CV of Prof. Dr. Eric Bakker

https://www.ericbakkergroup.ch

Personal Information

Born in Boudevilliers NE, Switzerland, on 11/11/1965.

Languages: German, English, French, Dutch.

Nationalities: Swiss and Netherlands.

Present Position at the University of Geneva

Full Professor,

Faculty of Science, University of Geneva, 1211 Geneva 4

Academic Degrees and Schooling

1993 Ph.D. natural sciences, ETH Zurich.

1989 Dipl. Chem. ETH, ETH Zurich.

Training and Education After Secondary School

1985-89 University studies of Chemistry, ETH Zurich

1989-90 Industry practice, Mettler-Toledo, Switzerland

1990-93 Doctoral studies, ETH Zurich, Switzerland

1993-95 Postdoctoral studies, University of Michigan, Ann Arbor, Michigan, U.S.A.

Professional Activities (post-graduate)

1990-93 Project Manager (part time), Mettler-Toledo, Switzerland.

1993-95 Postdoctoral studies, University of Michigan, Ann Arbor, Michigan, U.S.A.

1995-98 Assistant Professor, Auburn University, U.S.A.

1998-03 Associate Professor, Auburn University, U.S.A.

2000 Visiting Professor, ETH Zurich, Switzerland

2001 Visiting Professor, Ecole Normale Supérieure, Paris, France

2003-05 Professor, Auburn University, U.S.A.

2005-08 Professor, Purdue University, West Lafayette, U.S.A.

2007-10 Professor and Director, Curtin University of Technology, Perth, Australia

2007-10 Director, Western Australian Nanochemistry Research Institute, Perth

2011-17 Adjunct Professor, University of the Sunshine Coast, Queensland, Australia

2012-16 Director, Department of Inorganic and Analytical Chemistry, University of Geneva

2015 Visiting Professor, Keio University, Yokohama, Japan

2016 Visiting Professor, University of New South Wales, Sydney, Australia

2010– Professor, University of Geneva, Switzerland

2020-22 Director, Department of Inorganic and Analytical Chemistry, University of Geneva

2022–25 Vice President, School of Chemistry and Biochemistry, University of Geneva

2023–25 Director, Department of Inorganic and Analytical Chemistry, University of Geneva

Society Memberships

American Chemical Society (Executive Editor, ACS Sensors)

Royal Society of Chemistry (Fellow FRSC)

Swiss Chemical Society

International Society of Electrochemistry

Geneva Society for Physical and Analytical Science

Matrafüred Society for Electrochemical Sensors (President)

Current Group Members

Eva Paloma Caparros Rodriguez (*Masters Student),* Robin Nussbaum, Nikolai Tiuftiakov, Yaotian Wu, Yupu Zhang, Andrea Nonis, Geetansh Gupta, Justine Rothen, Yejin Son (*Doctoral Students),* Antonios Brouziakis (*Postdoc),* Marylou Tercier-Waeber (*Senior Scientist), Thomas Cherubini (Lab Technician), Maïtya Ithurria (Secretary).*

Past Doctoral Thesis Direction

2000 Yanming Mi, Ph.D.
Fundamental Studies of Carrier Based Potentiometric Ion Sensors

2000 Smita M. Jadhav, Ph.D.
Voltammetric and Pulse Amperometric Transduction Mode for Solvent Polymeric Membrane Ion Sensors

2001 Sally M. Mathison, Ph.D.
The Improvement of the Detection Limit of Ion-Selective Electrodes, the Development of a Heparin Sensor, and the Increasing of Sensor Biocompatibility Through Studies of Ion Transpoort and Diffusion Across Plasticized Polymer Membranes.

2002 Yu Qin, Ph.D.
Fundamental Studies of Binding and Extraction Processes in Potentiometric Sensors and Development of Novel Recognition Principles by Materials Synthesis

2003 Shane M. Peper, Ph.D.
Microsphere-Based Ion-Selective Bulk Optodes for the Determination of Clinical Electrolytes and the Evaluation of Closo-Dodecacarborane Anions as Ion-Exchangers in Potentiometric and Optical Cation-Selective Chemical Sensors

2005 Aleksandar Radu, Ph.D.
Experimental and Theoretical Insights in the Improvement of the Detection Limit of Ion-Selective Electrodes

2006 Robert F. Long III, Ph.D.
Spectral and Electrochemcial Study of the Response Mechanism of Ionophore-Based Polymeric Membranes

2006 Vishnupriya Bhakthavatsalam, Ph.D.
Ion Selective Polymeric membranes as Chemically Selective Coulometric Electrodes

2007 Chao Xu, Ph.D.
Sensing Platforms Based on Polymeric Microsphere Ion Selective Bulk Optodes

2008 Yida Xu, Ph.D.
Current Controlled Polymeric Ion Sensors for Bioanalysis

2008 Kebede L. Gemene, Ph.D.
Pulsed Chronopotentiometric Flash Titration at Polymeric Membrane Ion-Selective Electrodes–A Novel Method for Clinical and Environmental Analyses

2015 Bastien Néel, Ph.D.
Water Analysis: From Electroanalytical Chemistry to Education

2015 Xiaojiang Xie, Ph.D.
From Ion Selective Optodes to Photoelectric Conversion

2016 Romain Touilloux, Ph.D.
Towards a Renewable, Reliable and Robust Electrochemical Sensing Principle for Arsenic(III) Detection in Environmental Freshwater Systems

2017 Jingying Zhai, Ph.D.
Ionophore-Based Complexometric Titration

2017 Zdenka Jarolimova, Ph.D.
Electrochemical and fluorescent probes for ion sensing

2018 Nadezda Pankratova, Ph.D.
Development of Sensing Principles for Electrochemical Detection of Nutrients and Species Relevant to the Carbon Cycle

2018 Dajing Yuan, Ph.D.
Solid Contact Ion Selective Electrodes: From Potentiometric Application to Voltammetric Investigation

2019 Lu Wang, Ph.D.
Ion-selective optodes with lipophilic solvatochromic dyes as transducers

2020 Sutida Jansod, Ph.D.
Electrochemical and Optical Sensors for Ion Sensing

2020 Marylou Tercier-Waeber, Ph.D.
Innovative Sensing Devices for In Situ Spatial and Temporal Monitoring of Trace Metals in Aquatic Systems: Emphasis on Potentially Bioavailable Metal Species

2022 Pitchnaree Kraikaew, Ph.D.
Ultrasensitive Capacitive Readout for Ion-Selective Electrodes

2022 Canwei Mao, Ph.D.
Solid Contact Thin-Film Ion-Selective Membranes for Ion Transfer Voltammetry: Fundamental Studies and Applications

2022 Yoshiki Soda, Ph.D.
Novel Materials and Analytical Methods for Optical Sensing of Ionic Species

2023 Tara Forrest, Ph.D.
Development and Optimisation of Integrated Electrochemical Sensors for Aquatic Analysis

2023 Polyxeni Damala, Ph.D.
Exploring Novel Electrochemical Methods for Nitrate and Glucose Sensing

2026 Gabriel Junquetti Mattos, Ph.D.
Development of Integrated (Opto)Electrochemical Sensors for Spatially Resolved Biosensing and Ion Imaging

Key Research Grants

2023-27 Innovative Sensing Principles at Selective Interfaces
Swiss National Science Foundation Project, PI E. Bakker, CHF 634'000

2022-26 Advanced in situ sensing systems for high-resolution speciation in aquatic ecosystems
Swiss National Science Foundation Project, PI E. Bakker, CHF 850'667

2025-26 REFER: A high-performance miniaturized REFERence electrode for electrochemical sensors
Innosuisse Translational Grant with CSEM, CHF 546'618

2019-21 Eurostars Grant: Aqua Quality Ion Selective Electrode microsensor bundle for effective Nitrate Directive compliance (AQISE)
Work Package Leader E. Bakker, Euro 350'000 to EB

2018-23 Swiss National Science Foundation Project Grant
PI E. Bakker (100%), CHF 780,000

2015-18 Swiss National Science Foundation Project Grant
PI E. Bakker (100%), CHF 620,000

2017 Swiss National Science Foundation R'Equip Equipment Grant
PI E. Bakker (100%), CHF 72,500

2014-18 FP7 Project Grant (European Union)
Coordinator ML Tercier (Bakker's senior scientist, 25%), Euro 5,600,000

2014-17 Swiss National Science Foundation Sinergia Interdisciplinary Grant (with EAWAG)
PI E. Bakker (40%), CHF 1,020,000

2011-14 Swiss National Science Foundation Project Grant
PI E. Bakker (100%), CHF 600,000

2012-13 Austrian Science Fund (fellowship to G. Mistlberger, postdoc), Euro 41,000

2012-13 Innogap Technology Transfer Grant, PI E. Bakker (100%), CHF 29,575

2012 Industrial Equipment Gift, Metrohm, ca. CHF 70,000

2010-11 Swiss National Science Foundation R'Equipe Equipment Grant
PI E. Bakker (100%), CHF 160,000

2010 Equipment Grant, unige, PI E. Bakker (100%), CHF 115,000

2010 Commission Administrative Equipment Grant
PI E. Bakker (100%), CH 84,348

2009-12 CSIRO Flagship Cluster Grant in Environmental Sensing (CI E. Bakker,12.5%), AUD 3,000,000

2009-10 ARC Discovery grant PI E. Bakker (70%), AUD 800,000

2006-10 NIH R01, PI E. Bakker (30%), USD 1,250,000

2003-07 NIH R01 PI E. Bakker (100%), USD 620,000

2000-05 NIH R01 PI E. Bakker (50%), USD 670,000

1998-01 NIH R01 PI E. Bakker (100%), USD 294,000

1998-07 Industrial research grant, Beckman Coulter
PI E. Bakker (100%), USD 670,000

Honours, Awards, Editorial Roles

2025 Talanta Medal

2024 ISE Fellow

2024 Charles N. Reilley Award, Society for Electroanalytical Chemistry

2020– Executive Editor, ACS Sensors

2019 Simon-Widmer Award, Swiss Chemical Society

2015-19 Associate Editor, ACS Sensors

2014 Robert Boyle Prize, Royal Society of Chemistry

2014- Fellow of the Royal Society of Chemistry

2009-10 Australian Professorial Fellowship, Australian Research Council

2006-11 Subject Editor, Sensors and Actuators, B

2004 Roche Prize for Sensor Technology

2003-05 Alumni Professorship, Auburn University

2001 Young Investigator Award, Society for Electroanalytical Chemistry (U.S.A.)

2000 Sigma Xi outstanding researcher award (U.S.A.)

Patent Applications

1992 Reference Electrode with an Ion-Retention Barrier for Electrochemical Measuring Equipment
A. Nipkow, E. Bakker, PCT Int. Appl. WO 9221960 A1 19921210, Dec 10, 1992.

2002 Plasticizer-Free Ion Detective Sensors
S. Peper, Y. Qin, M. Telting-Diaz, E. Bakker, U.S. Patent 81841.0230 (2002).

2004 Ion-Detecting Microspheres and Methods of Use Thereof
E. Bakker, M. Telting-Diaz, M. Bell, US 2004058384 A1 20040325, Mar 25, 2004.

2005 Ion-Detecting Sensors Comprising Plasticizer-Free Copolymers
S. Peper, Y. Qin, E. Bakker, US 20030213691 A1, Nov 20, 2003; PCT Int. Appl. WO 2004106893 A2, Dec 9, 2004; US 20050011760 A1, Jan 20, 2005.

2005 Reversible Electrochemical Sensors for Polyions
A. Shvarev, E. Bakker, PCT Int. Appl. (2005) WO 2005008232 A1, Jan 27, 2005; US Patent 8,097,135, 2012.

2006 Doped silica microsphere optical ion sensors
E. Bakker, C. Xu, M. L. Bell, K. Wygladacz, Y. Qin, R. Retter, PCT Int. Appl. (2006) WO 2006083960 A1, Aug 10, 2006.

2007 Long lived anion-selective sensors based on a covalently attached metalloporphyrin as anion receptor
E. Bakker, Y. Qin, U.S. Pat. Appl. Publ. (2006) US 2006278526 A1, Dec 14, 2006; WO 2007146615, Dec 21, 2007; US Patent 7,678,252, 2010.

2007 Covalently attached Nile blue derivatives for optical sensors
E. Bakker, Y. Qin, PCT Int. Appl. (2007) WO 2007059449, May 24, 2007; US Patent 8,242,203, 2012.

2008 Hollow Microsphere Particles
E. Bakker, K. Wygladacz, N. Ye, C. Xu, PCT Int. Pat. Appl. (2008) WO 2008124202 A2, Oct 16, 2008; WO 2008095007 A1, Aug 7, 2008.

2009 Polymerized Nile blue derivatives for plasticizer-free fluorescent ion optode microsphere sensors
E. Bakker, W. Ngeontae, PCT (2009) WO 2009023287 A1, Feb 19, 2009.

2010 Sensing Device and Method
E. Bakker, PCT/AU2010/000156, 201; US Patent App. 13/201,158, 2010.

2015 Reversible detection of ions with permselective membranes
Bakker, Eric; Crespo, Gaston; Afshar, Majid G., PCT Int.
Appl. (2014), WO 2014016791 A2 20140130.

2015 Potentiometric Sensor
Bakker, Eric; Bohets, Hugo Achiel J.; Bonroy, Kristien Simonne Raymonda;
Marczak, Marcin Milosz; Oezdemir, Mahir Sinan; Roymans, Dirk Andre Emmy;
Vanhoutte, Koen Jeroom, U.S. Pat. Appl.
Publ. (2015), US 20150226695 A1 20150813.

2020 Sensor device for measuring a parameter of an analyte
Sailapu, Sunil; Bakker, Eric; Sabate, Neus
European patent application, EP20194360.2, 03 September 2020

2024 A method of fabrication of a sensor component including Ag/AgI pulstrode
Ayian Speck, Davide Migglioreli, Jeremy Disser, Guillaume Bouilly, Eric Bakker,
Loïc Burr
Patent Application

Incubator and Business Activities

2023– Scientific advisor and co-owner, Eaglenos Nanjing Co.

Technical and Scientific Roles

2015– Executive/Associate Editor, ACS Sensors (handling >300 papers per year)

2006-11 Subject Editor, Sensors and Actuators, B (handling >300 papers per year)

Administration (since 2010)

2010– Member, safety committee sciences II

2011– Committee member, centralized workshop services sciences II

2011– Supervisor, Department workshop CHIAM

2011– Steering committee member, outreach activity Chimiscope

2011– Executive committee member, GAPAG (Geneva Association for Physical and Analytical Sciences)

2011 Co-organizer, Matrafured Meeting on Electrochemical Sensors, Hungary

2012-16 Director of the Department of Inorganic and Analytical Chemistry (CHIAM)

2012– Council Member of the Section of Chemistry and Biochemistry

2012– Member, Executive Committee of the Section of Chemistry and Biochemistry

2013-15 Representative for Switzerland for the International Society for Electrochemistry

2013 Strategic planning committee member, Section of Chemistry and Biochemistry

2013 Strategic planning committee member, Section of Environmental Sciences

2013 Strategic planning committee member, Section of Pharmaceutical Sciences

2013 Member, Faculty Search Committee, Physical Chemistry

2013-14 Steering committee member, faculty outreach programs

2013-14 Faculty Representative, outreach activity chimiscope

2013 Member, Faculty Promotion Committee, Department CHIAM

2013 Chair, Technical Staff Search Committee, Department CHIAM

2014– President, Society for Matrafured Conferences

2014 Chair, Faculty Search Committee, Department CHIAM

2014 Co-organizer, Matrafured Meeting on Electrochemical Sensors, Hungary

2014 Co-organizer, Fall Meeting of the International Society of Electrochemistry, Lausanne

2014 Co-organizer, ISEAC38 Environmental Science Conference, Lausanne

2014 Co-organizer, Europtrode Meeting in Athens, Greece

2014 Co-organizer, Journée d'Electrochimie, Paris, France

2015– Executive member, Swiss Chemical Society Course Organizing Committee

2016– Executive committee member, Geneva Chemical Society

2016 Co-organizer, Europtrode Meeting in Graz, Austria

2016 Co-organizer, Journée d'Electrochimie, Rome, Italy

2016 Member, University Delegation for Strategic Agreements with Israel

2017 Co-organizer, Matrafured Meeting on Electrochemical Sensors, Hungary

2017 Strategic planning committee member, Section of Environmental Sciences

2017 Strategic planning committee member, Section of Pharmaceutical Sciences

2018 Scientific Advisory Committee, PACCON2018, Hat Yai, Thailand

2018 Co-organizer, Europtrode Meeting in Naples, Italy

2018 Member, Faculty Search Committee, Department CHIAM

2019 Member, Faculty Search Committee, Department CHIFI

2021 Faculty Search Committee, University of Barcelona

2021 Scientific Advisory Committee, ISEAC 2021, Changchun, China

2021 Award Committee, Swiss Chemical Society

2022 Co-organizer, Matrafured Meeting on Electrochemical Sensors, Hungary

2022 Award Committee, Swiss Chemical Society

2023 Co-Chair, Euroanalysis 2023 Conference, Geneva, Switzerland

2023 Award Committee, Swiss Chemical Society

2024 Co-organizer, Matrafured Meeting on Electrochemical Sensors, Hungary

2024 Award Committee, Swiss Chemical Society

2025 Award Committee, Swiss Chemical Society

2026 Co-organizer of the Matrafured International Meeting on Chemical Sensors, Visegrad, Hungary.

Service and Outreach (from 2010)

2024 Co-organizer of the Matrafured International Meeting on Chemical Sensors, Visegrad, Hungary.

2023 Co-Chair of Euroanalysis XXI, Geneva.

2022 Co-organizer of the Matrafured International Meeting on Chemical Sensors, Visegrad, Hungary.

2021- President, GAPAG, Geneva

2020- President of the Division of Analytical Science, Swiss Chemical Society

2020- Director, Department of Inorganic and Analytical Chemistry, U of Geneva

2019 Co-organizer of the Matrafured International Meeting on Chemical Sensors, Visegrad, Hungary.

2019 Co-organizer of a contributed session “ionophore-based chemical sensors” at Pittcon, Philadelphia, USA.

2018 Co-organizer of a contributed session “ionophore-based chemical sensors” at Pittcon, Orlando, USA.

2017 Co-organizer of a contributed session “ionophore-based chemical sensors” at Pittcon, Chicago, USA.

2017 Co-organizer of the Matrafured International Meeting on Chemical Sensors, Visegrad, Hungary.

2016-17 Principal Investigator on the Swiss National Science Outreach Project “Science Me” competition, 20’000 CHF.

2016 Co-organizer of a contributed session “ionophore-based chemical sensors” at Pittcon, Atlanta, USA.

2015– Associate Editor for the journal ACS Sensors

2015 Outreach Talk at the Museum of Science History, Geneva

2015 Co-organizer of a contributed session “ionophore-based chemical sensors” at Pittcon, New Orleans, USA.

2015 Co-organizer of the Matrafured International Meeting on Chemical Sensors, Visegrad, Hungary.

2014 Co-organizer of a contributed session “ionophore-based chemical sensors” at Pittcon, Chicago, USA.

2012– Responsible for the Development of the Module “Chimie et Environnement” for the Chimiscope at the University of Geneva

2013 Co-organizer of a contributed session “ionophore-based chemical sensors” at Pittcon, Philadelphia, USA.

2012 Seminar for the Geneva Chemical Society

2012– Member, Steering Committee of the Europtrode International Conference Series

2012 Co-organizer of a contributed session “ionophore-based chemical sensors” at Pittcon, Orlando, U.S.A.

2012 Co-organizer of the Matrafured International Meeting on Chemical Sensors, Visegrad, Hungary.

2011– Member, Organizing Committee for the French Speaking Conference Series “Electrochemistry Days”

2011 Co-organizer of a contributed session “ionophore-based chemical sensors” at Pittcon, Atlanta, U.S.A.

2006-11 Subject Editor, Sensors and Actuators, B

2010 Co-organizer of a contributed session “ionophore-based chemical sensors” at Pittcon, Chicago, U.S.A.

Citation Data

H-index (Google Scholar):	87
Total Citations	>33’500

Full List of Scientific Publications

(443) A Tripodal Ammonium Ionophore with Improved Selectivity and Lipophilicity for Potentiometric Detection in Whole Blood, Zhang, Y.; Zhou, J.; Yang, T.; Wu, Y.; Qin, Y.; Bakker, E. *Sens. Actuators, B*, submitted.

(442) Overcoming Glass Electrodes Limitations for Ultrasensitive In Situ pH Measurements in Costal Marine Waters While Maintaining Traceability to Primary Standards, Nussbaum, R.; Bakker, E. *Chimia*, submitted.

(441) Symmetrical pH Electrochemical Cell Coupled to Constant Potential Coulometry for Improved Sensitivity and Precision: Part 2. Submersible Probe for In Situ Measurements, Nussbaum, R.; Jeanneret, S.; Cherubini, T.; Omanovic, D.; Tercier-Waeber, M.-L.; Bakker, E. *ACS Measurement Sci. Au*, in press. DOI:

(440) Symmetrical pH Electrochemical Cell Coupled to Constant Potential Coulometry for Improved Sensitivity and Precision: Part 1. Fundamental Considerations, Nussbaum, R.; Jeanneret, S.; Cherubini, T.; Bakker, E. *ACS Measurement Sci. Au*, in press. DOI:

(439) Symmetrical pH Electrochemical Cell Coupled to Constant Potential Coulometry for Improved Sensitivity and Precision: Part 2. Submersible Probe for In Situ Measurements, Nussbaum, R.; Jeanneret, S.; Cherubini, T.; Omanovic, D.; Tercier-Waeber, M.-L.; Bakker, E. *Chemrxiv*, **2025**, , Preprint at DOI: 10.26434/chemrxiv-2025-w3qf9. DOI: 10.26434/chemrxiv-2025-w3qf9 (open access).

(438) Symmetrical pH Electrochemical Cell Coupled to Constant Potential Coulometry for Improved Sensitivity and Precision: Part 1. Fundamental Considerations, Nussbaum, R.; Jeanneret, S.; Cherubini, T.; Bakker, E. *ChemRxiv*, **2025**, , Preprint at DOI: 10.26434/chemrxiv-2025-1jwb9. DOI: 10.26434/chemrxiv-2025-1jwb9 (open access).

(437) Let’s talk about pH, the confusing pillar of aqueous systems, Bakker, E. *ACS Sensors*, **2025**, *10*, 8152–8153. DOI: 10.1021/acssensors.5c03666 (open access).

(436) Ionophores for Reference Electrodes based on Organic Electrolytes, Tiuftiakov, N.; Bakker, E. *Anal. Chem.*, **2025**, *97*, 24910–24915. DOI: 10.1021/acs.analchem.5c04958 (open access).

(435) Editorial, Bleiner, D.; Andres, A.; Bakker, E.; Finkler, C.; Halder, E.; Hattendorf, B.; Hauser, P. C.; Groh, Ksenia; et al., *Chimia*, **2025**, *79*, A6. DOI: https://doi.org/10.2533/chimia.2025.6 (open access).

(434) Spatially Resolved Ion Sensing with voltammetric ion transfer microscopy, Mattos, G. J.; Rothen, J. A.; Cherubini, T.; Bakker, E. *JACS Au*, **2025**, *5*, 5538–5546. DOI: 10.1021/jacsau.5c01034 (open access).

(433) Chemical ion imaging with voltammetric ion transfer microscopy, Mattos, G. J.; Rothen, J. A.; Cherubini, T.; Bakker, E. *Chemrxiv*, **2025**, , Preprint at https://doi.org/10.26434/chemrxiv-2025-tg1xs. DOI: 10.26434/chemrxiv-2025-tg1xs.

(432) Covalent Attachment of Molecularly Thin PVC Membranes by Click Chemistry for Ionophore-Based Ion Sensors, Zhang, Y.; Forrest, T.; Wu, Y.; Maroni, P.; Bakker, E. *Anal. Chem.*, **2025**, *97*, 17917–17920. DOI: 10.1021/acs.analchem.5c01986 (open access).

(431) Critical Influence of Organic Salt Purity on the Performance of Reference Electrodes based on Highly Lipophilic Electrolytes, Tiuftiakov, N.; Bakker, E. *Sens. Actuators, B*, **2025**, *438*, 137795. DOI: https://doi.org/10.1016/j.snb.2025.137795 (open access).

(430) Zero-Current Chronopotentiometry for Glucose Biosensors , Nonis, A.; Damala, P.; Bakker, E. *Microchim. Acta*, **2026**, *193*, 25 (Editor's Choice Article). DOI: https://doi.org/10.1007/s00604-025-07769-8 (open access).

(429) Improving Robustness, Sensitivity and Simplicity of Potentiometric Sensors Through Symmetry and Conceptual Design, Bakker, E. *Chimia*, **2025**, *79*, 7-11. DOI: 10.2533/chimia.2025.1 (open access).

(428) Know Your Sensor and Know Your Sample, Bakker, E. *ACS Sensors*, **2024**, *9*, 4974. DOI: 10.1021/acssensors.4c02750 (open access).

(427) Complexation Behavior and Clinical Assessment of Isomeric Calcium Ionophores of ETH 1001 in Polymeric Ion-Selective Membranes, Zhang, Y.; Zhou, J.; Yang, T.; Huang, Z.; Mattos, G.; Tiuftiakov, N.; Wu, Y.; Gao, J.; Qin, Y.; Bakker, E. *ACS Sensors*, **2024**, *9*, 6512-6519. DOI: 10.1021/acssensors.4c01907.

(426) Towards Mass-Production of Ion-selective Electrodes by Spotting: Optimization of Membrane Composition and Real-Time Tracking of Membrane Drying, Krivacic, S.; Speck, A.; Kassal, P.; Bakker, E. *Sens. Actuators, B*, **2025**, *423*, 136759. DOI: 10.1016/j.snb.2024.136759 (open access).

(425) Self-Powered Potentiometric Sensor with Relational Operation Function to Capture Concentration Excursions, Wu, Y.; Zhang, Y.; Qileng, A.; Bakker, E. *Anal. Chem.*, **2024**, *96*, 18401–18407. DOI: 10.1021/acs.analchem.4c03081.

(424) Microfabricated Self-Referencing Pulstrodes, Speck, A.; Migliorelli, D.; Generelli, S.; Bouilly, G.; Forrest, T.; Zdracheck, E.; Burr, L.; Bakker, E. *Sens. Diagn.*, **2025**, *4*, 669-679. DOI: 10.1039/d5sd00024f.

(423) Improving the Sensitivity of pH Glass Electrodes Towards Ultrasensitive Environmental Monitoring, Nussbaum, R.; Bakker, E. *Chimia*, **2024**, *78*, 445. DOI: 10.2533/chimia.2024.445 (open access).

(422) High Sensitivity Constant Potential Coulometry at Zero Current with pH Glass Electrodes, Nussbaum, R.; Jeanneret, S.; Bakker, E. *Anal. Chem.*, **2024**, *96*, 6436–6443. DOI: 10.1021/acs.analchem.4c00592 (open access).

(421) Ion-Exchange and Lipophilicity Limitations of Ionic Liquid Reference Electrodes, Tiuftiakov, N. Y.; Zdrachek, E.; Bakker, E. *Sens. Actuators, B*, **2024**, *407*, 135474. DOI: 10.1016/j.snb.2024.135474 (open access).

(420) Conference Report: Euroanalysis 2023 in Geneva, Bakker, E.; Hattendorf, B.; Kalman, F.; Suter, M. *Chimia*, **2024**, *78*, 69. DOI: 10.2533/chimia.2024.69 (open access).

(419) Ion transfer mediated by TEMPO in ionophore-doped thin films for multi-ion sensing by cyclic voltammetry, Mattos, G. J.; Rothen, J. A.; Tiuftiakov, N. Y.; Bakker, E. *Anal. Chim. Acta*, **2024**, *1299*, 342388. DOI: 10.1016/j.aca.2024.342388 (open access).

(418) Discrimination and Simultaneous Detection of Ammonium and Potassium Ions Based on Electrode Slope, Qileng, A.; Wu, Y.; Liu, Y.; Bakker, E. in preparation.

(417) Remembering Otto Wolfbeis (1947–2023), Bakker, E. *ACS Sensors*, **2023**, *8*, 3605. DOI: 10.1021/acssensors.3c02085 (open access).

(416) Avoiding Potential Pitfalls in Designing Wired Glucose Biosensors, Damala, P.; Tiuftiakov, N. Y.; Bakker, E. *ACS Sensors*, **2024**, *9*, 2-8. DOI: 10.1021/acssensors.3c01960.

(415) In situ Derivatization of Solid Contact 3,4-Ethylenedioxythiophene Transducers for Ion-Selective Electrodes through “Click” Chemistry, Forrest, T.; Bakker, E. *Sens. Actuators, B*, **2024**, *405*, 135339. DOI: 10.1016/j.snb.2024.135339 (open access).

(414) Self-powered Potentiometric Sensor with Electronic Paper Display Based on Passive Amplification by Serial Capacitors, Qileng, A.; Wu, Y.; Liu, Y.; Bakker, E. *Anal. Chem.*, **2023**, *95*, 17444–17449. DOI: 10.1021/acs.analchem.3c04323.

(413) Lipophilic tetramethylpiperidine N-oxyl (TEMPO) as a redox probe in thin films for anion and cation sensing by ion transfer voltammetry, Mattos, G. J.; Tiuftiakov, N. Y.; Bakker, E. *Electrochem. Commun.*, **2023**, *157*, 107603. DOI: 10.1016/j.elecom.2023.107603 (open access).

(412) Distance-Based Self-Powered Signal Transduction of Ion-Selective Electrodes to an Electronic Paper Display Array, Qileng, A.; Wu, Y.; Liu, Y.; Bakker, E. *Anal. Chem.*, **2023**, *95*, 17878–17885. DOI: 10.1021/acs.analchem.3c03994.

(411) Self-Plasticised Poly(Vinyl Chloride) (PVC) as Matrix for Ion-Selective Electrodes, Forrest, T.; Bakker, E. *PCT Application*, submitted.

(410) Correction: A submersible probe with in-line calibration and a symmetrical reference element for continuous direct nitrate concentration measurements, Forrest, T.; Cherubini, T.; Jeanneret, S.; Zdrachek, E.; Damala, P.; Bakker, E. *Environ. Sci.: Processes Impacts*, **2023**, *25*, 1131 - 1132. DOI: 10.1039/d3em90017g (open access).

(409) CHanalysis 2023 – Artificial Intelligence meets Analytical Excellence, Bleiner, D.; Bakker, E. *Chimia*, **2023**, *77*, 546-547. DOI: 10.2533/chimia.2023.546 (open access).

(408) Self-powered optical ion sensor array based on potentiometric probes coupled to electronic paper, Wu, Y.; Qileng, A.; Bakker, E. *Sens. Actuators, B*, **2023**, *396*, 134561. DOI: 10.1016/j.snb.2023.134561 (open access).

(407) Ultrasensitive Sensing of pH and Fluoride with Enhanced Constant Potential Coulometry at Membrane Electrodes, Nussbaum, R.; Nonis, A.; Jeanneret, S.; Cherubini, T.; Bakker, E. *Sens. Actuators, B*, **2023**, *392*, 134101. DOI: 10.1016/j.snb.2023.134101 (open access).

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