Torben Lund

From Organic Electrochemistry to Analytical Chemistry – and how I meet Bo for the first time
Assoc. Professor, Department of Science and Environment, RUC

During my PhD project in the organic electrochemistry group led by Henning Lund (1984–1987), we investigated whether the classical nucleophilic substitution reaction (S_N2) could, in certain special cases, proceed via a single electron transfer mechanism. This was examined by comparing the substitution rates of "super-nucleophiles" with alkyl halides (RX) against the electron transfer rates of aromatic radical anions with RX. Reaction kinetics were determined using cyclic voltammetry, and with the help of Bo Svensmark, the rate constants were extracted from the voltammograms through digital simulation.

I earned my PhD in organic electrochemistry from AU in 1987, became an assistant professor at RUC in 1989, and was promoted to associate professor in 1993. Over nearly 45 years, my research in chemistry has spanned a wide range of topics, including NMR spectroscopy, physical organic chemistry, electron transfer reactions, photochemistry, dye-sensitized solar cells, and analytical chemistry (GC-MS and LC-MS). Additionally, I have been involved in numerous interdisciplinary projects, such as environmental biology, plant physiology, target proteomics, the detection of quorum sensing molecules in bacteria, and the identification of neurotransmitters in the pancreas of mice.
https://scholar.google.com/citations?user=StDxOj8AAAAJ

Bo Svensmark

My 59 years with chemistry and computers in chemistry
Assoc. Professor emeritus, PLEN, University of Copenhagen

From organic electrochemistry to analytical chemistry and from Aarhus University to University of Copenhagen and to my present position at PLEN, applications of computers for digital simulation and experimental control have always been my field of expertise. At Department of Chemistry, I changed from organic electrochemistry to analytical chemistry - and was a main contributor to the bachelor and master education in environmental chemistry. As a result, I have supervised 91 master projects in analytical/environmental chemistry - from 2000 to 2009, 26 % of all candidates from Department of Chemistry. In 2010 analytical chemistry was cut down at Department of Chemistry so in 2012 I moved to Jan Christensen's group in analytical chemistry here at PLEN, where I was involved in making new courses in advanced analytical chemistry until 2015 when I vent on pension. But – I could not really stop working with analytical chemistry, so I continued as emeritus and am now working with all the fun stuff such as simulation of chromatography, extensions to the Theory of Sampling, making a computer-controlled DESI setup, and finally a few lectures in the courses and a lot of consultancy and small projects in applied statistics.

Bo Svensmark is Associate Professor emeritus of Chemistry at PLEN, University of Copenhagen and works with sampling theory, theories in chromatography, digital simulation of chromatography and applied statistics. He was chairman of The Danish Society of Analytical Chemistry 4 times.

1966-1972	Master in chemistry, Aarhus University
1972-1973	Candidate instructor, Aarhus University
1973-1976	Ph.D.-student at University of Copenhagen
1976-1978	Post Doc. Lund University
1978-2012	Associate Professor, Dep. of Chemistry KU
2012-2015	Associate Professor, PLEN, KU
2015 – now	Associate Professor emeritus, PLEN, KU

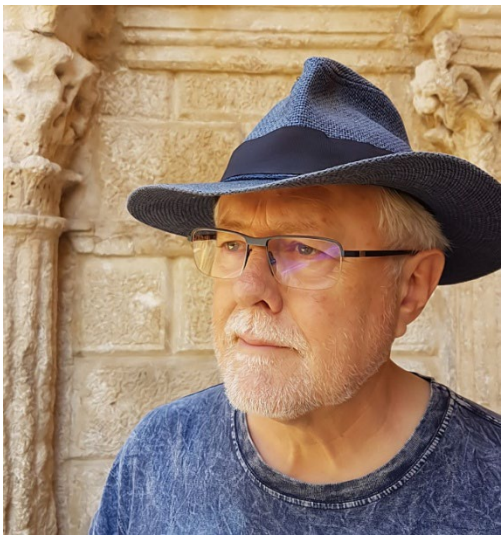
Anders Baun

PFAS is everywhere – what can we do?
Professor Anders Baun, Danish PFAS Research Centre, DTU Sustain. abau@dtu.dk

Since around the turn of the millennium the presence of PFAS in the environment has been documented, but despite fast emerging knowledge of their persistence, bioaccumulation, mobility, and toxicity already several decades ago, regulatory action has been taken at a slower pace. In this presentation, the background for this late regulatory action is briefly examined, i.e. whether early warning signs were overlooked, and whether regulatory or market actions could have been taken earlier. This is followed by an overview of which actions will make the most sense according to the Danish Government's Knowledge Task Force for PFAS Contamination and how some of these actions will be addressed by research project in the newly established Danish PFAS Research Centre.

Anders Baun is professor in risk assessment of chemicals and director of the Danish PFAS Research Centre. He is head of the section Environmental Contamination & Chemicals at DTU Sustain, Technical University of Denmark. His main research area is environmental risk assessment of emerging environmental contaminants like PFAS, nanomaterials and advanced materials. Here he works in the interface between science and regulation with a strong focus on novel experimental approaches for fate and effects assessment. In 2023-24 he was the chairman of the Danish Government's Knowledge Taskforce for PFAS Contamination.

Kaare Lund Rasmussen



Chemical analysis of fragments of glass- and ceramic-ware from Tycho Brahe's laboratory
Kaare Lund Rasmussen, Professor emeritus, CHART, FKF, SDU

World renowned astronomer Tycho Brahe was also intent on the emerging science *alchemy*. In the basement of his observatory and castle Uraniborg he fitted a state-of-the-art alchemical laboratory. Following Brahe's extradition and shortly thereafter death, the castle was demolished upon a royal decree, a process which was completed c. 1650. In 1988-90 an archaeological excavation unearthed pieces of glass- and ceramic-ware from Brahe's laboratory. These shards have now been analyzed by LA-ICP-MS and the results cast a first light into Brahe's laboratory and what went on there.

Kaare Lund Rasmussen is professor emeritus at SDU. He is working with analytical chemistry applied to cultural heritage objects.

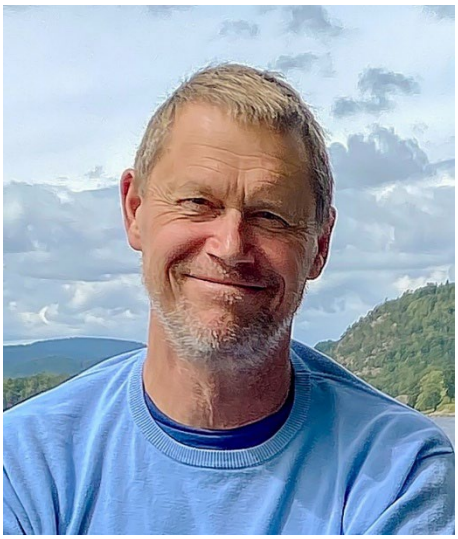
Kim H. Esbensen

There is always *some form of* sampling before chemical analysis - and Bo Svensmark knows it!
Kim H. Esbensen, Independent consultant and researcher, KHE Consulting

A representative sample from 20+ years of interesting and joyful collaboration around the interface between sampling and analysis - that's not going to be easy. But I shall give it a serious go in honour of Bo's monumental contribution to analytical chemistry and to the Danish and international university scene(s).

Research professor at GEUS (2010– 2015), professor at Aalborg University, Denmark (2001– 2015), professor at Telemark Institute of Technology, Norway (1990–2000 and 2010–2015). Since 2015 consultant and independent researcher. Kim has been working 20+ years in chemometrics, but since 2000 focuses on representative sampling of heterogeneous materials, processes and systems, Theory of Sampling (TOS) and PAT (Process Analytical Technology). Kim received the Pierre Gy Gold Medal in 2013.

Tore Vulpius



Work-life balance: as the wind blows - or?
Tore Vulpius, Owner and manager of MSCi ApS

Analytical chemistry (and physics) such as silver chemistry, environmental chemistry, aerodynamics and hydrodynamics can be combined with free time activities.
At least if you are Bo Svensmark.
The examples above have all played a role in Bo's life, professionally as well as in the "outer world. Semi-professional photography and sailing are good examples of successful work-life balance activities.

Tore is a chemist from the University of Copenhagen (chemistry and physics) and has a broad interest in analytical chemistry as well as chemistry and physics as we encounter them in everyday life.

Asger Nørgaard

Reflections On Mass Spectrometry and allied topics 2005-2025
Asger W. Nørgaard Specialist, CMC Analytical Support, Novo Nordisk A/S

Many things have happened within the field of Mass Spectrometry (MS) since I started my masters in Bo's capable hands in 2005. This presentation will focus on some of the many developments - which have made my life as a "mass spectrometrist" both easier and continuously interesting.

Upon completion of my master's degree, I worked in public research for 10 years with focus on MS characterisation of occupational exposures. At Novo Nordisk, I have worked with Extractables and Leachables and general analytical support since 2016.

Nikoline Juul Nielsen

Adding dimensionality to what we learned with Bo

Nikoline Juul Nielsen Assoc. Professor, PLEN, University of Copenhagen

One way to increase the resolution in data is to impose multiple dimensions of separation onto a sample. Here we demonstrate how comprehensive two-dimensional liquid chromatography (RPLC × HILIC) hyphenated to cyclic ion mobility separation (cIMS) and HRMS can improve resolution and structure in data. The platform was operated in data independent acquisition mode, thereby obtaining both low and high collision energy mass spectra. The one-pass cIMS separation was found to provide extremely high mass spectral purity for DIA data. The structure in 2DLC chromatograms aided compound identification, as specific chemical classes occupy specific separation sub-space. Collisional cross section measures were used to confirm compound identity. By this approach 50 phenolic metabolites were identified in shea, epitaxifolin, procyanidins B1-B4, prodelphinidins B1-B4, isoorientin and isoquercitrin for the first time.

After my MSc degree in Environmental Chemistry (2005), I did a PhD in Analytical and data Processing Aspects in Natural Products Research (2010). During the PhD my mass spectrometry teaching journey started, and in 2012 Bo and I combined our MS and chromatography teaching into one Advanced Analytical Chemistry – Chromatography and Mass Spectrometry course. Currently associate professor at PLEN, primarily occupied with chromatography and mass spectrometry analysis of small molecules in complex sample (biological and environmental), as well as with applied data processing and compound identification. Since 2020, I am also the Head of Studies for the MSc-program in Environmental Science at UCPH.

Bo Svensmark

A semi-scientific lecture on photography
Assoc. Professor emeritus, PLEN, University of Copenhagen

Digital photography involves a lot of computer software and concepts such as The Point Spead Function, Deconvolution, Acutance, Diffraction Limit, Focus Stacking and Circle of Confusion. Here I will limit myself to a single topic and show a few of my very best photos of birds, insects, landscapes, sailing and events in the Analytical Chemistry group.

Bo Svensmark is Associate Professor emeritus of Chemistry at PLEN, University of Copenhagen and works with sampling theory, theories in chromatography, digital simulation of chromatography and applied statistics. He was chairman of The Danish Society of Analytical Chemistry 4 times.