acs.langmuir.8b01592 IF 3.789.
- 3) T. Bertók; L. Lorencova, E. Dosekova; E. Jane, A. Vikartovska, P. Kasak, J. Tkac Electrochemical impedance spectroscopy-based biosensors: Mechanistic principles, analytical examples for assay of protein cancer biomarkers and challenges towards commercialization, *ChemElectroChem*, Accepted. <https://doi.org/10.1002/celec.201800848> IF= 4.446
- 4) A. Yousaf; S. A. M. Alsaydeh, F.S. Zavahir, P. Kasak, S. J. Zaidi Ultra-low Pt decorated NiCu Bimetallic Alloys Nanoparticles Supported on Reduced Graphene Oxide for Electro-oxidation of Methanol, *MRS Communication*. **2018**, accepted, doi:10.1557/mrc.2018.140 IF = 3.008
- 5) E.Chocholova; T. Bertok; L. Lorencova; A. Holazova; P. Farkas; A. Vikartovska; V. Bella; D. Velicova; P. Kasak; A. Andicsova Eckstein; J. Mosnacek; D. Hasko; J. Tkac Advanced antifouling zwitterionic layer based impedimetric HER2 biosensing in human serum: glycoprofiling as a novel approach for breast cancer diagnostics, *Sensors and Actuators B, Chemical*, **2018**, 272, 626-633, IF 5.667.
- 6) M. Mrlik, P. Sobolčiak, I. Krupa, P. Kasák Light controllable bioadhesive properties of photolabile carboxybetaine ester-based polymer. *Emergent Materials*, **2018**, accepted. <https://doi.org/10.1007/s42247-018-0004-2>
- 7) J. Lauko, P.H. Kouwer, P. Kasak, A.E. Rowan Tunable properties based on regioselectivity of 1,2,3-triazole units in axially chiral 2,2'-linked 1,1'-binaphthyl-based copolymers for ions and acid responsiveness, *European Polymer Journal*, **2018**, 108, 191-198. IF= 3.741
- 8) U. Waware, .A. Hamouda, A Shahool,; P Khanam, P. Kasak; Towards the Higher Solubility and Thermal Stability of Poly(Aniline-co-m-bromoaniline) *Ionics*, **2018**, 24, accepted. <https://doi.org/10.1007/s11581-018-2561-z> IF 2.347
- 9) J. Mosnáček, J. Osička, A. Popelka, S. Zavahir, R. Ben-Hamadou, P. Kasak Photochemical grafting of polysulfobetain onto polyethylene and polystyrene surfaces and investigation of long term stability of the polysulfobetain layer in seawater. *Polym. Adv. Tech.* **2018**, 29, 1930-1938 IF 2.137.

- 10) U. Waware, .A. Hamouda, A Shahool,; P Khanam, P. Kasak; Binding Energy, Structural and Dielectric Properties of thin film of Poly(Aniline-co-m-fluoroaniline), *Ionics*, **2018**, *24*, 1854-1863. IF 2.347 <https://doi.org/10.1007/s11581-018-2516-4>
- 11) K. Jlassi, S. Zavahir; P. Kasak, I. Krupa, A. Mohamed, M. M. Chehimi, Emerging Clay-Aryl-Gold Nanohybrids for Efficient Electrocatalytic Proton Reduction. *Energy conversion and management*, **2018**, *168*, 170-177. IF=5.58
- 12) K. Jlassi, R. Abidi, B. Memia, M. M. Chehimi, P. Kasak, I. Krupa Calix [4]arene -Decorated bentonite: A new promising hybrid material for heavy metals removal. *Applied Clay Science*, **2018**, *161*, 15–22. IF. 3.101
- 13) E. Chocholova, T. Bertok, E. Jane, L. Lorencova, A. Holazova, L. Belicka, S. Belicky, D. Mislovicova, A. Vikartovska, R. Imrich, P. Kasak, J. Tkac Glycomics meets artificial intelligence – potential of glycan analysis for identification of seropositive and seronegative rheumatoid arthritis revealed, *Clinic. Chim. Acta*, **2018**, *481*, 49–55. <https://www.sciencedirect.com/science/article/pii/S0009898118301001> IF 2.873
- 14) A. Bin Yousaf, M. Imran, M. Farooq, and P. Kasak Interfacial Phenomenon and Nanostructural Enhancements in Palladium Loaded Lanthanum Hydroxide Nanorods for Heterogeneous Catalytic Applications, *Sci. Reports*, **2018**, *8*, 4354. <https://www.nature.com/articles/s41598-018-22800-0> , IF 4.259
- 15) I M. Imran, A. Bin Yousaf, M. Farooq, and P. Kasak; Enhanced Z-scheme Visible Light Photocatalytic Hydrogen Production over α -Bi₂O₃/CZS Heterostructure, *Int. J. Hydrogen Energy*, **2018**, *43*, 4256-4264. <https://doi.org/10.1016/j.ijhydene.2018.01.056> , IF 3.582
- 16) . Šimkovic, I. Kelnar, R. Mendichi, A. Tracz, O. Gedeon, J. Filip, P. Kasak, Interfaces study of all-polysaccharide composite films, *Chem. Papers*, **2018**, *72*, 711-718. DOI 10.1007/s11696-017-0329-y, IF 1.258₂
- 17) L. Lorencova, T. Bertok, J. Filip, M. Jerigova, D. Velic, P. Kasak, K. A. Mahmoud, J. Tkac Highly stable Ti₃C₂T_x (MXene)/Pt nanoparticles-modified glassy carbon electrode for H₂O₂ and small molecules sensing applications. *Sens. Actuators: B. Chem.*, **2018**, *263*, 360-368., <https://www.sciencedirect.com/science/article/pii/S0925400518304039> IF 5.401
- 18) A. Bin Yousaf, M. Imran, M. Farooq, P. Kasak Synergistic Effect of Co-Ni Co-Bridging with MoS₂ Nanosheets for Enhanced Electrocatalytic Hydrogen Evolution Reactions, *RSC Advances*, **2018**, *8*, 3374–3380, IF 3.21
- 19) L. Honglin, A. Bin Yousaf, A. Zeb, P. Kasak, S. Javaid Zaidi, L. Ying, L. Weiqing, L. Shuaishuai, H. Tianli, L. Mingling; Nano-Magnetic Hydrotalcite Synthesized by Double In-situ Hydrothermal Method with Enhanced Electromagnetic Characteristics. *Int. J. Electrochem. Sci.*, **2018**, *13*, 1321 – 1330, IF 1.5
- 20) J. Mosnacek, A. Popelka, J. Osicka, J. Filip, M. Ilcikova, J. Kollar, A. B Yousaf, T. Bertok, J. Tkac, P. Kasak Modulation of wettability, gradient and adhesion on self-assembled monolayer by counterion exchange and pH, *J. Colloid Interf. Sci.* **2018**, *512*, 511-521. IF 4.233.
- 21) M. Mrlik, M. Spirek, J. Al-Khori, A. Ali Abdulrahman, J. Mosnacek, M. A. AlMaadeed, P. Kasak Mussel-mimicking sulfobetaine-based copolymer with metal tunable gelation, self-healing and antibacterial capability, *Arab. J. Chem.*, **2017**, accepted, <http://doi.org/10.1016/j.arabjc.2017.03.009>

- 22) C. Reckmeier,; J. Schneider, Y. Xiong,; J. Haeusler,; P. Kasak,; W. Schnick,; A. Rogach, Aggregated Molecular Fluorophores in the Ammonothermal Synthesis of Carbon Dots, *Chemistry of Materials* **2017**, *29*, 10352–10361, DOI: 10.1021/acs.chemmater.7b03344 IF9.466, IF 9.466.
- 23) A. B. Yousaf, M. Imran;S. J. Zaidi; P. Kasak Highly Efficient Photocatalytic Z-Scheme Hydrogen Production over Oxygen-Deficient WO_{3-x} Nanorods supported $Zn_{0.3}Cd_{0.7}S$ Heterostructure, *Scientific reports*, **2017**, *7*, 6574. IF 4.25.
- 24) A. M. Yousaf, M. Imran, S. Zaidi, P. Kasak, Highly Efficient Sustainable Photocatalytic Z-Scheme Hydrogen Production from α Fe_2O_3 Engineered ZnCdS Heterostructure. *Journal of Catalysis*, **2017**, *353*, 81-88. IF 6.84.
- 25) A. Yousaf, M. Imran, , M. Usman, S. Zaidi, P. Kasak, C. Fernandez, N. Uwitonze, Nano-Pd Cubes with Thin Layer of PtRu Bimetallic Alloys Exhibit Enhanced and Durable Performance for Electro-Oxidation of Methanol, *Catalysis Science & Technology*, **2017**, *7*, 3283-3290. IF 5.77
- 26) A. Yousaf, R. Khan, M. Imran, M. Fasehullah, A. Zeb, S. Zaidi, P. Kasak, Carbon nitride embedded MnO_2 nanospheres decorated with low-content Pt nanoparticles as highly efficient and durable electrode material for solid state supercapacitors *J. Electroanal. Chem.* **2017**, *801*, 84-91. IF 3.01
- 27) Xiong, Y.; Schneider, J.; Reckmeier, C.; Huang, H.; Kasak, P.; Rogach, A. The Influence of Carbonization Conditions on the Emission Characteristics and the Stability Against Photobleaching of Nitrogen Doped Carbon Dots, *Nanoscale*, **2017**, *9*, 11730-11738, IF 7.367.
- 28) D. Damborska; T. Bertok; E. Dosekova; A. Sediva; L. Lorencova; P. Kasak; J. Tkac; Nanotechnology in development of biosensors for detection of prostate specific antigen, *Microchimica acta*, **2017**, *184*, 3049–3067. IF 4.06.
- 29) J. Filip, A. Popelka, T. Bertok, A. Holazova, J. Osicka, J. Kollar, M. Ilčíková, J. Tkac, P. Kasak, pH switchable interaction of carboxybetaine ester based SAM with DNA and gold nanoparticles, *Langmuir*, **2017**, *33*, 6657-6666 DOI: 10.1021/acs.langmuir.7b00568, IF 3.99
- 30) M. Yousaf, M. Imran, S. Zaidi, P. Kasak, T. Ansari, S. Manzoor, G. Yasmeen., Synergistic Effect of Interfacial Phenomenon on Enhancing Catalytic Performance of Pd Loaded MnO_x - CeO_2 -C Hetero-nanostructure for Hydrogenation and Electrochemical Reactions, *Journal Material Chemistry A.*, **2017**, *5*, 10704–10712. DOI 10.1039/C7TA02122D. IF 8.867
- 31) P. Sobolčiak, A. Popelka, M. Mičusik, M. Sláviková, I. Krupa, J. Mosnacek, J. Tkac, I. Lacík, P. Kasák, Modification of surfaces by zwitterionic polymers via photoimmobilization for reducing cell adhesion, *J. Colloid Interf. Sci.* **2017**, *500*, 294-303. dx.doi.org/10.1016/j.jcis.2017.04.020. IF 4.233
- 32) L. Lorencova, T. Bertok, E. Dosekova, A. Holazova, D. Paprckova, A. Vikartovska, V. Sasinkova, J. Filip, P. Kasak, M. Jerigová, D. Velič, K. A. Mahmoud, J. Tkac Electrochemical performance of $Ti_3C_2T_x$ MXene in aqueous media: towards effective H_2O_2 sensing, *Electrochimica acta*, **2017**, *235*, 471–479. <http://dx.doi.org/doi:10.1016/j.electacta.2017.03.073>, IF 4.803
- 33) J. Filip, S. Zavahir, L. Klukova, J. Tkac, P. Kasak Immobilization of Concanavalin A lectin on a reduced graphene oxide-thionine surface by glutaraldehyde crosslinking for the

construction of an impedimetric biosensor, *J. Electroanal. Chem.* **2017**, 794, 156–163. <http://www.sciencedirect.com/science/article/pii/S157266571730259X> IF 3.01

- 34) J. Schneider, C. Reckmeier, Y. Xiong, M. von Seckendorff, A. Susa, P. Kasak, A. Rogach, "Molecular Fluorescence in Citric Acid Based Carbon Dots" *J. Phys. Chem. C.* **2017**, 121, 2014-2022. DOI: 10.1021/acs.jpcc.6b12519 IF 4.536
- 35) E Dosekova, J. Filip, T. Bertok, P. Both, P. Kasak, J. Tkac. Nanotechnology in glycomics. Applications in diagnostics, therapy, imaging and separation processes, *Medic. Res. Rev.* **2017**, 37, 514–626,. DOI: 10.1002/med.21420. IF 9.13
- 36) D. Pihikova, Z. Pakanova, M. Nemcovic, P. Barath, S. Belicky, T. Bertok, P. Kasak, J. Mucha, J. Tkac "Sweet characterisation of prostate specific antigen using electrochemical lectin-based immunosensor assay and MALDI TOF/TOF analysis: Focus on sialic acid.", *Proteomics*, **2016**, 16, 3085–3095. IF 4.079
- 37) P. Kasák, J. Mosnáček, M. Danko, I. Krupa, G. Hloušková, D. Chorvát, M. Koukaki, S. Karamanou, A. Economou, I. Lacík, A polysulfobetaine hydrogel for immobilization of glucose-binding protein, *RSC Advances*, **2016**, 6, 83890–83900. IF 3.382
- 38) T. Bertók, E. Dosekova, S. Belicky, A. Holazova, L. Lorencova, D. Mislovicova, D. Paprckova, A. Vikartovska, R. Plicka, J. Krejci, M. Ilcikova, P. Kasak, J. Tkac. Mixed zwitterionic-based self-assembled monolayer interface for impedimetric glycomic analyses of human IgG samples in an array format" *Langmuir*, **2016**, 32, 7070-7078. IF 3.99
- 39) D. Pihíková; P. Kasák; P. Kubániková; R. Sokol; J. Tkac, Aberrant sialylation of a prostate specific antigen: Electrochemical label-free glycoprofiling in prostate cancer serum samples. *Analytica Chimica Acta*, **2016**, 934, 72–79. IF 4.712
- 40) J. Osicka, M. Ilcikova, A. Popelka, J. Filip, T. Bertok, J. Tkac, Jan; P. Kasak. Simple, reversible and fast modulation in superwettability, gradient and adsorption by counterion exchange on self-assembled monolayer, *Langmuir*, **2016**, 32, 5491–5499. IF 3.99
- 41) M. Mrlík, M. Ilčíková, M. Cvek, V. Pavlínek, A. Zahoranová, Z. Kroneková, P. Kasak Carbonyl iron coated with sulfobetaine moiety as a biocompatible system and the magnetorheological performance of its silicone oil suspensions, *RSC Advances*, **2016**, 6, 32823–32830. IF 3.382
- 42) D. Ponnamma, K. K. Sadasivuni, M. Strankowski, P. Kasak, I. Krupa, M. A. S. Al-Maadeed, "Eco-friendly electromagnetic interference shielding materials from flexible reduced graphene oxide filled polycaprolactone/polyaniline nanocomposites", *Polymer-Plastics Technology and Engineering*, **2016**, 55, 920-928. IF 1.511
- 43) J. Osička, M. Ilčíková, M. Mrlík, M. Ali S A Al-Maadeed, M. Šlouf, J. Tkáč,. P. Kasák Anisotropy in CNT composite fabricated by combining directional freezing and gamma irradiation of acrylic acid. *Materials and design*, **2016**, 97, 300–306. IF 3.997
- 44) I. Lacik, P. Sobolčiak, M. Stach, D. Chorvat Jr, P. Kasak "Propagation rate coefficient for sulfobetaine monomers by PLP–SEC", *Polymer*, **2016**, 87, 38–49. IF 3.586
- 45) D. Pihikova, Š. Belicky, P. Kasak, T. Bertok, J. Tkac "Sensitive detection of a prostate specific antigen (PSA) using impedimetric assays with in-situ PSA's glycan analysis", *Analyst*, **2016**, 141, 1044 – 1051. IF 4.107

- 46) M. Ilcikova, J. Tkac, P. Kasak, "Switchable materials containing polyzwitterion moieties." *Polymers*, **2015**, 7, 2344–2370. IF 3.681
- 47) M. Ilcikova, M. Mrlík, V. Babayan, P. Kasak, Graphene Oxide Modified by Betaine Moieties for Improvement of Electrorheological Performance, *RSC Advances*, **2015**, 5, 57820-57827. IF 3.708
- 48) T. Bertok,; A. Sediva,; J. Filip,; M. Ilcikova, P. Kasak, D. Velic, E. Jane, M. Mravcová, J. Rovenský, P. Kunzo, P. Lobotka, V. Smatko, A. Vikartovska, J.Tkac. " Carboxybetaine interface for electrochemical glycoprofiling of antibodies isolated from human serum" *Langmuir*, **2015**, 31, 7148-7157. IF 4.386.
- 49) M. Ilčíková, J. Filip, M. Mrlík, T. Plachý, J. Tkáč, P. Kasák "Polypyrrole nanotubes decorated with gold particles applied for construction of enzymatic bioanodes and biocathodes" *Internat. J. Electrochem. Sci.* **2015**, 10, 6558-6571. IF 1.956
- 50) M. Danko, P. Kasak, P. Hrdlovic "The Interactions of Probes Based on Monosubstituted Pyrene Derivatives in Polymer Matrices; Spectral Study, *J Photochem. Photobiol A: Chem.*, **2015**, 307, 79–87. IF 2.291
- 51) P. Jolly, N. Formisano, J. Tkáč, **P. Kasák**, C. G. Frost, P. Estrela "Label-free impedimetric aptasensor with antifouling surface chemistry: A prostate specific antigen case study." *Sens. Actuators B: Chem.* **2015**, 209, 306-312. doi:10.1016/j.snb.2014.11.083 IF 3.84.
- 52) D. Pihíková, **P. Kasák**, J. Tkac, Glycoprofiling of cancer biomarkers: Label-free electrochemical lectin-based biosensors *Open Chem.* **2015**, 13, 636–655. IF 1.329
- 53) I. Laciík, M. Stach, **P. Kasák**, V. Semak, L. Uhelská, A. Chovancová, G.Reinhold, P. Kilz, G. Delaittre, B. Charleux, I. Chaduc, F. D'Agosto, M. Lansalot, M. Gaborieau, P. Castignolles, R. G. Gilbert, Z. Szablan, C. Barner-Kowollík, P. Hesse, M. Buback, "SEC Analysis of Poly(Acrylic Acid) and Poly(Methacrylic Acid)". *Macromol. Chem. Phys.* **2015**, 216, 23–37. doi: 10.1002/macp.201400339. IF 2.65.
- 54) J. Filip, **P. Kasak**, J. Tkáč "Graphene as signal amplifier for preparation of ultrasensitive electrochemical biosensors", *Chem. Papers*, **2015**, 69, 112-133. DOI: 10.1515/chempap-2015-0051. IF 1.193
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