

# PUBLICATIONS by Johan Bobacka (*updated 21.4.2016*)

## Articles in international scientific journals with referee practice

1. J. Bobacka and A. Ivaska, "COMPARISON OF PROPERTIES OF ELECTRO-CHEMICALLY SYNTHESIZED POLY(3-OCTYLTHIOPHENE) USING MONOMER AND DIMER AS STARTING MATERIAL", *Synth. Met.*, **41–43** (1991) 3053–3058.
2. J. Bobacka, A. Ivaska and M. Grzeszczuk, "ELECTROCHEMICAL STUDY OF POLY(3-OCTYLTHIOPHENE) FILM ELECTRODES. I. ELECTROLYTE EFFECTS ON THE VOLTAMMETRIC CHARACTERISTICS OF THE POLYMER. THREE STATES OF THE POLYMER FILM", *Synth. Met.*, **44** (1991) 9–19.
3. J. Bobacka, A. Ivaska and M. Grzeszczuk, "ELECTROCHEMICAL STUDY OF POLY(3-OCTYLTHIOPHENE) FILM ELECTRODES. II. REVERSIBLE REDOX/CONDUCTIVITY STATE SWITCHING. IMPEDANCE STUDY", *Synth. Met.*, **44** (1991) 21–34.
4. S. Engblom, J. Bobacka, A. Ivaska, G. Nagy, P. Sárkány and E. Pungor, "STUDIES OF THE MECHANICALLY GENERATED NOISE IN STATIC MERCURY DROP ELECTRODES", *Talanta*, **39** (1992) 819–824.
5. J. Bobacka, M. Grzeszczuk and A. Ivaska, "ELECTROCHEMICAL STUDY OF POLY(3-OCTYLTHIOPHENE) FILM ELECTRODES. IMPEDANCE OF THE POLYMER FILM SEMICONDUCTOR-ELECTROLYTE INTERFACE", *Electrochim. Acta*, **37** (1992) 1759–1765.
6. Z. Gao, J. Bobacka and A. Ivaska, "ELECTROCHEMICAL IMPEDANCE SPECTROSCOPY OF COBALT(II)-HEXACYANOFERRATE FILM MODIFIED ELECTRODES", *Electrochim. Acta*, **38** (1993) 379–385.
7. J. Bobacka, Z. Gao and A. Ivaska, "ELECTROCHEMICAL STUDY ON POLYPYRROLE-POLY(3-OCTYLTHIOPHENE) BILAYER FILMS", *Synth. Met.*, **55–57** (1993) 1453–1458.
8. Z. Gao, J. Bobacka, and A. Ivaska, "ELECTROCHEMICAL STUDY ON THE POLYPYRROLE-POLYANILINE BILAYERS", *Synth. Met.*, **55–57** (1993) 1477–1482.
9. M. Grzeszczuk, J. Bobacka and A. Ivaska, "ION TRANSFER AT A POLY(3-OCTYLTHIOPHENE) FILM ELECTRODE", *J. Electroanal. Chem.*, **362** (1993) 287–289.
10. J. Bobacka, A. Lewenstam and A. Ivaska, "POTENTIOMETRIC RESPONSE OF POLY(3-OCTYLTHIOPHENE), POLY(3-METHYLTHIOPHENE) AND POLYTHIOPHENE IN AQUEOUS SOLUTIONS", *Talanta*, **40** (1993) 1437–1444.
11. Z. Gao, J. Bobacka, A. Lewenstam and A. Ivaska, "ELECTROCHEMICAL BEHAVIOUR OF POLYPYRROLE FILM POLYMERIZED IN INDIGO CARMINE SOLUTION", *Electrochim. Acta*, **39** (1994) 755–762.

12. Z. Gao, J. Bobacka, A. Lewenstam and A. Ivaska, "ELECTROCHEMICAL PROPERTIES OF POLYPYRROLE FILMS POLYMERIZED IN THE PRESENCE OF METHYLENE BLUE", *Synth. Met.*, **62** (1994) 117–123.
13. Z. Gao, J. Bobacka and A. Ivaska, "ELECTROCHEMICAL STUDY OF BILAYER CONDUCTING POLYMERS: POLYPYRROLE/POLYANILINE SYSTEM", *J. Electroanal. Chem.*, **364** (1994) 127–133.
14. A. Lewenstam, J. Bobacka and A. Ivaska, "MECHANISM OF IONIC AND REDOX SENSITIVITY OF p-TYPE CONDUCTING POLYMERS. PART I. THEORY", *J. Electroanal. Chem.*, **368** (1994) 23–31.
15. J. Bobacka, Z. Gao, A. Ivaska and A. Lewenstam, "MECHANISM OF IONIC AND REDOX SENSITIVITY OF p-TYPE CONDUCTING POLYMERS. PART II. EXPERIMENTAL STUDY OF POLYPYRROLE", *J. Electroanal. Chem.*, **368** (1994) 33–41.
16. J. Bobacka, M. McCarrick, A. Lewenstam and A. Ivaska, "ALL-SOLID-STATE POLY(VINYL CHLORIDE) MEMBRANE ION-SELECTIVE ELECTRODES WITH POLY(3-OCTYLTHIOPHENE) SOLID INTERNAL CONTACT", *Analyst*, **119** (1994) 1985–1991.
17. J. Bobacka, T. Lindfors, M. McCarrick, A. Ivaska and A. Lewenstam, "SINGLE-PIECE ALL-SOLID-STATE ION-SELECTIVE ELECTRODE", *Anal. Chem.*, **67** (1995) 3819–3823.
18. T. Lindfors, J. Bobacka, A. Lewenstam and A. Ivaska, "IMPEDANCE SPECTROSCOPIC STUDY ON SINGLE-PIECE ALL-SOLID-STATE CALCIUM-SELECTIVE ELECTRODE BASED ON POLYANILINE", *Analyst*, **121** (1996) 1823–1827.
19. J. Bobacka, M. Grzeszczuk and A. Ivaska, "ELECTRON TRANSFER AT CONDUCTING POLYMER FILM ELECTRODES: MECHANISM AND KINETICS OF FERROCENE OXIDATION AT POLY(3-OCTYLTHIOPHENE)", *J. Electroanal. Chem.*, **427** (1997) 63–69.
20. T. Lindfors, J. Bobacka and A. Ivaska, "ELECTROSYNTHESIS OF POLYPYRROLE IN IODIDE SOLUTION. FILM GROWTH, REDOX BEHAVIOUR AND POTENTIOMETRIC RESPONSE", *Anal. Chim. Acta*, **355** (1997) 217–225.
21. K. Maksymiuk, A.-S. Nybäck, J. Bobacka, A. Ivaska and A. Lewenstam, "METALLIC AND NON-METALLIC REDOX RESPONSE OF CONDUCTING POLYMERS", *J. Electroanal. Chem.*, **430** (1997) 243–252.
22. T. Lindfors, J. Bobacka, A. Lewenstam and A. Ivaska, "STUDY ON SOLUBLE POLYPYRROLE AS A COMPONENT IN ALL-SOLID-STATE ION-SENSORS", *Electrochim. Acta*, **43** (1998) 3503–3509.
23. J. Bobacka, A. Ivaska and A. Lewenstam, "PLASTICIZER-FREE ALL-SOLID-STATE POTASSIUM-SELECTIVE ELECTRODE BASED ON POLY(3-OCTYLTHIOPHENE) AND VALINOMYCIN", *Anal. Chim. Acta*, **385** (1999) 195–202.

24. T. Lindfors, P. Sjöberg, J. Bobacka, A. Lewenstam and A. Ivaska, "CHARACTERIZATION OF A SINGLE-PIECE ALL-SOLID-STATE LITHIUM-SELECTIVE ELECTRODE BASED ON SOLUBLE CONDUCTING POLYANILINE", *Anal. Chim. Acta*, **385** (1999) 163–173.
25. P. Sjöberg, J. Bobacka, A. Lewenstam and A. Ivaska, "ALL-SOLID-STATE CHLORIDE-SELECTIVE ELECTRODE BASED ON POLY(3-OCTYLTHIOPHENE) AND TRIDODECYLMETHYLAMMONIUM CHLORIDE", *Electroanalysis*, **11** (1999) 821–824.
26. J. Bobacka, "POTENTIAL STABILITY OF ALL-SOLID-STATE ION-SELECTIVE ELECTRODES USING CONDUCTING POLYMERS AS ION-TO-ELECTRON TRANSDUCERS", *Anal. Chem.*, **71** (1999) 4932–4937.
27. K. Maksymiuk, J. Bobacka, A. Ivaska and A. Lewenstam, "COUPLED REDOX AND pH POTENTIOMETRIC RESPONSES OF ELECTRODES COATED WITH POLYPYRROLE" *Anal. Lett.*, **33** (2000) 1339–1360.
28. J. Bobacka, A. Lewenstam and A. Ivaska, "ELECTROCHEMICAL IMPEDANCE SPECTROSCOPY OF OXIDIZED POLY(3,4-ETHYLENEDIOXYTHIOPHENE) FILM ELECTRODES IN AQUEOUS SOLUTIONS", *J. Electroanal. Chem.*, **489** (2000) 17–27.
29. J. Bobacka, T. Lahtinen, J. Nordman, S. Häggström, K. Rissanen, A. Lewenstam and A. Ivaska, "ALL-SOLID-STATE Ag<sup>+</sup>-ISE BASED ON [2.2.2]*p,p,p*-CYCLOPHANE", *Electroanalysis*, **13** (2001) 723–726.
30. K.N. Mikhelson, J. Bobacka, A. Lewenstam and A. Ivaska, "POTENTIOMETRIC PERFORMANCE AND INTERFACIAL KINETICS OF NEUTRAL IONOPHORE BASED ISE MEMBRANES IN INTERFERING ION SOLUTIONS BEFORE AND AFTER CONTACT WITH PRIMARY IONS", *Electroanalysis*, **13** (2001) 876–881.
31. M. Vázquez, K. Mikhelson, J. Rämö, M. Sillanpää, S. Piepponen, A. Ivaska, A. Lewenstam and J. Bobacka, "DETERMINATION OF Na<sup>+</sup>, K<sup>+</sup>, Ca<sup>2+</sup> and Cl<sup>-</sup> IONS IN WOOD PULP SUSPENSION USING ION-SELECTIVE ELECTRODES", *Electroanalysis*, **13** (2001) 1119–1124.
32. J. Bobacka, A. Lewenstam and A. Ivaska, "EQUILIBRIUM POTENTIAL OF POTENTIOMETRIC ION SENSORS UNDER STEADY-STATE CURRENT BY USING CURRENT-REVERSAL CHRONOPOTENTIOMETRY", *J. Electroanal. Chem.*, **509** (2001) 27–30.
33. H. Hägerstrand, J. Bobacka, M. Bobrowska-Hägerstrand, V. Kralj-Iglic, M. Fosnaric and A. Iglic, "OXYETHYLENE CHAIN-CATION COMPLEXATION; NONIONIC POLYOXYETHYLENE DETERGENTS MAY ATTAIN A POSITIVE CHARGE AND DEMONSTRATE ELECTROSTATIC HEAD GROUP INTERACTIONS", *Cell. Mol. Biol. Lett.*, **6** (2001) 161–165.
34. M. Vázquez, J. Bobacka, A. Ivaska and A. Lewenstam, "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”, *Sens. Actuators B*, **82** (2002) 7–13.

35. K.N. Mikhelson, J. Bobacka, A. Ivaska, A. Lewenstam and M. Bochenska, “SELECTIVITY OF LITHIUM ELECTRODES: CORRELATION WITH ION-IONOPHORE COMPLEX STABILITY CONSTANTS AND WITH INTERFACIAL EXCHANGE CURRENT DENSITIES”, *Anal. Chem.*, **74** (2002) 518–527.
36. F. Sundfors, J. Bobacka, A. Ivaska and A. Lewenstam, “KINETICS OF ELECTRON TRANSFER BETWEEN  $\text{Fe}(\text{CN})_6^{3-/4-}$  AND POLY(3,4-ETHYLENEDIOXYTHIOPHENE) STUDIED BY ELECTROCHEMICAL IMPEDANCE SPECTROSCOPY”, *Electrochim. Acta*, **47** (2002) 2245–2251.
37. J. Bobacka, T. Alaviuhkola, V. Hietapelto, H. Koskinen, A. Lewenstam, M. Lämsä, J. Pursiainen and A. Ivaska, ”SOLID-CONTACT ION-SELECTIVE ELECTRODES FOR AROMATIC CATIONS BASED ON  $\pi$ -COORDINATING SOFT CARRIERS”, *Talanta*, **58** (2002) 341–349.
38. J. Bobacka, M. Maj-Zurawska and A. Lewenstam, ”CARBONATE ION-SELECTIVE ELECTRODE WITH REDUCED INTERFERENCE FROM SALICYLATE”, *Biosensors and Bioelectronics*, **18** (2002) 245–253..
39. J. Bobacka, T. Lahtinen, H. Koskinen, K. Rissanen, A. Lewenstam and A. Ivaska, ”SILVER ION-SELECTIVE ELECTRODES BASED ON  $\pi$ -COORDINATING IONOPHORES WITHOUT HETEROATOMS”, *Electroanalysis*, **14** (2002) 1353–1357.
40. J. Bobacka, A. Ivaska and A. Lewenstam, ”POTENTIOMETRIC ION SENSORS BASED ON CONDUCTING POLYMERS”, *Electroanalysis*, **15** (2003) 366–374.
41. K.N. Mikhelson, J. Bobacka, A. Lewenstam and A. Ivaska, ”TOWARDS REVERSIBILITY OF ION TRANSFER ACROSS THE INTERFACE BETWEEN VALINOMYCIN MEMBRANES AND AQUEOUS ELECTROLYTE SOLUTIONS”, *Russian Journal of Electrochemistry*, **39** (2003) 771–776. From *Elektrokhimiya*, 39 (2003) 853–869.
42. P. Sjöberg-Eerola, J. Bobacka, T. Sokalski, J. Mieczkowski, A. Ivaska and A. Lewenstam, ”ALL-SOLID-STATE CHLORIDE SENSORS WITH POLY(3-OCTYLTHIOPHENE) MATRIX AND TRIHEXADECYLMETHYLAMMONIUM CHLORIDE AS AN ION-EXCHANGER SALT”, *Electroanalysis*, **16** (2004) 379–385.
43. M. Vázquez, J. Bobacka, A. Ivaska and A. Lewenstam, ”SMALL-VOLUME RADIAL FLOW CELL FOR ALL-SOLID-STATE ION-SELECTIVE ELECTRODES”, *Talanta*, **62** (2004) 57–63.
44. J. Bobacka, T. Lindfors, A. Lewenstam and A. Ivaska, ”ALL-SOLID-STATE ION SENSORS USING CONDUCTING POLYMERS AS ION-TO-ELECTRON TRANSDUCERS”, *American Laboratory*, **36** (2004) 13–20 (pages 13 + 14 + 16 + 18 + 20).
45. M. Vázquez, P. Danielsson, J. Bobacka, A. Lewenstam and A. Ivaska, ”SOLUTION-CAST FILMS OF POLY(3,4-ETHYLENEDIOXYTHIOPHENE) AS ION-TO-

ELECTRON TRANSDUCERS IN ALL-SOLID-STATE ION-SELECTIVE ELECTRODES”,  
*Sens. Actuators B*, **97** (2004) 182–189.

46. J. Bobacka, V. Väänenen, A. Lewenstam and A. Ivaska, ”INFLUENCE OF ANIONIC ADDITIVE ON  $\text{Hg}^{2+}$  INTERFERENCE ON  $\text{Ag}^+$ -ISE BASED ON [2.2.2]*p,p,p*-CYCLOPHANE AS NEUTRAL CARRIER”, *Talanta*, **63** (2004) 135–138.
47. F. Sundfors and J. Bobacka, ”EIS STUDY OF THE REDOX REACTION OF  $\text{Fe}(\text{CN})_6^{3-4-}$  AT POLY(3,4-ETHYLENEDIOXYTHIOPHENE) ELECTRODES: INFLUENCE OF DC POTENTIAL AND  $\text{C}_{\text{Ox}}:\text{C}_{\text{Red}}$  RATIO”, *J. Electroanal. Chem.*, **572** (2004) 309–316.
48. P. Danielsson, J. Bobacka and A. Ivaska, ”ELECTROCHEMICAL SYNTHESIS AND CHARACTERIZATION OF POLY(3,4-ETHYLENEDIOXYTHIOPHENE) IN IONIC LIQUIDS WITH BULKY ORGANIC ANIONS”, *J. Solid State Electrochem.*, **8** (2004) 809–817.
49. T. Alaviuhkola, J. Bobacka, M. Nissinen, K. Rissanen, A. Ivaska, A. Lewenstam and J. Pursiainen, ”SYNTHESIS, CHARACTERIZATION, AND COMPLEXATION OF TETRAARYLBORATES WITH AROMATIC CATIONS AND THEIR USE IN CHEMICAL SENSORS”, *Chem. Eur. J.*, **11** (2005) 2071–2080.
50. M. Vázquez, J. Bobacka, M. Luostarinen, K. Rissanen, A. Lewenstam and A. Ivaska, ”POTENTIOMETRIC SENSORS BASED ON POLY(3,4-ETHYLENEDIOXYTHIOPHENE) (PEDOT) DOPED WITH SULFONATED CALIX[4]ARENE and CALIX[4]RESORCARENES”, *J. Solid State Electrochem.*, **9** (2005) 312–319.
51. Z. Mousavi, J. Bobacka and A. Ivaska, ”POTENTIOMETRIC  $\text{Ag}^+$  SENSORS BASED ON CONDUCTING POLYMERS: A COMPARISON BETWEEN POLY(3,4-ETHYLENEDIOXYTHIOPHENE) AND POLYPYRROLE DOPED WITH SULFONATED CALIXARENES”, *Electroanalysis*, **17** (2005) 1609–1615.
52. T.G. Bäcklund, R. Österbacka, H. Stubb, J. Bobacka and A. Ivaska, ”OPERATING PRINCIPLE OF POLYMER INSULATOR ORGANIC THIN-FILM TRANSISTORS EXPOSED TO MOISTURE”, *J. Appl. Phys.*, **98** (2005) 074504-1 – 074504-6.
53. M. Vázquez, J. Bobacka and A. Ivaska, ”POTENTIOMETRIC SENSORS FOR  $\text{Ag}^+$  BASED ON POLY(3-OCTYLTHIOPHENE) (POT)”, *J. Solid State Electrochem.*, **9** (2005) 865–873. [Erratum: *J. Solid State Electrochem.*, **10** (2006) 1012.]
54. B. Paczosa-Bator, J. Peltonen, J. Bobacka and A. Lewenstam, ”INFLUENCE OF MORPHOLOGY AND TOPOGRAPHY ON POTENTIOMETRIC RESPONSE OF MAGNESIUM AND CALCIUM SENSITIVE PEDOT FILMS DOPED WITH ADENOSINE TRIPHOSPHATE (ATP)”, *Anal. Chim. Acta*, **555** (2006) 118–127.
55. J. Bobacka, ”CONDUCTING POLYMER-BASED SOLID-STATE ION-SELECTIVE ELECTRODES”, *Electroanalysis*, **18** (2006) 7–18.
56. Z. Mousavi, J. Bobacka, A. Lewenstam and A. Ivaska, ”RESPONSE MECHANISM OF POTENTIOMETRIC  $\text{Ag}^+$  SENSOR BASED ON POLY(3,4-ETHYLENEDIOXYTHIOPHENE) DOPED WITH SILVER HEXABROMOCARBORANE” *J. Electroanal. Chem.*, **593** (2006) 219–226.

57. F. Sundfors, R. Berecki, J. Bobacka, K. Tóth, A. Ivaska, R.E. Gyurcsányi, "MICROCAVITY BASED SOLID-CONTACT ION-SELECTIVE MICROELECTRODES" *Electroanalysis*, **18** (2006) 1372–1378.
58. P. Sjöberg-Eerola, J. Bobacka, A. Lewenstam, A. Ivaska, "ALL-SOLID-STATE CHLORIDE SENSORS BASED ON ELECTRONICALLY CONDUCTING, SEMICONDUCTING AND INSULATING POLYMER MEMBRANES" *Sens. Actuators B*, **127** (2007) 545–553.
59. J. Bobacka, A. Ivaska, A. Lewenstam, "POTENTIOMETRIC ION SENSORS", *Chem. Rev.* **108** (2008) 329–351.
60. Z. Mousavi, T. Alaviuhkola, J. Bobacka, J. Pursiainen, A. Ivaska, "ELECTROCHEMICAL CHARACTERIZATION OF POLY(3,4-ETHYLENEDIOXYTHIOPHENE) (PEDOT) DOPED WITH SULFONATED THIOPHENES", *Electrochim. Acta*, **53** (2008) 3755–3762.
61. P. Sjöberg-Eerola, J. Bobacka, A. Lewenstam, A. Ivaska, "SOLUBLE SEMICONDUCTING POLY(3-OCTYLTHIOPHENE) AS A SOLID-CONTACT MATERIAL IN ALL-SOLID-STATE CHLORIDE SENSORS" *Sens. Actuators B*, **134** (2008) 878–886.
62. M. Blomquist, T. Lindfors, R.-M. Latonen, J. Bobacka, "ELECTROPOLYMERIZATION OF N-METHYLANTHRANILIC ACID AND SPECTROELECTROCHEMICAL CHARACTERIZATION OF THE FORMED FILM", *Synth. Met.* **159** (2009) 96–192.
63. G. Lisak, E. Grygolowicz-Pawlak, M. Mazurkiewicz, E. Malinowska, T. Sokalski, J. Bobacka, A. Lewenstam, "NEW POLYACRYLATE-BASED LEAD(II) ION-SELECTIVE ELECTRODES", *Microchimica Acta*, **164** (2009) 293–297.
64. Z. Mousavi, A. Ekholm, J. Bobacka, A. Ivaska, "ION-SELECTIVE ORGANIC ELECTROCHEMICAL JUNCTION TRANSISTORS BASED ON POLY(3,4-ETHYLENEDIOXYTHIOPHENE) DOPED WITH POLY(STYRENE SULFONATE)", *Electroanalysis*, **21** (2009) 472–479.
65. G.A. Crespo, S. Macho, J. Bobacka, F.X. Rius, "TRANSDUCTION MECHANISM OF CARBON NANOTUBES IN SOLID-CONTACT ISE", *Anal. Chem.*, **81** (2009) 676–681.
66. E. Altürk Parlak, A. Sezai Sarac, M. Serantoni, J. Bobacka, "ELECTROPOLYMERIZATION OF N-HYDROXYETHYLCARBAZOLE ON CARBON FIBER MICROELECTRODES" *J. Appl. Polym. Sci.*, **113** (2009) 136–142.
67. U. Mattinen, J. Bobacka, A. Lewenstam, "SOLID-CONTACT REFERENCE ELECTRODES BASED ON LIPOPHILIC SALTS", *Electroanalysis*, **21** (2009) 1955–1969.
68. K. Granholm, P. Ek, T. Sokalski, L. Harju, J. Bobacka, A. Ivaska, "DETERMINATION OF CALCIUM WITH ION-SELECTIVE ELECTRODE IN BLACK LIQUOR FROM A KRAFT PULPING PROCESS", *Electroanalysis*, **21** (2009) 2014–2021.

69. Z. Mousavi, J. Bobacka, A. Lewenstam, A. Ivaska, "POLY(3,4-ETHYLENEDIOXYTHIOPHENE) (PEDOT) DOPED WITH CARBON NANOTUBES AS ION-TO-ELECTRON TRANSDUCER IN POLYMER MEMBRANE-BASED POTASSIUM ION-SELECTIVE ELECTRODES", *J. Electroanal. Chem.*, **633** (2009) 246–252.
70. M.N. Akieh, W.E. Price, J. Bobacka, A. Ivaska, S.F. Ralph, "ION EXCHANGE BEHAVIOUR AND CHARGE COMPENSATION MECHANISM OF POLYPYRROLE IN ELECTROLYTES CONTAINING MONO-, DI- AND TRIVALENT METAL IONS", *Synth. Met.*, **159** (2009) 2590–2598.
71. X. Wang, P. Sjöberg-Eerola, J-E. Eriksson, J. Bobacka, M. Bergelin, "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", *Synth. Met.*, **160** (2010) 1373–1381.
72. M.N. Akieh, S.F. Ralph, J. Bobacka, A. Ivaska, "TRANSPORT OF METAL IONS ACROSS AN ELECTRICALLY SWITCHABLE CATION EXCHANGE MEMBRANE BASED ON POLYPYRROLE DOPED WITH A SULFONATED CALIX[6]ARENE", *J. Membr. Sci.*, **354** (2010) 162–170.
73. S. Anastasova-Ivanova, U. Mattinen, A. Radu, J. Bobacka, A. Lewenstam, J. Migdalski, M. Danielewski, D. Diamond, "DEVELOPMENT OF MINIATURE ALL-SOLID-STATE POTENTIOMETRIC SENSING SYSTEM", *Sens. Actuators B*, **146** (2010) 199–205.
74. A. Radu, S. Anastasova-Ivanova, B. Paczosa-Bator, M. Danielewski, J. Bobacka, A. Lewenstam, D. Diamond, "DIAGNOSTIC OF FUNCTIONALITY OF POLYMER MEMBRANE-BASED ION SELECTIVE ELECTRODES BY IMPEDANCE SPECTROSCOPY", *Anal. Methods*, **2** (2010) 1490–1498.
75. G. Lisak, M. Wagner, C. Kvarnström, J. Bobacka, A. Ivaska, A. Lewenstam, "ELECTROCHEMICAL BEHAVIOUR OF POLY(BENZOPYRENE) FILMS DOPED WITH ERIOCHROME BLACK T AS A Pb<sup>2+</sup>-SENSITIVE SENSOR", *Electroanalysis*, **22** (2010) 2794–2800.
76. G. Lisak, T. Sokalski, J. Bobacka, L. Harju, A. Lewenstam, "A STUDY ON LOWERING THE DETECTION LIMIT WITH SOLID-STATE LEAD-SELECTIVE ELECTRODES", *Talanta*, **83** (2010) 436–440.
77. M.N. Akieh, A. Varga, R.-M. Latonen, S.F. Ralph, J. Bobacka, A. Ivaska, "SIMULTANEOUS MONITORING OF THE TRANSPORT OF ANIONS AND CATIONS ACROSS POLYPYRROLE BASED COMPOSITE MEMBRANES", *Electrochim. Acta*, **56** (2011) 3507–3515.
78. X. Wang, P. Sjöberg-Eerola, K. Immonen, J. Bobacka, M. Bergelin, "IMMOBILIZATION OF *TRAMETES HIRSUTA* LACCASE INTO POLY(3,4-ETHYLENEDIOXYTHIOPHENE) AND POLYANILINE POLYMER-MATRICES", *J. Power Sources*, **196** (2011) 4957–4964.

79. P. Ihalainen, A. Määttänen, U. Mattinen, M. Stępień, M. Toivakka, J. Bobacka, J. Peltonen, "ELECTRODEPOSITION OF PEDOT-CI FILM ON A FULLY PRINTED Ag/POLYANILINE ELECTRODE ON PAPER", *Thin Solid Films*, **519** (2011) 2172–2175.
80. X. Wang, R.-M. Latonen, P. Sjöberg-Eerola, J.-E. Eriksson, J. Bobacka, H. Boer, M. Bergelin, "DIRECT ELECTRON TRANSFER OF *TRAMETES HIRSUTA* LACCASE IN A DUAL-LAYER-ARCHITECTURE OF POLY(3,4-ETHYLENEDIOXYTHIOPHENE) FILMS", *J. Phys. Chem. C*, **115** (2011) 5919–5929.
81. Z. Mousavi, A. Teter, A. Lewenstam, M. Maj-Zurawska, A. Ivaska, J. Bobacka, "COMPARISON OF MULTI-WALLED CARBON NANOTUBES AND POLY(3-OCTYLTHIOPHENE) AS ION-TO-ELECTRON TRANSDUCERS IN ALL-SOLID-STATE POTASSIUM ION-SELECTIVE ELECTRODES", *Electroanalysis*, **23** (2011) 1352–1358.
82. U. Mattinen, S. Rabiej, A. Lewenstam, J. Bobacka, "IMPEDANCE STUDY OF THE ION-TO-ELECTRON TRANSDUCTION PROCESS FOR CARBON CLOTH AS SOLID-CONTACT MATERIAL IN POTENTIOMETRIC ION SENSORS", *Electrochim. Acta*, **56** (2011) 10683–10687.
83. D. Cicmil, S. Anastasova, A. Kavanagh, D. Diamond, U. Mattinen, J. Bobacka, A. Lewenstam, A. Radu, "IONIC LIQUID-BASED, LIQUID-JUNCTION-FREE REFERENCE ELECTRODE", *Electroanalysis*, **23** (2011) 1881–1890.
84. M.N. Akieh, R-M. Latonen, S. Lindholm, S.F. Ralph, J. Bobacka, A. Ivaska, "ELECTROCHEMICALLY CONTROLLED ION TRANSPORT ACROSS POLYPYRROLE/MULTI-WALLED CARBON NANOTUBE COMPOSITE MEMBRANES", *Synth. Met.*, **161** (2011) 1906–1914.
85. G. Lisak, T. Sokalski, J. Bobacka, L. Harju, K. Mikhelson, A. Lewenstam, "TUNED GALVANOSTATIC POLARIZATION OF SOLID-STATE LEAD-SELECTIVE ELECTRODES FOR LOWERING OF THE DETECTION LIMIT", *Anal. Chim. Acta*, **707** (2011) 1–6.
86. X. Wang, M. Falk, R. Ortiz, H. Matsumura, J. Bobacka, R. Ludwig, M. Bergelin, L. Gorton, S. Shleev, "MEDIATORLESS SUGAR/OXYGEN ENZYMATIC FUEL CELL BASED ON GOLD NANOPARTICLE-MODIFIED ELECTRODES", *Biosens. Bioelectron.*, **31** (2012) 219–225.
87. S. Anastasova, A. Radu, G. Matzeu, C. Zuliani, U. Mattinen, J. Bobacka, D. Diamond, "DISPOSABLE SOLID-CONTACT ION-SELECTIVE ELECTRODES FOR ENVIRONMENTAL MONITORING OF LEAD WITH ppb LIMIT-OF-DETECTION" *Electrochim. Acta*, **73** (2012) 93–97.
88. R-M. Latonen, X. Wang, P. Sjöberg-Eerola, J-E. Eriksson, M. Bergelin, J. Bobacka, "POLY(3,4-ETHYLENEDIOXYTHIOPHENE) BASED ENZYME-ELECTRODE CONFIGURATION FOR ENHANCED DIRECT ELECTRON TRANSFER TYPE BIOCATALYSIS OF OXYGEN REDUCTION", *Electrochim. Acta*, **68** (2012) 25–31.

89. M. Blomquist, J. Bobacka, A. Ivaska, K. Levon, "IMPEDANCE STUDY OF THIOLATED POLYANILINE", *J. Solid State Electrochem.*, **16** (2012) 2783–2789.
90. G. Lisak, J. Bobacka, A. Lewenstam, "RECOVERY OF NANOMOLAR DETECTION LIMIT OF SOLID CONTACT LEAD(II) SELECTIVE ELECTRODES BY ELECTRODE CONDITIONING", *J. Solid State Electrochem.*, **16** (2012) 2983–2991.
91. H. Vakili, N. Genina, H. Ehlers, J. Bobacka, N. Sandler, "USING ION-SELECTIVE ELECTRODES TO STUDY THE DRUG RELEASE FROM POROUS CELLULOSE MATRICES", *Pharmaceutics*, **4** (2012) 366–376. ISSN 1999-4923
92. R. Hernández, J. Riu, J. Bobacka, C. Vallés, P. Jiménez, A.M. Benito, W.K. Maser, F.X. Rius, "REDUCED GRAPHENE OXIDE FILMS AS SOLID TRANSDUCER IN POTENTIOMETRIC ALL-SOLID-STATE ION-SELECTIVE ELECTRODES", *J. Phys. Chem. C*, **116** (2012) 22570–22578.
93. M. Blomquist, J. Bobacka, A. Ivaska, K. Levon, "ELECTROCHEMICAL AND SPECTROSCOPIC STUDY ON THIOLATION OF POLYANILINE", *Electrochim. Acta*, **90** (2013) 604–614.
94. G. Lisak, F. Ciepiela, J. Bobacka, T. Sokalski, L. Harju, A. Lewenstam, "DETERMINATION OF LEAD(II) IN GROUNDWATER USING SOLID-STATE LEAD(II) SELECTIVE ELECTRODES BY TUNED GALVANOSTATIC POLARIZATION", *Electroanalysis*, **25** (2013) 123–131.
95. A. Määttänen, U. Vanamo, P. Ihälainen, P. Pulkkinen, H. Tenhu, J. Bobacka, J. Peltonen, "A LOW-COST PAPER-BASED INKJET-PRINTED PLATFORM FOR ELECTROCHEMICAL ANALYSES", *Sens. Actuators B*, **177** (2013) 153–162.
96. M. Guziński, G. Lisak, T. Sokalski, J. Bobacka, A. Ivaska, M. Bocheńska, A. Lewenstam, "SOLID-CONTACT ION-SELECTIVE ELECTRODES WITH NOVEL HIGHLY SELECTIVE THIOAMIDE DERIVATIVES OF p-tert-BUTYL CALIX[4]ARENE FOR THE DETERMINATION OF LEAD(II) IN ENVIRONMENTAL SAMPLES", *Anal. Chem.*, **85** (2013) 1555–1561.
97. M. Wagner, G. Lisak, A. Ivaska, J. Bobacka, "DURABLE PEDOT:PSS FILMS OBTAINED FROM MODIFIED WATER-BASED INKS FOR ELECTROCHEMICAL SENSORS", *Sens. Actuators B*, **181** (2013) 694–701.
98. A. Ferancova, S. Rengaraj, Y. Kim, S. Vijayalakshmi, J. Labuda, J. Bobacka, M. Sillanpää, "ELECTROCHEMICAL STUDY OF NOVEL NANOSTRUCTURED  $\text{In}_2\text{S}_3$  AND ITS EFFECT ON OXIDATIVE DAMAGE TO DNA PURINE BASES", *Electrochim. Acta*, **92** (2013) 124–131.
99. R-M. Latonen, M.N. Akieh, K. Vavra, J. Bobacka, A. Ivaska, "ION EXCHANGE BEHAVIOR OF POLYPYRROLE DOPED WITH LARGE ANIONS IN ELECTROLYTES CONTAINING MONO- AND DIVALENT METAL IONS", *Electroanalysis*, **25** (2013) 991–1004.
100. M. Wagner, C. Kvarnström, A. Ivaska, J. Bobacka, "ELECTROCHEMICAL ACTIVITY OF NOVEL POROUS CARBON BASED MATERIAL SYNTHESIZED FROM

POLYCYCLIC AROMATIC HYDROCARBONS”, *Electrochim. Acta*, **105** (2013) 384–393.

101. C. Dumitriu, Z. Mousavi, R-M. Latonen, J. Bobacka, I. Demetrescu, “ELECTROCHEMICAL SYNTHESIS AND CHARACTERIZATION OF POLY(3,4-ETHYLENEDIOXYTHIOPHENE) DOPED WITH SULFONATED CALIXARENES AND SULFONATED CALIXARENE-FULLERENE COMPLEXES”, *Electrochim. Acta*, **107** (2013) 178–186.
102. A. Prabhu, J. Bobacka, A. Ivaska, K. Levon, ”INVESTIGATION OF PROTEIN BINDING WITH ALL SOLID-STATE ION-SELECTIVE ELECTRODES”, *Electroanalysis*, **25** (2013) 1887–1894.
103. U. Vanamo, J. Bobacka, “Electrochemical control of the standard potential of solid-contact ion-selective electrodes having a conducting polymer as ion-to-electron transducer”, *Electrochim. Acta*, **122** (2014) 316–321.
104. J. Cui, G. Lisak, S. Strzalkowska, J. Bobacka, “Potentiometric sensing utilizing paper-based microfluidic sampling”, *Analyst*, **139** (2014) 2133–2136.
105. G. Lisak, A. Ivaska, A. Lewenstam, J. Bobacka, “Multicalibrational procedure for more reliable analyses of ions at low analyte concentrations”, *Electrochim. Acta*, **140** (2014) 27–32.
106. Y. Sugano, R-M. Latonen, M. Akieh-Pirkanniemi, J. Bobacka, A. Ivaska, ”Electro-catalytic oxidation of cellulose at a gold electrode”, *ChemSusChem*, **7** (2014) 2240–2247.
107. C. Dumitriu, A.B. Stoian, I. Titorencu, V. Pruna, V.V. Jinga, R-M. Latonen, J. Bobacka, I. Demetrescu, “Electrospun TiO<sub>2</sub> nanofibers decorated Ti substrate for biomedical application”, *Mater. Sci. Eng. C*, **45** (2014) 56–63.
108. U. Vanamo, J. Bobacka, “Instrument-free control of the standard potential of potentiometric solid-contact ion-selective electrodes by short-circuiting with a conventional reference electrode”, *Anal. Chem.*, **86** (2014) 10540–10545.
109. Grzegorz Lisak, Jingwen Cui, Johan Bobacka, “Paper-based microfluidic sampling for potentiometric determination of ions”, *Sens. Actuators B*, **207** (2015) 933–939.
110. Pierdomenico Biasi, Stefano Sterchele, Francesco Bizzotto, Maela Manzoli, Sten Lindholm, Paul Ek, Johan Bobacka, Jyri-Pekka Mikkola, Tapio Salmi, “Application of the catalyst wet pretreatment method (CWPM) for catalytic direct synthesis of H<sub>2</sub>O<sub>2</sub>” *Catalysis Today*, **246** (2015) 207–215.
111. Elisa Hupa, Ulriika Vanamo, Johan Bobacka, “Novel ion-to-electron transduction principle for solid-contact ISEs” *Electroanalysis*, **27** (2015) 591–594.

112. Yasuhito Sugano, Tiina Saloranta, Johan Bobacka, Ari Ivaska, "Electro-catalytic oxidation of hemicelluloses at the Au electrode", *Phys. Chem. Chem. Phys.*, **17** (2015) 11609–11614.
113. Grzegorz Lisak, Thomas Arnebrant, Tautgirdas Ruzgas, Johan Bobacka, "Textile-based sampling for potentiometric determination of ions", *Anal. Chim. Acta*, **877** (2015) 71–79.
114. Artur Jasiński, Marcin Guziński, Grzegorz Lisak, Johan Bobacka, Maria Bocheńska, "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)", *Sens. Actuators B*, **218** (2015) 25–30.
115. Manzar Sohail, Roland de Marco, Jarolimova Zdenka, Marcin Pawlak, Eric Bakker, Ning He, Rose-Marie Latonen, Tom Lindfors, Johan Bobacka, "Transportation and accumulation of redox active species at the buried interfaces of plasticized membrane electrodes", *Langmuir*, **31** (2015) 10599–10609.
116. J. Szűcś, T. Lindfors, J. Bobacka, R.E. Gyurcsányi, "Ion-selective electrodes with 3D nanostructured conducting polymer solid contact", *Electroanalysis*, **28** (2016) 778–786.
117. J. Kupis-Rozmysłowicz, M. Wagner, J. Bobacka, A. Lewenstam, J. Migdalski, "Biomimetic membranes based on molecularly imprinted conducting polymers as a sensing element for determination of taurine", *Electrochim. Acta*, **188** (2016) 537–544.
118. P. Sjöberg, A. Määttänen, U. Vanamo, M. Novell, P. Ihalainen, F.J. Andrade, J. Bobacka, J. Peltonen, "Paper-based potentiometric ion sensors constructed on ink-jet printed gold electrodes", *Sens. Actuators B*, **224** (2016) 325–332.
119. Grzegorz Lisak, Thomas Arnebrant, Andrzej Lewenstam, Johan Bobacka, Tautgirdas Ruzgas, "In-situ potentiometry and ellipsometry: a promising tool to study biofouling of potentiometric sensors", *Anal. Chem.*, **88** (2016) 3009–3014.
121. Marceline Akieh-Pirkanniemi, Grzegorz Lisak, Jesus Arroyo, Johan Bobacka, Ari Ivaska, "Tuned ionophore-based bi-membranes for selective transport of target ions", *J. Membr. Sci.*, **511** (2016) 76–83.
120. Ulriika Vanamo, Elisa Hupa, Ville Yrjänä, Johan Bobacka, "New signal readout principle for solid-contact ion-selective electrodes", *Anal. Chem.*, in pressss.
122. Yasuhito Sugano, Narendra Kumar, Markus Peurla, Jorma Roine, Jarno Salonen, Atte Aho, Johan Bobacka, Ari Ivaska, Jyri-Pekka Mikkola, "Specific electro-catalytic oxidation of cellulose at carbon electrodes modified by Au nanoparticles", *ChemCatChem*, submitted.

123. G. Lisak, K. Wagner, P. Wagner, J.E. Barnsley, K.C. Gordon, J. Bobacka, G.G. Wallace, A. Ivaska, D.L. Officer, "A modified terpyridine derivative as a model molecule to study novel kinetic-based optical spectroscopic ion determination methods by deceleration of ligand-ion-complexation", *Anal. Methods*, submitted: AY-ART-04-2016-001096

### **Articles in international scientific compilation works and international scientific conference proceedings with referee practice**

1. S.O. Engblom, M. Wasberg, J. Bobacka and A. Ivaska, "EXPERIENCES OF AN ON-LINE FOURIER TRANSFORM FARADAIC ADMITTANCE MEASUREMENT (FT-FAM) SYSTEM BASED ON DIGITAL SIGNAL PROCESSORS", in A. Ivaska, A. Lewenstam and R. Sara (eds.), *Contemporary Electroanalytical Chemistry*, Plenum Publishing Co, London, 1990, p. 21–29.
2. J. Bobacka and A. Ivaska, "SMOOTHING OF AC POLAROGRAPHIC DATA BY FFT FILTERING", in A. Ivaska, A. Lewenstam and R. Sara (eds.), *Contemporary Electroanalytical Chemistry*, Publishing Co, London, 1990, p. 37–46.
3. S.O. Engblom, M. Wasberg, J. Bobacka and A. Ivaska, "POMIAR ADMITANCJI FARADAJOWSKIEJ Z TRANSFORMACJĄ FOURIERA ON-LINE (FT-FAM) Z ZASTOSOWANIEM CYFROWYCH PROCESORÓW SYGNALU", *Wiadomości chemiczne*, **7–8** (1990) 529–540 (in Polish). (Translation of article no. 1)
4. A. Ivaska, S. Engblom and J. Bobacka, "APPLICATION OF FOURIER TRANSFORM TO ELECTROANALYTICAL CHEMISTRY", in A. San Feliciano, M. Grande and J. Casado (eds.), *Conferencias Plenarias de la XXIII Reunión Bienal de Química*, Universidad de Salamanca Sección Local de la R.S.E.Q., Salamanca, 1991, p. 203–216.
5. A. Lewenstam, J. Bobacka and J. Öst, "ELECTROCHEMICAL SENSORS FOR CLINICAL AND ENVIRONMENTAL ANALYSIS - STATE-OF-THE-ART", in *The IIIrd International Symposium, Chemistry Forum '97*, 14–16 April 1997, Warsaw, ISBN 83-904741-1-5, p. 11–13.
6. A. Ivaska and J. Bobacka, "PROCESS ANALYSIS: ELECTROANALYTICAL TECHNIQUES", in P. Worsfold, A. Townshend and C. Poole (eds.), *Encyclopedia of Analytical Science, 2<sup>nd</sup> Edition*, Elsevier, Oxford, 2005, Vol. 7, pp. 309–316.
7. J. Bobacka, "CONJUGATED POLYMER CHEMICAL SENSORS" in C.A. Grimes, E.C. Dickey and M.V. Pishko (eds.), *Encyclopedia of Sensors*, American Scientific Publishers, California, USA, 2006, Vol. 2, pp. 279–294.
8. J. Bobacka and A. Ivaska, "ION SENSORS WITH CONDUCTING POLYMERS AS ION-TO-ELECTRON TRANSDUCERS" in S. Alegret and A. Merkoçi (eds.) *Electrochemical Sensor Analysis, Part 1 Fundamentals and Applications*,

*Chapter 4, Potentiometric sensors*, in D. Barceló (ed.), Series: Comprehensive Analytical Chemistry, Vol. 49, Elsevier, Amsterdam, The Netherlands, 2007, pp. 73–86.

9. J. Bobacka, M. Vázquez, F. Sundfors, K. Mikhelson, A. Lewenstam and A. Ivaska, “DETERMINATION OF Ca(II) IN WOOD PULP USING A CALCIUM-SELECTIVE ELECTRODE WITH POLY(3,4-ETHYLENEDIOXYTHIOPHENE) AS ION-TO-ELECTRON TRANSDUCER” in S. Alegret and A. Merkoçi (eds.) *Electrochemical Sensor Analysis, Part 2 Procedures, Potentiometric sensors, Procedure 4*, in D. Barceló (ed.), Series: Comprehensive Analytical Chemistry, Vol. 49, Elsevier, Amsterdam, The Netherlands, 2007, pp. e25–e28.
10. J. Bobacka, V. Lax, T. Lindfors and A. Ivaska, “TITRATION OF TRIMEPRAZINE BASE WITH TARTARIC ACID IN ISOPROPANOL SOLUTION USING POLYANILINE AS INDICATOR ELECTRODE” in S. Alegret and A. Merkoçi (eds.) *Electrochemical Sensor Analysis, Part 2 Procedures, Potentiometric sensors, Procedure 5*, in D. Barceló (ed.), Series: Comprehensive Analytical Chemistry, Vol. 49, Elsevier, Amsterdam, The Netherlands, 2007, pp. e29–e34.
11. J. Bobacka, T. Lindfors and A. Ivaska, ”CONDUCTING POLYMER-BASED SENSORS” in Faiz Mohammad (ed.) *Specialty Polymers: Materials and Applications*, I.K. International, New Delhi, India, 2007, pp. 279–300.
12. M. Berggren, R. Forchheimer, J. Bobacka, P-O. Svensson, D. Nilsson, O. Larsson, A. Ivaska, “PEDOT:PSS-BASED ELECTROCHEMICAL TRANSISTORS FOR ION-TO-ELECTRON TRANSDUCTION AND SENSOR SIGNAL AMPLIFICATION”, in D.A. Bernards, R.M. Owens and G.G. Malliaras (eds.) *Organic Semiconductors in Sensor Applications*, Series: Springer Series in Materials Science, Vol. 107, Springer, 2008, pp. 263–279.
13. J. Bobacka, 11 entries in A.J. Bard, G. Inzelt and F. Scholz (eds.) *Electrochemical Dictionary*, Springer, Berlin Heidelberg, 2008.
14. K. Granholm, L. Harju, J. Bobacka, A. Ivaska, “SPECIATION OF  $\text{Ca}^{2+}$  IONS IN BLACK LIQUORS DETERMINED BY A Ca-ION SELECTIVE ELECTRODE”, *The Second International Papermaking & Environment Conference*, Tianjin, P.R.China, May14-16, 2008, Proceedings, Book A, pp. 391–394.
15. Z. Mousavi, T. Han, C. Kvarnström, J. Bobacka, A. Ivaska, ”ALL-SOLID-STATE POTASSIUM ION-SELECTIVE ELECTRODE WITH CONDUCTING POLYMER DOPED WITH CARBON NANOTUBES AND  $\text{C}_{60}$  AS THE ION-TO-ELECTRON TRANSDUCING LAYERS” *ECS Transactions*, 19(6) (2009) 19–26.
16. A. Ivaska, J. Bobacka, “PROCESS ANALYTICAL CHEMISTRY, NECESSITY FOR THE MODERN INDUSTRY AND ENVIRONMENT” (in Hungarian), *Magyar Kémiai Folyóirat*, 115 (2009) 14–17.
17. J. Bobacka and A. Ivaska, “CHEMICAL SENSORS BASED ON CONDUCTING POLYMERS”, in S. Cosnier, A. Karyakin (eds.) *Electropolymerization*, Wiley-VCH, Weinheim, Germany, 2010, pp. 173–187.

18. A. Radu, S. Anastasova, C. Fay, D. Diamond, J. Bobacka, A. Lewenstam, "LOW COST, CALIBRATION-FREE SENSORS FOR IN SITU DETERMINATION OF NATURAL WATER POLLUTION", *IEEE Sensors* 2010, 1487–1490.

**Articles in international scientific compilation works and international scientific conference proceedings (without referee practice)**

1. J. Bobacka, A. Lewenstam and A. Ivaska, "ALL-SOLID-STATE ION SENSORS USING CONDUCTING POLYMERS AS ION-TO-ELECTRON TRANSDUCERS", in S.K. Aggarwal, N. Gopinath and J.V. Kamat (eds.), *International Conference on electroanalytical chemistry and allied topics (ELAC-2004)*, January 18–23, 2004, Goa, Indian Society for ElectroAnalytical Chemistry (ISEAC), Mumbai, India, ISBN 81-901950-0-X, p. 57–70.
2. J. Bobacka, A. Ivaska and A. Lewenstam, "CONDUCTING POLYMER-BASED ION-SELECTIVE ELECTRODES", in A. Tuominen, J. Kantola, A. Suominen and S. Hyrynsalmi (eds.), *Proceedings of NEXT 2008 The Fifth International New Exploratory Technologies Conference*, August 20–22, 2008, Turku (Finland), TUCS General Publication No 50, August 2008, pp. 5–7.
3. J. Peltonen, A. Määttänen, R. Bollström, M. Toivakka, M. Stępień, J. Saarinen, P. Ihälainen, U. Mattinen, J. Bobacka, "PRINTED ELECTRODES ON TAILORED PAPER ENABLE EXTENDED FUNCTIONALIZATION OF PAPER", Advances in Printing and Media Technology Ecofriendly print for a sustainable world, 37<sup>th</sup> International Research Conference (iarigai Montréal 2010), September 12–15, 2010, Montreal (Canada).
4. D. Diamond, S. Anastasova-Ivanova, A. Radu, R. Byrne, F. Benito Lopez, U. Mattinen, J. Bobacka, "FROM EVOLUTION TO REVOLUTION IN WATER QUALITY MONITORING: ARE STIMULUS-RESPONSIVE MATERIALS THE KEY TO THE ANALYTICAL PLATFORMS OF THE FUTURE?" *The 14<sup>th</sup> International Conference on Miniaturized Systems for Chemistry and Life Sciences ( $\mu$ TAS 2010)*, October 3–7, 2010, Groningen, The Netherlands.
5. A. Radu, S. Anastasova, C. Fay, D. Diamond, J. Bobacka, A. Lewenstam, "LOW COST, CALIBRATION-FREE SENSORS FOR IN SITU DETERMINATION OF NATURAL WATER POLLUTION", *The 9<sup>th</sup> Annual IEEE Conference on Sensors (IEEE Sensors 2010)*, November 1–4, 2010, Waikoloa, Hawaii, USA.

## **Other scientific publications**

1. J. Bobacka och A. Bulsari, "SENSORPANELER OCH ICKE-LINJÄR MODELLERING: EN KRAFTFULL KOMBINATION", Svensk Papperstidning, nr 6: 1999, 85–88.
2. A. Ivaska, T. Lindfors, J. Bobacka ja A. Lewenstam, "KIIANTEÄKONTAKTiset ionianturit – askel kohti älykkäitä kemiallisia antureita", Kemia-Kemi 28 (2001) 90–93.

## **Other publications**

1. J. Bobacka, "MEXICO", Redox 40 (1988) 70–71.
2. J. Bobacka, "ELEKTRISKT LEDANDE POLYMERER SOM ELEKTRODER OCH SENSORER", Redox 42 (1990) 53–55.
3. M. Ljung, J. Bobacka, P. Mäki-Arvela, A. Sundberg and M. Zevenhoven (Eds.), "ÅBO AKADEMI PROCESS CHEMISTRY GROUP. ANNUAL REPORT 1999", ISSN 1457-5752, Grafia Oy, Åbo, 2000.
4. J. Bobacka, "DURABLE CHEMICAL SENSORS", Åbo Akademi Process Chemistry Group Newsletter No. 1, 2001.
5. M. Ljung, J. Bobacka, A. Brink, P. Mäki-Arvela, A. Sundberg (Eds.), "ÅBO AKADEMI PROCESS CHEMISTRY GROUP. ANNUAL REPORT 2000", ISSN 1457-5752, Grafia Oy, Åbo, 2001.
6. M. Ljung, J. Bobacka, A. Brink, P. Mäki-Arvela, A. Sundberg (Eds.), "ÅBO AKADEMI PROCESS CHEMISTRY GROUP. ANNUAL REPORT 2001", ISSN 1457-5752, Grafia Oy, Åbo, 2002.
7. M. Ljung, J. Bobacka, A. Brink, P. Mäki-Arvela, A. Sundberg (Eds.), "ÅBO AKADEMI PROCESS CHEMISTRY GROUP. ANNUAL REPORT 2002", ISSN 1457-5752, Grafia Oy, Åbo, 2003.
8. M. Ljung, J. Bobacka, A. Brink, P. Mäki-Arvela, A. Sundberg (Eds.), "ÅBO AKADEMI PROCESS CHEMISTRY CENTRE. ANNUAL REPORT 2003", ISSN 1459-8213, Åbo Akademis tryckeri, Åbo, 2004.
9. M. Ljung, J. Bobacka, A. Brink, P. Mäki-Arvela, A. Sundberg (Eds.), "ÅBO AKADEMI PROCESS CHEMISTRY CENTRE. ANNUAL REPORT 2004", ISSN 1459-8213, Åbo Akademis tryckeri, Åbo, 2005.
10. J. Bobacka, Editorial Preface, *J. Solid State Electrochem.*, **13** (2009) 1–2.

## **Patents**

1. A. Lewenstam, J. Bobacka and A. Ivaska, "IONISELEKTIIVINEN ELEKTRODI JA MENETELMÄ IONISELEKTIIVISEN ELEKTRODIN VALMISTAMISEKSI. JONSELEKTIV ELEKTROD OCH FÖRFARANDE FÖR ATT FRAMSTÄLLA EN JONSELEKTIV ELEKTROD", Finnish patent: FI 96141, 10.5.1996.
2. A. Lewenstam, J. Bobacka, and A. Ivaska, "ION-SELECTIVE ELECTRODE AND PROCEDURE FOR PRODUCING AN ION-SELECTIVE ELECTRODE", US patent: US 5,584,979, 17.12.1996.
3. A. Lewenstam, J. Bobacka, and A. Ivaska, "ION-SELECTIVE ELECTRODE AND PROCEDURE FOR PRODUCING AN ION-SELECTIVE ELECTRODE", European patent: EP 0 684 466 A3, 10.6.1998.
4. J. Bobacka and A. Lewenstam, "IONISELEKTIIVINEN ELEKTRODI JA MENETELMÄ HILIDIOKSIDIN MÄÄRITTÄMISEKSI RUUMIIN NESTEISSÄ - JONSELEKTIV ELEKTROD OCH FÖRFARANDE FÖR BESTÄMNING AV KOLDIOXID I KROPPSVÄTSKOR - ION-SELECTIVE ELECTRODE AND METHOD FOR DETERMINATION OF CARBON DIOXIDE IN BODY FLUIDS", Finnish patent: FI 110288, 31.12.2002.
5. J. Bobacka and A. Lewenstam, "ION-SELECTIVE ELECTRODE AND METHOD FOR SELECTIVE DETERMINATION OF ANALYTES IN BODY FLUIDS", International patent application no. PCT/FI98/00179, filed 26.2.1998. International publication number WO 98/38503. European patent application no. 98905449.9. European publication number 0 963 550.

## Theses

1. J. Bobacka, "BRUSUTJÄMNING AV AC-POLAROGRAM MED HJÄLP AV DIGITAL FILTRERING BASERAD PÅ FOURIERTRANSFORMATION", M.Sc. (Chem. Eng.) thesis (in Swedish), Laboratory of Analytical Chemistry, Åbo Akademi University, Turku-Åbo (Finland) 1988. (Diplomarbete, Institutionen för analytisk kemi, Åbo Akademi, Åbo, 1988.)
2. J. Bobacka, "ELECTROCHEMICAL STUDY OF POLY(3-OCTYLTHIOPHENE) FILM ELECTRODES", Licentiate thesis, Laboratory of Analytical Chemistry, Åbo Akademi University, Turku-Åbo (Finland) 1991. (Licentiatahandling, Institutionen för analytisk kemi, Åbo Akademi, Åbo, 1991.)
3. J. Bobacka, "ELECTROCHEMICAL CHARACTERISTICS OF POLY(3-OCTYLTHIOPHENE) FILM ELECTRODES", Ph.D. (Tech.) thesis, Laboratory of Analytical Chemistry, Åbo Akademi University, Turku-Åbo (Finland) 1993. (Doktorsavhandling, Institutionen för analytisk kemi, Åbo Akademi, Åbo, 1993.)