
PROGRAM

Sunday, June 16, 2024

14.00– **Registration**

16.00 **Coffee**

18.00-18.15 *Opening*

18.15-19.00 **Csaba Szántay**

Gedeon Richter Plc

The Human Factor in Scientific Thinking: The Illusions That We Live By

19.30– **Welcome party**

Monday, June 17, 2024

Chair: Eric Bakker

- 9.00–9.30 Tania M. Benedetti, Samuel V. Somerville, Johanna Wordsworth, Richard D. Tilley, **J. Justin Gooding**
School of Chemistry and Australian Centre for NanoMedicine,
University of New South Wales, Sydney, Australia
An Artificial Enzyme: How Nanoconfinement Allows the Selective Electrochemical Detection of Glucose Directly in Whole Blood
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- 9.30–10.00 **Elizabeth (Lisa) A. H. Hall**, Adam L. Roberts, Anna R Bird, Dushanth J Seevaratnam
Chemical Engineering and Biotechnology, University of Cambridge, Cambridge, UK
Biosensors Without Frontiers: A Regenerable Supply Chain For PCR In Low Resource Countries
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- 10.00–10.20 **Jiawang Ding**, Han Zhang, Wei Qin
Yantai Institute of Coastal Zone Research, Chinese Academy of Sciences, Yantai, Shandong, P.R. China.
Magneto-Controlled Sensors for Potentiometric Sensing of Extracellular Alkaline Phosphatase
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- 10.20–10.40 **Sara Knežević**, Emily Kerr, Bertrand Goudeau, Giovanni Valenti, Francesco Paolucci, Paul S. Francis, Frédéric Kanoufi, Neso Sojic CNRS, Bordeaux INP, ISM, Univ. Bordeaux, Pessac, France
Signal Enhancement in Electrochemiluminescence Immunoassays through the Freely Diffusing $[\text{Ir}(\text{sppy})_3]^{3-}$ Complex and its Application in biological Imaging
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- 10.40–11.10 **Coffee Break**
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Chair: Lisa Hall

- 11.10–11.40 Din Zelikovich, Pavel Savchenko and **Daniel Mandler**
Institute of Chemistry, the Hebrew University of Jerusalem, Jerusalem, Israel
Nanoparticle-Imprinted Matrix: The Effect of the Nanoparticle Interface
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- 11.40–12.10 Beatrise Berzina, Sommer Y. Osman, Sanduni U. Devasinghe, Umesha Peramune, Sungu Kim, Kumar Saurabh, Ruhul Amin, Echo L. Claus Madison A. Strait, Baskar Ganapathysubramanian, **Robbyn K. Anand**
Microscale Surface Ion Conduction for Point-of-Care Diagnostics
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Monday, June 17, 2024

12.10 –12.30 **Tugba Ozer**

Yildiz Technical University, Department of Bioengineering, Faculty of Chemical-Metallurgical Engineering, Istanbul, Türkiye
Microfluidic Dual Mode Electrochemical/Colorimetric Sensor Array for Simultaneous Screening of Electrolyte

12.40 **Lunch**

15.30–16.00 **Coffee**

Chair: Johan Bobacka

16.00–16.30 **Eric Bakker**, Nikolai Tiuftiakov, Ayian Speck

University of Geneva, Geneva, Switzerland

Understanding Fundamental Limits and Opportunities of Liquid Junction-Free Reference Electrodes

16.30–17.00 Madeline L. Honig, **Philippe Bühlmann**

University of Minnesota, Minneapolis MN, USA

Ion-Selective Electrodes: Selectivity Coefficients for Interfering Ions of the Opposite Charge Sign

17.00–17.20 **Sohrab Mansour**

Werfen, Bedford, MA, USA

Blood Gas Competitive Landscape

17.20–17.30 **Break**

Chair: Daniel Citterio

17.30–18.00 **Johan Bobacka**, Naela Delmo, Tingting Han, Elisa Hupa, Ulriika

Mattinen, Zekra Mousavi, Tomasz Sokalski, Ville Yrjänä

Åbo Akademi University, Turku/Åbo, Finland

Coulometric ISEs: A critical Overview

18.00–18.30 Junhao Wang, Kaikai Wang, Rongning Liang, **Wei Qin**

Yantai Institute of Coastal Zone Research, Chinese Academy of Sciences, Yantai, P. R. China

Potentiometric Biosensors Based on Surface Blocking of Ion Fluxes

18.30–18.50 **Muhammad A. Alam** and Ajanta Saha

Purdue University, West Lafayette, IN, USA

Reliable Sensing with Field-Deployed “Unreliable” Sensors: How Physics, Information Theory, and Fake-News Algorithm Make Robust Sensing Possible

18.50 **Dinner**

20.00–22.00 **Poster Session**

Tuesday, June 18, 2024

Chair: Philippe Bühlmann

- 9.00–9.30 **Gergely Solymosi**, Gyula Jágerszki, Péter Fürjes,
Róbert E. Gyurcsányi
Lendület Chemical Nanosensors Research Group, Budapest University
of Technology and Economics, Budapest, Hungary
Nanopore-based Potentiometric Sensing
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- 9.30–9.50 **Yu Ishige**, Mathijs Janssen
Independent researcher, Oslo, Norway
*Electroosmotic Flow-Enhanced Ion Selectivity of Surface-Charged
Nanopores Filled with a Dense Electrolyte*
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- 9.50–10.20 **Jeffrey E. Dick**
Department of Chemistry, Purdue University,
*A Nanoelectrochemical Approach to Understanding Curious Chemistry
in Multiphase Microenvironments*
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- 10.20–10.40 **Lin-Lin Zhang**, Cheng-Bing Zhong, Yi-Tao Long, Yi-Lun Ying
State Key Laboratory of Analytical Chemistry for Life Science, School
of Chemistry and Chemical Engineering, Nanjing University, Nanjing
Droplet Nanopore Microchip for Low-volume Biomarkers Sensing
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- 10.40–11.10 **Coffee Break**
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Chair: Wei Qin

- 11.10–11.40 **Jason Davis**
Department of Chemistry, Physical & Theoretical Chemistry
Laboratory, University of Oxford, UK
Capturing and assaying clinically relevant targets
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- 11.40–12.10 Hikaru Suzuki, Yohei Tanifuji, Guodong Tong, Yuki Hiruta,
Daniel Citterio
Department of Applied Chemistry, Keio University, Yokohama, Japan
CRISPR/Cas Assays Integrated into Paper-Based Analytical Devices
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- 12.10–12.30 **Grzegorz Lisak**, Mingpeng Yang, Rochelle Silva, Ke Zhao, Ruiyu
Ding, Jit Loong Cyrus Foo, Liya Ge, Canwei Mao
Nanyang Technological University, Singapore
*Corrective Protocol to Predict Interference Free Sensor Response of
Paper-based Solution Sampling Coupled with Heavy Metal Sensitive
Ion-Selective Electrodes*
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- 12.40 **Lunch**
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Tuesday, June 18, 2024

15.30–16.00 Coffee

Chair: Justin Gooding

16.00–16.30 John J. Kasianowicz, Mazdak A. Bakshloo, and Abdelghani Oukahaled

University of South Florida, Tampa, FL USA

Nanopore-Based Sensors for Chemical, Polymer, DNA, & Protein Analysis

16.30–17.00 Yi-Lun Ying, Fan Gao, Xinyi Li, Cheng-Bing Zhong, Lin-Lin Zhang, Yi-Tao Long

State Key Laboratory of Analytical Chemistry for Life Science, School of Chemistry and Chemical Engineering, Nanjing University, Nanjing, China

Stereo-Selective Nanopore for Single-Molecule Sensing

17.00–17.10 Break

Chair: Jeffrey E. Dick

17.10–17.30 Netzahualcóyotl Arroyo-Currás

Department of Pharmacology and Molecular Sciences, Johns Hopkins University School of Medicine, Baltimore, MD , USA

Solutions to Overcome Competitive Displacement of Oligonucleotides from Nucleic Acid-Based Electrochemical Sensors in Biofluids

17.30–18.00 Tianxiao Ma, Dan Bizzotto

AMPEL and Dept of Chemistry, University of British Columbia, Vancouver, BC, Canada

Studying Redox-Llabelled DNA SAMs Using EIS and In-Situ Fluorescence Imaging

18.00–18.20 Robin Nussbaum, Andrea Nonis, Stéphane Jeanneret, Eric Bakker

Department of Inorganic and Analytical Chemistry, University of Geneva, Geneva, Switzerland

Coulometric Readout of High Impedance Ion-Selective Electrodes

18.50 Dinner

20.00–22.00 Poster Session

Chair: Dan Bizzotto

9.00–9.30	Klaus Koren and team Aarhus University Centre for Water Technology, Department of Biology, Aarhus University, Aarhus C, Denmark <i>Chemical GPS- How Optical Sensors Can Help Navigate the Microbial World</i>
9.30–10.00	Xiaojiang Xie Department of Chemistry, Southern University of Science and Technology, Shenzhen, China. <i>New Synthetic Receptors and Polymer Matrices for Electrochemical and Optical Ion Sensors</i>
10.00–10.20	Nadezhda V. Pokhvisheva, Ilya S. Prozherin, Anna S. Menshova, Maria A. Peshkova Saint Petersburg State University, Saint Petersburg, Russia <i>Water-Soluble Acidochromic Dyes Lipophilized with Quaternary Ammonium Cations as Tunable Chromoionophores for Polymeric Optodes</i>
10.20–10.40	Coffee Break

Chair: Xuewei Wang

10.40–11.00	Rongning Liang , Longbin Qi, Wei Qin Yantai Institute of Coastal Zone Research, Chinese Academy of Sciences, Yantai, P. R. China <i>Antifouling Approaches for Polymeric Membrane Ion-Selective Electrodes in Environmental Waters</i>
11.00–11.20	Amy V. Mueller and Lajos Höfler Northeastern University, Boston, MA, USA <i>Roles and Benefits of Physics-based and Machine Learning Modeling Tools for Environmental Sensing Using ISE Array</i>
11.20–11.40	Lajos Höfler Department of Inorganic and Analytical Chemistry, Budapest University of Technology and Economics, Budapest, Hungary <i>A Critical Comparison of Machine Learning Techniques for Interpreting Results from Sensor Data</i>
12.00	Lunch
13.30–22.00	Banquet

Thursday, June 20, 2024

Chair: Jason Davis

9.30–9.50	Osamu Niwa , Saki Ohta, Shunsuke Shiba Saitama Institute of Technology, Fukaya, Saimata, Japan <i>Enhanced Electrocatalytic Performance of Metal Nanoparticles Heterodimer Modified Carbon Film Electrode</i>
9.50–10.10	Yuko Ueno Chuo University, Tokyo, Japan <i>Unique Electrochemical Detection Properties of Monolayer Graphene Electrodes</i>
10.10–10.30	Gabriel J. Mattos , Justine A. Rothen, Nikolai Y. Tiuftiakov, and Eric Bakker Department of Inorganic and Analytical Chemistry, University of Geneva, Geneva, Switzerland <i>Ion Sensing by TEMPO-Redox-Modulated Fluorescence of Optical Probes in Thin Films</i>
10.30–11.00	Coffee Break

Chair: Róbert E. Gyurcsányi

11.00–11.30	Mohammad Asghari, Sarah Duclos Ivetich, Mahmut Kamil Aslan, Tobias Weiss, Stefan Balabanov, Stavros Stavrakis and Andrew J. DeMello Institute for Chemical & Bioengineering, ETH Zürich, Zürich, Switzerland <i>Real-Time Viscoelastic Cytometry: High Throughput Optical and Mechanical Phenotyping of Liquid and Solid Biopsies</i>
11.30–12.00	Charles S. Henry , Matthew Russo, Elijah Barstis, Floyd Taub Colorado State University, Fort Collins, CO, USA <i>Electrochemical Sensors for Liquid Biopsies</i>
12.00–12.30	Nasrin Ghanbari Ghalehjoughi, Simona Clement, Aishwarya Patel, Renjie Wang, Xuwei Wang Department of Chemistry, Virginia Commonwealth University, Richmond, Virginia, USA <i>Optical Sensing of Ions and Metabolites Based on Liquid-Liquid Extraction</i>
12.40	Lunch

Thursday, June 20, 2024

15.30–16.00 Coffee

Chair: Xiaojiang Xie

16.00–16.20 Thomas Just Sørensen
Nano-Science Center & Department of Chemistry, University of
Copenhagen, Denmark
*The 15 Years from Fluorescent dyes to Commercial Optical
Chemosensors*

16.20–16.40 Fabian Steininger, Alexander Wiorek, Gaston A. Crespo, Maria
Cuartero and Klaus Koren
Aarhus University, Aarhus, Denmark
*In Situ pH Modulation for Enhanced Chemical Sensing of
pH-Dependent Analytes*

16.40–17.00 Andrey V. Kalinichev, Georg Schwendt, Sergey M. Borisov, Klaus
Koren
Aarhus University, Aarhus C, Denmark
*The Way to Advanced 2D Chemical Imaging with Optodes: from the
Determination of Ionic Species to Multiparameter Measurements*

17.00–17.20 Closing

18.50 Dinner

20.00–22.00 Poster Session
