

Johan Bobacka
Laboratoriet för molekylärvetenskap och teknik
Lösningar för hälsa
E-post: johan.bobacka@abo.fi
Mobil: +358-469200208



Biografi

Johan Bobacka, D.Sc. (Tech.), is Professor of Analytical Chemistry and the Laboratory of Molecular Science and Engineering, Åbo Akademi University. Johan Bobacka's main research activities are in the area of electroanalytical chemistry and electrochemical sensors with special emphasis on the development of solid-contact ion-selective electrodes, solid-state reference electrodes and novel transduction principles for ion sensors. Research activities are also directed towards wearable chemical sensors and Johan Bobacka is a co-founder and senior scientific advisor of the company *GlucModicum Ltd* developing a platform for needle-free health monitoring. Johan Bobacka is an editor of *Sensors & Actuators: B. Chemical (Elsevier)* and a member of the editorial advisory board of *Electrochimica Acta (Elsevier)*. He is also a member of the editorial boards of *Chemosensors (MDPI)* and *Current topics in electrochemistry (Research Trends)*. Johan Bobacka is the chairman of the board of the profiling area *Technologies for a sustainable future* and chairman of the board of the *Johan Gadolin Process Chemistry Centre (PCC)* at Åbo Akademi University.

Publikationer

Environmental footprint of voltammetric sensors based on screen-printed electrodes: An assessment towards "green" sensor manufacturing

Ahamed, A., Ge, L., Zhao, K., Veksha, A., Bobacka, J. & Lisak, G., sep 2021, I: *Chemosphere*. 278, 130462.

In situ catalytic reforming of plastic pyrolysis vapors using MSW incineration ashes

Ahamed, A., Liang, L., Chan, W. P., Tan, P. C. K., Yip, N. T. X., Bobacka, J., Veksha, A., Yin, K. & Lisak, G., 1 maj 2021, I: *Environmental Pollution*. 276, 116681.

Highly sensitive and stable fructose self-powered biosensor based on a self-charging biosupercapacitor

Bollella, P., Boeva, Z., Latonen, R.-M., Kano, K., Gorton, L. & Bobacka, J., 2021, I: *Biosensors and Bioelectronics*. 176

Multilayer and Surface Immobilization of EDOT-Decorated Nanocapsules

Hambly, B., Sears, C., Guzinski, M., Perez, F., Latonen, R.-M., Bobacka, J., Pendley, B. & Lindner, E., 29 dec 2020, I: *Langmuir*. 37, 1, s. 499-508 1.

Potentiometric Carboxylate Sensors Based on Carbazole-Derived Acyclic and Macrocyclic Ionophores

Yrjänä, V., Saar, I., Ilisson, M., Kadam, S. A., Leito, I. & Bobacka, J., 24 dec 2020, I: *Chemosensors*. 9, 1, 26 s., 4.

Coulometric response of solid-contact anion-sensitive electrodes

Han, T., Mattinen, U., Mousavi, Z. & Bobacka, J., 27 nov 2020, I: *Electrochimica Acta*. 367, 137566.

Solid reference electrode integrated with paper-based microfluidics for potentiometric ion sensing

Ding, R., Fiedoruk-Pogrebniak, M., Pokrzywnicka, M., Koncki, R., Bobacka, J. & Lisak, G., 15 nov 2020, I: *Sensors and Actuators B: Chemical*. 323, 10 s., 128680.

Polyterthiophenes Cross-Linked with Terpyridyl Metal Complexes for Molecular Architecture of Optically and Electrochemically Tunable Materials

Wagner, M., Wagner, K., Barnsley, J. E., Veksha, A., Wagner, P., Gordon, K. C., Bobacka, J., Wallace, G. G., Ivaska, A., Officer, D. L. & Lisak, G., 2 nov 2020, I: *ChemElectroChem*. 7, 21, s. 4453-4459

LogP determination for highly lipophilic hydrogen-bonding anion receptor molecules

Tshepelevitsh, S., Kadam, S., Darnell, A., Bobacka, J., Rützel, A., Haljasorg, T. & Leito, I., 2 okt 2020, I: *Analytica Chimica Acta*. 1132, s. 123-133

On-line microcolumn-based dynamic leaching method for investigation of lead bioaccessibility in shooting range soils
Joon, N., Ek, P., Zevenhoven, M., Hupa, L., Miró, M., Bobacka, J. & Lisak, G., okt 2020, I: Chemosphere. 256, s. – 9 s., 127022.

Too small to matter? Physicochemical transformation and toxicity of engineered nTiO₂, nSiO₂, nZnO, carbon nanotubes, and nAg
Ahamed, A., Liang, L., Lee, M. Y., Bobacka, J. & Lisak, G., 28 sep 2020, I: Journal of Hazardous Materials. 404, 21 s., 124107.

Life cycle assessment of plastic grocery bags and their alternatives in cities with confined waste management structure: A Singapore case study
Ahamed, A., Vallam, P., Iyer, N. S., Veksha, A., Bobacka, J. & Lisak, G., 29 aug 2020, I: Journal of Cleaner Production. 278, 11 s., 123956.

Design, synthesis and application of carbazole macrocycles in anion sensors
Rüütel, A., Yrjänä, V., Kadam, S. A., Saar, I., Ilsson, M., Darnell, A., Haav, K., Haljasorg, T., Toom, L., Bobacka, J. & Leito, I., 4 aug 2020, I: Beilstein Journal of Organic Chemistry. 16, s. 1901-1914 14 s.

Coulometric response characteristics of solid contact ion-selective electrodes for divalent cations
Han, T., Mousavi, Z., Mattinen, U. & Bobacka, J., 15 jun 2020, I: Journal of Solid State Electrochemistry. 24, 11-12, s. 2975-2983

Electrochemical sensors for real-world applications
Bobacka, J., 11 jun 2020, I: Journal of Solid State Electrochemistry. 24, 9, s. 2039-2040 2 s.

Real-time monitoring of the dissolution of silver nanoparticles by using a solid-contact Ag⁺-selective electrode
Yin, T., Han, T., Li, C., Qin, W. & Bobacka, J., 8 mar 2020, I: Analytica Chimica Acta. 1101, s. 50-57

Silver(I)-selective electrodes based on rare earth element double-decker porphyrins
Joon, N., Barnsley, J. E., Ding, R., Lee, S., Latonen, R-M., Bobacka, J., Gordon, K. C., Ogawa, T. & Lisak, G., feb 2020, I: Sensors and Actuators B: Chemical. 305, s. – 8 s., 127311.

Antimicrobial Colloidal Silver-Lignin Particles via Ion and Solvent Exchange
Lintinen, K., Lairo, S., Figueiredo, P., Sakarinen, E., Mousavi, Z., Seitsonen, J., GNS, R., Mattinen, U., Niemelä, M., Tammela, P., Österberg, M., L-S, J., Bobacka, J., Santos, HA. & Kostiaainen, MA., 2019, I: ACS Sustainable Chemistry and Engineering. 7, 18, s. 15297–15303 13 s.

Bioimpedance Sensor Array for Long-Term Monitoring of Wound Healing from Beneath the Primary Dressings and Controlled Formation of H₂O₂ Using Low-Intensity Direct Current
Kekonen, A., Bergelin, M., Johansson, M., Joon, N. K., Bobacka, J. & Viik, J., 2019, I: Sensors. 19, 11, s. – 12 s.

EACH (Excellence in Analytical Chemistry), an Erasmus Mundus Joint Programme: progress and success
Leito, I., Teearu, A., Bobacka, J., Randon, J. & Bergquist, J., 2019, I: Analytical and Bioanalytical Chemistry. 411, s. 5913–5921 9 s.

Electrochemically controlled transport of anions across polypyrrole-based membranes
Arroyo, J., Akiel-Pirkanniemi, M., Lisak, G., Latonen, R-M. & Bobacka, J., 2019, I: Journal of Membrane Science. 581, s. 50–57

Gadolinium retention in gliomas and adjacent normal brain tissue: association with tumor contrast enhancement and linear/macrocyclic agents
Kiviniemi, A., Gardberg, M., Ek, P., Frantzén, J., Bobacka, J. & Minn, H., 2019, I: Neuroradiology. 61, 5, s. 535–544 10 s.

Improving the Sensitivity of Solid-Contact Ion-Selective Electrodes by Using Coulometric Signal Transduction

Han, T., Mattinen, U. & Bobacka, J., 2019, I: ACS Sensors. 4, 4, s. 900–906 13 s.

Molecularly imprinted conducting polymer for determination of a condensed lignin marker

Gonzalez-Vogel, A., Fogde, A., Crestini, C., Sandberg, T., Huynh, T. P. & Bobacka, J., 2019, I: Sensors and Actuators B: Chemical. 295, s. 186–193 8 s.

PVC-Based Ion-Selective Electrodes with a Silicone Rubber Outer Coating with Improved Analytical Performance

Joon, N., He, N., Ruzgas, T., Bobacka, J. & Lisak, G., 2019, I: Analytical Chemistry. 91, 16, s. 10524–10531 8 s.

Solid-contact Acetate-selective Electrode Based on a 1,3-bis(carbazoly)urea-ionophore

Martin, K., S A, K., Mattinen, U., Bobacka, J. & Leito, I., 2019, I: Electroanalysis. 31, 6, s. 1061–1066 6 s.

Application of terpyridyl ligands to tune the optical and electrochemical properties of a conducting polymer

Lisak, G., Wagner, K., Barnsley, J. E., Veksha, A., Huff, G., S. Elliott, A. B., Wagner, P., Gordon, K. C., Bobacka, J., Wallace, G. G., Ivaska, A. & Officer, D. L., 2018, I: RSC Advances. 8, s. 29505–29512 8 s.

Calcium-selective electrodes based on photo-cured polyurethane-acrylate membranes covalently attached to methacrylate functionalized poly(3,4-ethylenedioxythiophene) as solid-contact

Ocana Tejada, C., Abramova, N., Bratov, A., Lindfors, T. & Bobacka, J., 2018, I: Talanta. 186, s. 279–285

Capacitive Model for Coulometric Readout of Ion-Selective Electrodes

Jarolímová, Z., Han, T., Mattinen, U., Bobacka, J. & Bakker, E., 2018, I: Analytical Chemistry. 90, 14, s. 8700–8707 8 s.

Controlled time release and leaching of silver nanoparticles using a thin immobilizing layer of aluminum oxide

Brobbe, K., Haapanen, J., Gunell, M., Toivakka, M., Mäkelä, J. M., Eerola, E., Ali, R., Saleem, M. R., Honkanen, S., Bobacka, J. & Saarinen, J., 2018, I: Thin Solid Films. 645, s. 166–172 7 s.

Electrosynthesized polypyrrole/zeolite composites as solid contact in potassium ion-selective electrode

Yu, K., He, N., Kumar, N., Wang, N., Bobacka, J. & Ivaska, A., 2017, I: Electrochimica Acta. 228, s. 66–75

Influence of phosphate buffer and proteins on the potentiometric response of a polymeric membrane-based solid-contact Pb(II) ion-selective electrode

Joon, N. K., He, N., Wagner, M., Cárdenas, M., Bobacka, J. & Lisak, G., 2017, I: Electrochimica Acta. 252, s. 490–497

Paper-based microfluidic sampling and separation of analytes for potentiometric ion sensing

Ding, J., He, N., Lisak, G., Qin, W. & Bobacka, J., 2017, I: Sensors and Actuators B: Chemical. 243, s. 346–352

A novel modified terpyridine derivative as a model molecule to study kinetic-based optical spectroscopic ion determination methods

Lisak, G., Wagner, K., Wagner, P., Barnsley, J. E., Gordon, K. C., Bobacka, J., Wallace, G. G., Ivaska, A. & Officer, D. L., 2016, I: Synthetic Metals. 219, s. 101–108

Biomimetic membranes based on molecularly imprinted conducting polymers as a sensing element for determination of taurine

Kupis-Rozmysłowicz, J., Wagner, M., Bobacka, J., Lewenstam, A. & Migdalski, J., 2016, I: Electrochimica Acta. 188, s. 537–544

Hand-held transistor based electrical and multiplexed chemical sensing system

Kaisti, M., Boeva, Z., Koskinen, J., Nieminen, S., Bobacka, J. & Levon, K., 2016, I: ACS Sensors. 1, 12, s. 1423–1431

Influence of electrode geometry on the response of solid-contact ion-selective electrodes when utilizing a new coulometric signal readout method

Han, T., Vanamo, U. & Bobacka, J., 2016, I: ChemElectroChem. 3, 12, s. 2071–2077

In situ potentiometry and ellipsometry: a promising tool to study biofouling of potentiometric sensors

Lisak, G., Arnebrant, T., Lewenstam, A., Bobacka, J. & Ruzgas, T., 2016, I: Analytical Chemistry. 88, 6, s. 3009–3014

Ion-selective electrodes with 3D nanostructured conducting polymer solid contact

Szűcs, J., Lindfors, T., Bobacka, J. & Gyurcsányi, R. E., 2016, I: Electroanalysis. 28, 4, s. 778–786

New signal readout principle for solid-contact ion-selective electrodes

Vanamo, U., Hupa, E., Yrjänä, V. & Bobacka, J., 2016, I: Analytical Chemistry. 88, 8, s. 4369–4374

Paper-based potentiometric ion sensors constructed on ink-jet printed gold electrodes

Sjöberg, P., Määttänen, A., Vanamo, U., Peltonen, J., Mattinen, U., Andrade, F. J., Bobacka, J. & Ihalainen, P., 2016, I: Sensors and Actuators B: Chemical. 224, s. 325–332

Specific electrocatalytic oxidation of cellulose at carbon electrodes modified by gold nanoparticles

Sugano, Y., Kumar, N., Peurla, M., Roine, J., Aho, A., Bobacka, J. & Mikkola, J-P., 2016, I: ChemCatChem. 8, 14, s. 2401–2405

Study of Adhesion Force Between Cellulose Microsphere and Cellulose Membrane

Lai, YL., Kallio, P., Zhang, H., Xie, H., Sugano, Y. & Bobacka, J., 2016, I: 2015 INTERNATIONAL CONFERENCE ON MANIPULATION, MANUFACTURING AND MEASUREMENT ON THE NANOSCALE (3M-NANO). s. 125–129 5 s.

Tuned ionophore-based bi-membranes for selective transport of target ions

Akieh-Pirkanniemi, M., Lisak, G., Arroyo Condori, J., Bobacka, J. & Ivaska, A., 2016, I: Journal of Membrane Science. 511, s. 76–83

Adhesive Behavior Study between Cellulose and Borosilicate Glass using Colloidal Probe Technique

Lai, YL., Kallio, P., Sugano, Y. & Bobacka, J., 2015, I: 2015 INTERNATIONAL CONFERENCE ON MANIPULATION, MANUFACTURING AND MEASUREMENT ON THE NANOSCALE (3M-NANO). s. 85–89 5 s.

Application of the catalyst wet pretreatment method (CWPM) for catalytic direct synthesis of H₂O₂

Biasi, P., Sterchele, S., Bizzotto, F., Manzoli, M., Lindholm, S., Ek, P., Bobacka, J., Mikkola, J-P. & Salmi, T., 2015, I: Catalysis Today. 246, s. 207–215

Electro-catalytic oxidation of hemicelluloses at the Au electrode

Sugano, Y., Saloranta-Simell, T., Bobacka, J. & Ivaska, A., 2015, I: Physical Chemistry Chemical Physics. 17, 17, s. 11609–11614 6 s.

Novel ion-to-electron transduction principle for solid-contact ISEs

Hupa, E., Vanamo, U. & Bobacka, J., 2015, I: Electroanalysis. 27, 3, s. 591–594

Paper-based microfluidic sampling for potentiometric determination of ions

Lisak, G., Cui, C. & Bobacka, J., 2015, I: Sensors and Actuators B: Chemical. 207, s. 933–939 7 s.

Solid-contact lead(II) ion-selective electrodes for potentiometric determination of lead(II) in presence of high concentrations of Na(I), Cu(II), Cd(II), Zn(II), Ca(II) and Mg(II)

Jasiński, A., Guziński, M., Lisak, G., Bobacka, J. & Bocheńska, M., 2015, I: Sensors and Actuators B: Chemical. 218, s. 25–30 6 s.

Textile-based sampling for potentiometric determination of ions

Lisak, G., Arnebrant, T., Ruzgas, T. & Bobacka, J., 2015, I: Analytica Chimica Acta. 877, s. 71–79

Transportation and accumulation of redox active species at the buried interfaces of plasticized membrane electrodes
Sohail, M., De Marco, R., Jarolímová, Z., Pawlak, M., Bakker, E., He, H., Latonen, R-M., Lindfors, T. & Bobacka, J., 2015, I: *Langmuir*. 31, 38, s. 10599–10609 11 s.

Electrocatalytic oxidation of cellulose at a gold electrode
Sugano, Y., Latonen, R-M., Akieh-Pirkanniemi, M., Bobacka, J. & Ivaska, A., 2014, I: *ChemSusChem*. 7, 8, s. 2240–2247

Electrochemical control of the standard potential of solid-contact ion-selective electrodes having a conducting polymer as ion-to-electron transducer
Vanamo, U. & Bobacka, J., 2014, I: *Electrochimica Acta*. 122, Special Issue, s. 316–321 6 s.

Electrospun TiO₂ nanofibers decorated Ti substrate for biomedical application
Dimitriu, C., Bogdan Stoian, A., Titorencu, I., Pruna, V., Jinga, V. V., Latonen, R-M., Bobacka, J. & Demetrescu, I., 2014, I: *Materials Science and Engineering: C*. 45, s. 56–63

Instrument-Free Control of the Standard Potential of Potentiometric Solid-Contact Ion-Selective Electrodes by Short-Circuiting with a Conventional Reference Electrode
Vanamo, U. & Bobacka, J., 2014, I: *Analytical Chemistry*. 86, 21, s. 10540–10545

Multicalibrational procedure for more reliable analyses of ions at low analyte concentrations
Lisak, G., Ivaska, A., Lewenstam, A. & Bobacka, J., 2014, I: *Electrochimica Acta*. 140, Special issue, s. 27–32 6 s.

Potentiometric sensing utilizing paper-based microfluidic sampling
Cui, J., Lisak, G., Strzalkowska, S. & Bobacka, J., 2014, I: *Analyst*. 139, 9, s. 2133–2136 4 s.

A low-cost paper-based inkjet-printed platform for electrochemical analyses
Mattinen, U., Vanamo, U., Ihalainen, P., Peltonen, J., Tenhu, H., Bobacka, J. & Määttä, A., 2013, I: *Sensors and Actuators B: Chemical*. 177, s. 153–162 10 s.

Determination of Lead(II) in Groundwater Using Solid-State Lead(II) Selective Electrodes by Tuned Galvanostatic Polarization
Lisak, G., Ciepela, F., Bobacka, J., Sokalski, T., Harju, L. & Lewenstam, A., 2013, I: *Electroanalysis*. 25, 1, s. 123–131 9 s.

Durable PEDOT:PSS films obtained from modified water-based inks for electrochemical sensors
Wagner, M., Lisak, G., Ivaska, A. & Bobacka, J., 2013, I: *Sensors and Actuators B: Chemical*. 181, s. 694–701 8 s.

Electrochemical and spectroscopic study on thiolation of polyaniline
Blomquist, M., Bobacka, J., Ivaska, A. & Levon, K., 2013, I: *Electrochimica Acta*. 90, s. 604–614 11 s.

Electrochemical properties of novel porous carbon based material synthesized from polycyclic aromatic hydrocarbons
Wagner, M., Kvarnström, C., Ivaska, A. & Bobacka, J., 2013, I: *Electrochimica Acta*. 105, s. 384–393 10 s.

Electrochemical study of novel nanostructured In₂S₃ and its effect on oxidative damage to DNA purine bases
Ferancova, A., Rengaraj, S., Kim, Y., Vijayalakshmi, S., Labuda, J., Bobacka, J. & Sillanpää, M., 2013, I: *Electrochimica Acta*. 92, s. 124–131 8 s.

Electrochemical synthesis and characterization of poly(3,4-ethylenedioxythiophene) doped with sulfonated calixarenes and sulfonated calixarene-fullerene complexes
Dumitriua, C., Mousavi, Z., Latonen, R-M., Bobacka, J. & Demetrescu, I., 2013, I: *Electrochimica Acta*. 107, s. 178–186 9 s.

Investigation of protein binding with all solid-state ion-selective electrodes

Prabhu, A., Bobacka, J., Ivaska, A. & Levon, K., 2013, I: *Electroanalysis*. 25, 8, s. 1887–1894 8 s.

Ion exchange behavior of polypyrrole doped with large anions in electrolytes containing mono- and divalent metal ions

Latonen, R-M., Akieh-Pirkanniemi, M., Vavra, K., Bobacka, J. & Ivaska, A., 2013, I: *Electroanalysis*. 25, 4, s. 991–1004 14 s.

Solid-contact ion-selective electrodes with highly selective thioamide derivatives of p-tert-butylcalix[4]arene for the determination of lead(II) in environmental samples

Guziński, M., Lisak, G., Sokalski, T., Bobacka, J., Ivaska, A., Bocheńska, M. & Lewenstam, A., 2013, I: *Analytical Chemistry*. 85, 3, s. 1555–1561 7 s.

Direct electron transfer of *Trametes hirsuta* laccase in a dual-layer-architecture of poly(3,4-ethylenedioxythiophene) films

Wang, X., Latonen, R-M., Sjöberg-Eerola, P., Bobacka, J., Bergelin, M., Boer, H. & Eriksson, J.E., 2012, I: *Abstracts of Papers of the American Chemical Society*. 243, s. – 1 s.

Disposable solid-contact ion-selective electrodes for environmental monitoring of lead with ppb limit-of-detection

Anastasova, S., Radu, A., Matzeu, G., Zuliani, C., Mattinen, U., Bobacka, J. & Diamond, D., 2012, I: *Electrochimica Acta*. 73, s. 93–97 5 s.

Electrochemical Sensors: From nanoscale engineering to industrial applications. Selection of papers from the 9th ISE Spring Meeting 8-11 May 2011, Turku, Finland: Foreword

Bobacka, J., 2012, I: *Electrochimica Acta*. 73, s. 1–2 2 s.

Impedance study of thiolated polyaniline

Blomquist, M., Bobacka, J., Ivaska, A. & Levon, K., 2012, I: *Journal of Solid State Electrochemistry*. 16, s. 2783–2789 7 s.

Mediatorless sugar/oxygen enzymatic fuel cells based on gold nanoparticle-modified electrodes

Wang, X., Falk, M., Ortiz, R., Matsumura, H., Bobacka, J., Ludwig, R., Bergelin, M., Gorton, L. & Shleev, S., 2012, I: *Biosensors and Bioelectronics*. 33, 1, s. 219–225

Poly(3,4-ethylenedioxythiophene) based enzyme-electrode configuration for enhanced direct electron transfer type biocatalysis of oxygen reduction

Latonen, R-M., Wang, X., Sjöberg-Eerola, P., Eriksson, J-E., Bergelin, M. & Bobacka, J., 2012, I: *Electrochimica Acta*. 68, s. 25–31

Recovery of nanomolar detection limit of solid-contact lead (II)-selective electrodes by electrode conditioning

Lisak, G., Bobacka, J. & Lewenstam, A., 2012, I: *Journal of Solid State Electrochemistry*. 16, s. 2983–2991 9 s.

Reduced Graphene Oxide Films as Solid Transducers in Potentiometric All-Solid-State Ion-Selective Electrodes

Hernández, R., Riu, J., Bobacka, J., Vallés, C., Jiménez, P., Benito, A. M., Maser, W. K. & Xavier Rius, F., 2012, I: *Journal of Physical Chemistry C*. 116, 42, s. 22570–22578 9 s.

Roll to roll printed electronics on paper

Bollström, R., Tobjork, D., Dolietis, P., Remonen, T., Wikman, C-J., Viljanen, S., Sarfraz, J., Salminen, P., Linden, M., Wilen, C-E., Bobacka, J., Österbacka, R. & Toivakka, M., 2012, *Paper conference and trade show 2012 (PaperCon 2012) : growing the future*. TAPPI Press, s. 252–

Comparison of multi-walled carbon nanotubes and poly(3-octylthiophene) as ion-to-electron transducers in all-solid-state potassium ion-selective electrodes

Mousavi, Z., Teter, A., Lewenstam, A., Maj-Zurawska, M., Ivaska, A. & Bobacka, J., 2011, I: *Electroanalysis*. 23, 6, s. 1352–1358 7 s.

Direct Electron Transfer of *Trametes hirsuta* Laccase in a Dual-Layer Architecture of Poly(3,4-ethylenedioxythiophene) Films

Wang, X., Latonen, R.-M., Sjöberg-Eerola, P., Eriksson, J.-E., Bobacka, J., Boer, H. & Bergelin, M., 2011, I: *Journal of Physical Chemistry C*. 115, 13, s. 5919–5929

Electrochemically controlled ion transport across polypyrrole/multi-walled carbon nanotube composite membranes

Akieh-Pirkanniemi, M., Latonen, R.-M., Lindholm, S., Ralph, S. F., Bobacka, J. & Ivaska, A., 2011, I: *Synthetic Metals*. 161, 17-18, s. 1906–1914

Electrodeposition of PEDOT-Cl film on a fully printed Ag/polyaniline electrode

Ihalainen, P., Määttänen, A., Mattinen, U., Stepien, M., Bollström, R., Toivakka, M., Bobacka, J. & Peltonen, J., 2011, I: *Thin Solid Films*. 519, 7, s. 2172–2175 4 s.

Immobilization of *Trametes hirsuta* laccase into poly(3,4-ethylenedioxythiophene) and polyaniline polymer-matrices

Wang, X., Sjöberg-Eerola, P., Immonen, K., Bobacka, J. & Bergelin, M., 2011, I: *Journal of Power Sources*. 196, 11, s. 4957–4964

Impedance study of the ion-to-electron transduction process for carbon cloth as solid-contact material in potentiometric ion sensors

Mattinen, U., Rabiej, S., Lewenstam, A. & Bobacka, J., 2011, I: *Electrochimica Acta*. 56, 28, s. 10683–10687 5 s.

Ionic Liquid-Based, Liquid-Junction-Free Reference Electrode

Cicmil, D., Anastasova, S., Kavanagh, A., Diamond, D., Mattinen, U., Bobacka, J., Lewenstam, A. & Radu, A., 2011, I: *Electroanalysis*. 23, 8, s. 1881–1890 10 s.

Simultaneous monitoring of the transport of anions and cations across polypyrrole based composite membranes

Akieh-Pirkanniemi, M., Varga, Á., Latonen, R.-M., Ralph, S. F., Bobacka, J. & Ivaska, A., 2011, I: *Electrochimica Acta*. 56, 10, s. 3507–3515 9 s.

Tuned galvanostatic polarization of solid-state lead-selective electrodes for lowering of the detection limit

Lisak, G., Sokalski, T., Bobacka, J., Harju, L., Mikhelson, K. & Lewenstam, A., 2011, I: *Analytica Chimica Acta*. 707, 1-2, s. 1–6 6 s.

A study on lowering the detection limit with solid-state lead-selective electrodes

Lisak, G., Sokalski, T., Bobacka, J., Harju, L. & Lewenstam, A., 2010, I: *Talanta*. 83, s. 436–440 5 s.

Development of miniature all-solid-state potentiometric sensing system

Anastasova-Ivanova, S., Mattinen, U., Radu, A., Bobacka, J., Lewenstam, A., Migdalski, J., Danielewski, M. & Diamond, D., 2010, I: *Sensors and Actuators B: Chemical*. 146, s. 199–205 7 s.

Diagnostic of functionality of polymer membrane - based ion selective electrodes by impedance spectroscopy

Radu, A., Anastasova-Ivanova, S., Paczosa-Bator, B., Danielewski, M., Bobacka, J., Lewenstam, A. & Diamond, D., 2010, I: *Analytical Methods*. 2, s. 1490–1498 9 s.

Electrochemical Behaviour of Poly(benzopyrene) Films Doped with Eriochrome Black T as a Pb²⁺-Sensitive Sensors

Lisak, G., Wagner, M., Kvarnström, C., Bobacka, J., Ivaska, A. & Lewenstam, A., 2010, I: *Electroanalysis*. 22, 23, s. 2794–2800 7 s.

Low Cost, Calibration-free Sensors for In Situ Determination of Natural Water Pollution

Radu, A., Anastasova, S., Fay, C., Diamond, D., Bobacka, J. & Lewenstam, A., 2010, *Proceedings of IEEE Sensors*. IEEE, s. 1487–1490 4 s.

Printed electrodes on tailored paper enable electrochemical functionalization of paper

Peltonen, J., Määttä, A., Bollström, R., Toivakka, M., Mattinen, U., Stpień, M., Bobacka, J., Saarinen, J. & Ihalainen, P., 2010, *International Conference on Nanotechnology for the Forest Products Industry 2010*. s. 57-76 20 s. (International Conference on Nanotechnology for the Forest Products Industry 2010).

The effect of counter ions and substrate material on the growth and morphology of poly(3,4-ethylenedioxythiophene) films: Towards the application of enzyme electrode construction in biofuel cells

Wang, X., Sjöberg-Eerola, P., Eriksson, J-E., Bobacka, J. & Bergelin, M., 2010, *Synthetic Metals*. 160, 13-14, s. 1373–1381

Transport of metal ions across an electrically switchable cation exchange membrane based on polypyrrole doped with a sulfonated calix[6]arene

Akiah-Pirkanniemi, M., Ralph, S. F., Bobacka, J. & Ivaska, A., 2010, *Journal of Membrane Science*. 354, 1-2, s. 162–170 9 s.

All-Solid-State Potassium Ion-Selective Electrode with Conducting Polymer Doped with Carbon Nanotubes and C(60) as the Ion-to-Electron Transducing Layers

Mousavi, Z., Han, T., Kvarnstrom, C., Bobacka, J. & Ivaska, A., 2009, *ECS Transactions*. 19, 6, s. 19–26 8 s.

Determination of Calcium with Ion-Selective Electrode in Black Liquor from a Kraft Pulping Process

Granhölm, K., Ek, P., Sokalski, T., Harju, L., Bobacka, J. & Ivaska, A., 2009, *Electroanalysis*. 21, 17-18, s. 2014–2021 8 s.

Electropolymerization of N-Hydroxyethylcarbazole on Carbon Fiber Microelectrodes

Parlak, EA., Sarac, AS., Serantoni, M. & Bobacka, J., 2009, *Journal of Applied Polymer Science*. 113, 1, s. 136–142 7 s.

Electropolymerization of N-methylantranilic acid and spectroelectrochemical characterization of the formed film

Blomquist, M., Lindfors, T., Latonen, R-M. & Bobacka, J., 2009, *Synthetic Metals*. 159, 1-2, s. 96–102

Ion exchange behaviour and charge compensation mechanism of polypyrrole in electrolytes containing mono-, di- and trivalent metal ions

Akiah, MN., Price, WE., Bobacka, J., Ivaska, A. & Ralph, SF., 2009, *Synthetic Metals*. 159, 23-24, s. 2590–2598 9 s.

Ion-Selective Organic Electrochemical Junction Transistors Based on Poly(3,4-ethylenedioxythiophene) Doped with Poly(styrene sulfonate)

Mousavi, Z., Ekholm, A., Bobacka, J. & Ivaska, A., 2009, *Electroanalysis*. 21, 3-5, s. 472–479 8 s.

New polyacrylate-based lead(II) ion-selective electrodes

Lisak, G., Grygolowicz-Pawlak, E., Mazurkiewicz, M., Malinowska, E., Sokalski, T., Bobacka, J. & Lewenstam, A., 2009, *Microchimica Acta*. 164, 3-4, s. 293–297 5 s.

Poly(3,4-ethylenedioxythiophene) (PEDOT) doped with carbon nanotubes as ion-to-electron transducer in polymer membrane-based potassium ion-selective electrodes

Mousavi, Z., Bobacka, J., Lewenstam, A. & Ivaska, A., 2009, *Journal of Electroanalytical Chemistry*. 633, 1, s. 246–252 7 s.

Preface

Bobacka, J., 2009, *Journal of Solid State Electrochemistry*. 13, s. 1–2 2 s.

Solid-Contact Reference Electrodes Based on Lipophilic Salts

Mattinen, U., Bobacka, J. & Lewenstam, A., 2009, *Electroanalysis*. 21, 17-18, s. 1955–1960 6 s.

Transduction Mechanism of Carbon Nanotubes in Solid-Contact Ion-Selective Electrodes

Crespo, GA., Macho, S., Bobacka, J. & Rius, FX., 2009, *Analytical Chemistry*. 81, 2, s. 676–681 6 s.

Electrochemical characterization of poly(3,4-ethylenedioxythiophene) (PEDOT) doped with sulfonated thiophenes

Mousavi, Z., Alaviuhkola, T., Bobacka, J., Latonen, R-M., Pursiainen, J. & Ivaska, A., 2008, I: *Electrochimica Acta*. 53, 11, s. 3755–3762 8 s.

Potentiometric ion sensors

Bobacka, J., Ivaska, A. & Lewenstam, A., 2008, I: *Chemical Reviews*. 108, 2, s. 329–351 23 s.

Soluble semiconducting poly(3-octylthiophene) as a solid-contact material in all-solid-state chloride sensors

Sjoberg-Eerola, P., Nylund, J., Bobacka, J., Lewenstam, A. & Ivaska, A., 2008, I: *Sensors and Actuators B: Chemical*. 134, 2, s. 878–886 9 s.

Speciation of Ca²⁺ ions in black liquors determined by a Ca-ion-selective electrode

Granholm, K., Harju, L., Bobacka, J. & Ivaska, A., 2008, *Proceedings The Second International Papermaking & Environmental Conference Book A*. Wang, L., Yonghau, N., Hou, Q. & Liu, Z. (red.). s. 391–394 4 s.

All-solid-state chloride sensors based on electronically conducting, semiconducting and insulating polymer membranes

Sjoberg-Eerola, P., Bobacka, J., Lewenstam, A. & Ivaska, A., 2007, I: *Sensors and Actuators B: Chemical*. 127, 2, s. 545–553 9 s.

Conducting polymer-based solid-state ion-selective electrodes

Bobacka, J., 2006, I: *Electroanalysis*. 18, 1, s. 7–18 12 s.

Influence of morphology and topography on potentiometric response of magnesium and calcium sensitive PEDOT films doped with adenosine triphosphate (ATP)

Paczosa-Bator, B., Peltonen, J., Bobacka, J. & Lewenstam, A., 2006, I: *Analytica Chimica Acta*. 555, 1, s. 118–127 10 s.

Microcavity based solid-contact ion-selective microelectrodes

Sundfors, F., Bereczki, R., Bobacka, J., Toth, K., Ivaska, A. & Gyurcsanyi, RE., 2006, I: *Electroanalysis*. 18, 13-14, s. 1372–1378 7 s.

Response mechanism of potentiometric Ag⁺ sensor based on poly(3,4-ethylenedioxythiophene) doped with silver hexabromocarbonane

Mousavi, Z., Bobacka, J., Lewenstam, A. & Ivaska, A., 2006, I: *Journal of Electroanalytical Chemistry and Interfacial Electrochemistry*. 593, 1-2, s. 219–226 8 s.

Operating principle of polymer insulator organic thin-film transistors exposed to moisture

Backlund, TG., Osterbacka, R., Stubb, H., Bobacka, J. & Ivaska, A., 2005, I: *Journal of Applied Physics*. 98, s. – 6 s.

Potentiometric Ag⁺ sensors based on conducting polymers: A comparison between poly(3,4-ethylenedioxythiophene) and polypyrrole doped with sulfonated calixarenes

Mousavi, Z., Bobacka, J. & Ivaska, A., 2005, I: *Electroanalysis*. 17, 18, s. 1609–1615 7 s.

Potentiometric sensors based on poly(3,4-ethylenedioxythiophene) (PEDOT) doped with sulfonated calix[4]arene and calix[4]resorcarenes

Vazquez Ulloa, E., Bobacka, J., Luostarinen, M., Rissanen, K., Lewenstam, A. & Ivaska, A., 2005, I: *Journal of Solid State Electrochemistry*. 9, 5, s. 312–319 8 s.

Potentiometric sensors for Ag⁺ based on poly(3-octylthiophene) (POT)

Vazquez Ulloa, E., Bobacka, J. & Ivaska, A., 2005, I: *Journal of Solid State Electrochemistry*. 9, 12, s. 865–873 9 s.

Synthesis, characterization, and complexation of tetraarylborates with aromatic cations and their use in chemical sensors

Alaviuhkola, T., Bobacka, J., Nissinen, M., Rissanen, K., Ivaska, A. & Pursiainen, J., 2005, I: *Chemistry - A European Journal*. 11, 7, s. 2071–2080 10 s.

All-solid-state chloride sensors with poly(3-octylthiophene) matrix and trihexadecylmethylammonium chlorides as an ion exchanger salt

Sjoberg-Eerola, P., Bobacka, J., Sokalski, T., Mieczkowski, J., Ivaska, A. & Lewenstam, A., 2004, I: *Electroanalysis*. 16, 5, s. 379–385 7 s.

All-solid-state ion sensors, using conducting polymers as ion-to-electron transducers

Bobacka, J., Lindfors, T., Lewenstam, A. & Ivaska, A., 2004, I: *American Laboratory*. 36, 3, s. 13–20 6 s.

EIS study of the redox reaction of Fe(CN)₆^{3-/4-} poly(3,4-ethylenedioxythiophene) electrodes: influence of dc potential and c(Ox): c(Red) ratio

Sundfors, F. & Bobacka, J., 2004, I: *Journal of Electroanalytical Chemistry*. 572, 2, s. 309–316 8 s.

Electrochemical synthesis and characterization of poly(3,4-ethylenedioxythiophene) in ionic liquids with bulky organic anions

Danielsson, P., Bobacka, J. & Ivaska, A., 2004, I: *Journal of Solid State Electrochemistry*. 8, 10, s. 809–817 9 s.

Influence of anionic additive on Hg²⁺ interference on Ag⁺-ISEs based on [2.2.2]p,p,p-cyclophane as neutral carrier

Bobacka, J., Vaananen, V., Lewenstam, A. & Ivaska, A., 2004, I: *Talanta*. 63, 1, s. 135–138 4 s.

Small-volume radial flow cell for all-solid-state ion-selective electrodes

Vazquez Ulloa, E., Bobacka, J., Ivaska, A. & Lewenstam, A., 2004, I: *Talanta*. 62, 1, s. 57–63 7 s.

Solution-cast films of poly(3,4-ethylenedioxythiophene) as ion-to-electron transducers in all-solid-state ion-selective electrodes

Vazquez Ulloa, E., Danielsson, P., Bobacka, J., Lewenstam, A. & Ivaska, A., 2004, I: *Sensors and Actuators B: Chemical*. 97, 2-3, s. 182–189 8 s.

Carbonate ion-selective electrode with reduced interference from salicylate

Bobacka, J., Maj-Zurawska, M. & Lewenstam, A., 2003, I: *Biosensors and Bioelectronics*. 18, 2-3, s. 245–253 9 s.

Potentiometric ion sensors based on conducting polymers

Bobacka, J., Ivaska, A. & Lewenstam, A., 2003, I: *Electroanalysis*. 15, s. 366–374 9 s.

Towards reversibility of ion transfer across the interface between valinomycin membranes and aqueous electrolyte solutions

Mikhelson, KN., Bobacka, J., Lewenstam, A. & Ivaska, A., 2003, I: *Elektrokhimiya / Russian Journal of Electrochemistry*. 39, 7, s. 771–776 6 s.

Influence of oxygen and carbon dioxide on the electrochemical stability of poly(3,4-ethylenedioxythiophene) used as ion-to-electron transducer in all-solid-state ion-selective electrodes

Vazquez Ulloa, E., Bobacka, J., Ivaska, A. & Lewenstam, A., 2002, I: *Sensors and Actuators B: Chemical*. 82, 1, s. 7–13 7 s.

Kinetics of electron transfer between Fe(CN)₆^{3-/4-} and poly(3,4-ethylenedioxythiophene) studied by electrochemical impedance spectroscopy

Sundfors, F., Bobacka, J., Ivaska, A. & Lewenstam, A., 2002, *Electrochimica Acta*. Elsevier, s. 2245–2251 7 s.

Selectivity of lithium electrodes: Correlation with ion-ionophore complex stability constants and with interfacial exchange current densities

Mikhelson, KN., Bobacka, J., Ivaska, A., Lewenstam, A. & Bochenka, M., 2002, I: *Journal of the American Chemical Society*. 74, s. 518–527 10 s.

Silver ion-selective electrodes based on pi-coordinating ionophores without heteroatoms

Bobacka, J., Lahtinen, T., Koskinen, H., Rissanen, K., Lewenstam, A. & Ivaska, A., 2002, I: *Electroanalysis*. 14, s. 1353–1357 5 s.

Solid-contact ion-selective electrodes for aromatic cations based on pi-coordinating soft carriers

Bobacka, J., Alaviuhkola, T., Hietapelto, V., Koskinen, H., Lewenstam, A., Lämsä, M., Pursiainen, J. & Ivaska, A., 2002, I: *Talanta*. 58, 2, s. 341–349 9 s.

All-solid-state Ag⁺-ISE based on [2.2.2]p,p,p-cyclophane

Bobacka, J., Lahtinen, T., Nordman, J., Haggstrom, S., Rissanen, K., Lewenstam, A. & Ivaska, A., 2001, I: *Electroanalysis*. 13, s. 723–726 4 s.

Determination of Na⁺, K⁺, Ca²⁺, and Cl⁻ ions in wood pulp suspension using ion-selective electrodes

Vazquez, M., Mikhelson, K., Piepponen, S., Rama, J., Sillanpaa, M., Ivaska, A., Lewenstam, A. & Bobacka, J., 2001, I: *Electroanalysis*. 13, s. 1119–1124 6 s.

Equilibrium potential of potentiometric ion sensors under steady-state current by using current-reversal chronopotentiometry

Bobacka, J., Lewenstam, A. & Ivaska, A., 2001, I: *Journal of Electroanalytical Chemistry*. 509, 1, s. 27–30 4 s.

Oxyethylene chain-cation complexation; Nonionic polyoxyethylene detergents attain a positive charge and demonstrate electrostatic head group interactions

Hagerstrand, H., Bobacka, J., Bobrowska-Hagerstrand, M., Kralj-Iglic, V., Fosnaric, M. & Iglic, A., 2001, I: *Cellular and Molecular Biology Letters*. 6, s. 161–165 5 s.

Potentiometric performance and interfacial kinetics of neutral ionophore based ISE membranes in interfering ion solutions before and after contact with primary ions

Mikhelson, KN., Bobacka, J., Lewenstam, A. & Ivaska, A., 2001, I: *Electroanalysis*. 13, s. 876–881 6 s.

Coupled Redox and pH Potentiometric Responses of Electrodes Coated with Polypyrrole

Maksymiuk, K., Bobacka, J., Ivaska, A. & Lewenstam, A., 2000, I: *Analytical Letters*. 33, 7, s. 1339–1360 22 s.

Electrochemical impedance spectroscopy of oxidized poly(3,4-ethylenedioxythiophene) film electrodes in aqueous solutions

Bobacka, J., Lewenstam, A. & Ivaska, A., 2000, I: *Journal of Electroanalytical Chemistry*. 489, 1-2, s. 17–27 11 s.

All-solid-state chloride-selective electrode based on poly(3-octylthiophene) and tridodecylmethylammonium chloride

Sjoberg, P., Bobacka, J., Lewenstam, A. & Ivaska, A., 1999, I: *Electroanalysis*. 11, s. 821–824 4 s.

Characterization of a single-piece all-solid-state lithium-selective electrode based on soluble conducting polyaniline

Lindfors, T., Sjöberg, P., Bobacka, J., Lewenstam, A. & Ivaska, A., 1999, I: *Analytica Chimica Acta*. 385, 1-3, s. 163–173 11 s.

Plasticizer-free all-solid-state potassium-selective electrode based on poly(3-octylthiophene) and valinomycin

Bobacka, J., Ivaska, A. & Lewenstam, A., 1999, I: *Analytica Chimica Acta*. 385, 1-3, s. 195–202 8 s.

Potential Stability of All-Solid-State Ion-Selective Electrodes Using Conducting Polymers as Ion-to-Electron Transducers

Bobacka, J., 1999, I: *Analytical Chemistry*. 71, s. 4932–4937 6 s.

Sensor panels and nonlinear modelling - a powerful combination

Bobacka, J. & Bulsari, A., 1999, I: *Svensk papperstidning*. 102, 6, s. 85–

Study on soluble polypyrrole as a component in all-solid-state ion-sensors

Lindfors, T., Bobacka, J., Lewenstam, A. & Ivaska, A., 1998, I: *Electrochimica Acta*. 43, 23, s. 3503–3509 7 s.

Electron transfer at conducting polymer film electrodes: Mechanism and kinetics of ferrocene oxidation at poly(3-octylthiophene)

Bobacka, J., Grzeszczuk, M. & Ivaska, A., 1997, I: Journal of Electroanalytical Chemistry and Interfacial Electrochemistry. 427, 1-2, s. 63–69 7 s.

Electrosynthesis of polypyrrole in iodide solution. Film growth, redox behaviour and potentiometric response

Lindfors, T., Bobacka, J. & Ivaska, A., 1997, I: Analytica Chimica Acta. 355, 2-3, s. 217–225 9 s.

Metallic and non-metallic redox response of conducting polymers

Maksymiuk, K., Nyback, AS., Bobacka, J., Ivaska, A. & Lewenstam, A., 1997, I: Journal of Electroanalytical Chemistry and Interfacial Electrochemistry. 430, 1-2, s. 243–252 10 s.

Impedance spectroscopic study on single-piece all-solid-state calcium-selective electrode based on polyaniline

Lindfors, T., Bobacka, J., Lewenstam, A. & Ivaska, A., 1996, I: Analyst. 121, 12, s. 1823–1827 5 s.

Single-piece all-solid-state ion-selective electrode

Bobacka, J., Lindfors, T., McCarrick, M., Ivaska, A. & Lewenstam, A., 1995, I: Analytical Chemistry. 67, 20, s. 3819–3823 5 s.

ALL-SOLID-STATE POLY(VINYL CHLORIDE) MEMBRANE ION-SELECTIVE ELECTRODES WITH POLY(3-OCTYLTHIOPHENE) SOLID INTERNAL CONTACT

Bobacka, J., MCCARRICK, M., Lewenstam, A. & Bobacka, J., 1994, I: Analyst. 119, 9, s. 1985–1991 7 s.

ELECTROCHEMICAL-BEHAVIOR OF POLYPYRROLE FILM POLYMERIZED IN INDIGO CARMINE SOLUTION

GAO, Z., Bobacka, J., Lewenstam, A. & Ivaska, A., 1994, I: Electrochimica Acta. 39, 5, s. 755–762 8 s.

ELECTROCHEMICAL PROPERTIES OF POLYPYRROLE FILMS POLYMERIZED IN THE PRESENCE OF METHYLENE-BLUE

GAO, ZQ., Bobacka, J., Lewenstam, A. & Ivaska, A., 1994, I: Synthetic Metals. 62, 2, s. 117–123 7 s.

ELECTROCHEMICAL STUDY OF BILAYER CONDUCTING POLYMERS - POLYPYRROLE POLYANILINE SYSTEM

GAO, ZQ., Bobacka, J. & Ivaska, A., 1994, I: Journal of Electroanalytical Chemistry and Interfacial Electrochemistry. 364, 1-2, s. 127–133 7 s.

MECHANISM OF IONIC AND REDOX SENSITIVITY OF P-TYPE CONDUCTING POLYMERS .1. THEORY

Lewenstam, A., Bobacka, J. & Ivaska, A., 1994, I: Journal of Electroanalytical Chemistry. 368, 1-2, s. 23–31 9 s.

MECHANISM OF IONIC AND REDOX SENSITIVITY OF P-TYPE CONDUCTING POLYMERS .2. EXPERIMENTAL-STUDY OF POLYPYRROLE

Bobacka, J., GAO, ZQ., Ivaska, A. & Lewenstam, A., 1994, I: Journal of Electroanalytical Chemistry. 368, 1-2, s. 33–41 9 s.

ELECTROCHEMICAL IMPEDANCE SPECTROSCOPY OF COBALT(II)-HEXACYANOFERRATE FILM MODIFIED ELECTRODES

GAO, ZQ., Bobacka, J. & Ivaska, A., 1993, I: Electrochimica Acta. 38, 2-3, s. 379–385 7 s.

ELECTROCHEMICAL STUDY ON POLYPYRROLE - POLY(3-OCTYLTHIOPHENE) BILAYER FILMS

Bobacka, J., GAO, ZQ. & Ivaska, A., 1993, I: Synthetic Metals. 55, 2-3, s. 1453–1458 6 s.

ELECTROCHEMICAL STUDY ON THE POLYPYRROLE-POLYANILINE BILAYERS

GAO, ZQ., Bobacka, J. & Ivaska, A., 1993, I: Synthetic Metals. 55, 2-3, s. 1477–1482 6 s.

ION TRANSFER AT A POLY(3-OCTYLTHIOPHENE) FILM ELECTRODE

GRZESZCZUK, M., Bobacka, J. & Ivaska, A., 1993, I: *Journal of Electroanalytical Chemistry*. 362, s. 287–289 3 s.

POTENTIOMETRIC RESPONSE OF POLY(3-OCTYLTHIOPHENE), POLY(3-METHYLTHIOPHENE) AND POLYTHIOPHENE IN AQUEOUS-SOLUTIONS

Bobacka, J., Lewenstam, A. & Ivaska, A., 1993, I: *Talanta*. 40, 9, s. 1437–1444 8 s.

ELECTROCHEMICAL STUDY OF POLY(3-OCTYLTHIOPHENE) FILM ELECTRODES - IMPEDANCE OF THE POLYMER FILM SEMICONDUCTOR ELECTROLYTE INTERFACE

Bobacka, J., GRZESZCZUK, M. & Ivaska, A., 1992, I: *Electrochimica Acta*. 37, 10, s. 1759–1765 7 s.

STUDIES OF THE MECHANICALLY GENERATED NOISE IN STATIC MERCURY DROP ELECTRODES

ENGBLOM, S., Bobacka, J., Ivaska, A., NAGY, G., SARKANY, P. & PUNGOR, E., 1992, I: *Talanta*. 39, 7, s. 819–824 6 s.

COMPARISON OF PROPERTIES OF ELECTROCHEMICALLY SYNTHESIZED POLY(3-OCTYLTHIOPHENE) USING MONOMER AND DIMER AS STARTING MATERIAL

Bobacka, J. & Ivaska, A., 1991, I: *Synthetic Metals*. 43, 1-2, s. 3053–3058 6 s.

ELECTROCHEMICAL STUDY OF POLY(3-OCTYLTHIOPHENE) FILM ELECTRODES .1. ELECTROLYTE EFFECTS ON THE VOLTAMMETRIC CHARACTERISTICS OF THE POLYMER - 3 STATES OF THE POLYMER FILM

Bobacka, J., Ivaska, A. & GRZESZCZUK, M., 1991, I: *Synthetic Metals*. 44, 1, s. 9–19 11 s.

ELECTROCHEMICAL STUDY OF POLY(3-OCTYLTHIOPHENE) FILM ELECTRODES .2. REVERSIBLE REDOX/CONDUCTIVITY STATE SWITCHING - IMPEDANCE STUDY

Bobacka, J., Ivaska, A. & GRZESZCZUK, M., 1991, I: *Synthetic Metals*. 44, 1, s. 21–34 14 s.

EXPERIENCES OF AN ONLINE FOURIER-TRANSFORM FARADAIC ADMITTANCE MEASUREMENT (FT-FAM) SYSTEM BASED ON DIGITAL SIGNAL PROCESSORS

ENGBLOM, SO., Wasberg, M., Bobacka, J. & IVASKA, A., 1990, *Contemporary Electroanalytical Chemistry*. Ivaska, A., Lewenstam, A. & Sara, R. (red.). Springer, s. 21–29 9 s.

SMOOTHING OF AC-POLAROGRAPHIC DATA BY FFT FILTERING

Bobacka, J. & Ivaska, A., 1990, *Contemporary Electroanalytical Chemistry*. Ivaska, A., Lewenstam, A. & Sara, R. (red.). Springer, s. 37–46 10 s.