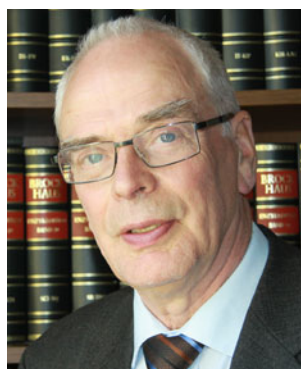


Guest editors' tribute to Fritz Pragst on the occasion of his 70th birthday

Jiří Ludvík · Fritz Scholz

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This issue is dedicated to Fritz Pragst on the occasion of his 70th birthday on September 9th, 2011. Fritz Pragst is an outstanding scientist who has succeeded to make two scientific carriers in rather different fields of chemistry, first in organic electrochemistry and then in forensic analysis. From 1961 to 1966, Pragst studied chemistry at Humboldt University, Berlin. He finished with a diploma work on the electrochemical reduction of porphyrines and porphyrine metal complexes. His Ph.D. thesis, defended in 1969, concerned the electrochemical oxidation of diazo compounds. In 1976, he has defended his doctor of science thesis which was entitled “Correlations between structure,

electrochemical properties and electrochemical luminescence of organic compounds”. The electrochemically generated luminescence (ECL) is the topic to which he has substantially contributed to a number of original papers published in the 1970s and 1980s and for which he is best known in the community of electrochemists.

In the last two decades, several reviews as well as monographs dealing with ECL were published; however, two important facets of ECL deserve a much higher attention than had been given so far. To both these facets, Fritz Pragst has considerably contributed: First, it is the use of electron transfer reactions (indirect oxidation or reduction) and/or energy transfer reactions (both in homogeneous phase) to generate selectively and exclusively triplet states as ECL intermediates. The interpretation of emission can be used not only for correction or confirmation of the theoretical energetic considerations but also for estimation of the triplet energies of the studied compounds in an alternative way and, based on known energetic criteria, for the determination of—otherwise unavailable—redox potentials of short-living radical species. Second, it is the mechanistic significance of ECL studies, based on the ECL principle, that the luminescence is a consequence of a strongly exoenergetic electron transfer reaction fulfilling fundamental energetic criteria; the observed emission serves also as an unambiguous proof of formation and existence of highly reactive radical intermediates. They often represent the missing link in investigated reaction mechanisms. This type of ECL is generated at one single potential at one single electrode (originally called “direct-current”) utilizing the follow-up splitting of the primary radical ion. It is a very sensitive alternative method for the interception of even highly unstable intermediates and for the proof of the two-electron ECE (electrochemical–chemical–electrochemical step) reaction mechanism in electrochemistry. Today, this type of ECL is called ECL with coreactants.

J. Ludvík (✉)

Academy of Science of the Czech Rep.,
J. Heyrovský Institute of Physical Chemistry,
Dolejškova 3,
182 23 Prague 8, Czech Republic
e-mail: jiri.ludvik@jh-inst.cas.cz

F. Scholz

Universität Greifswald, Institut für Biochemie,
Felix-Hausdorff-Straße 4,
17487 Greifswald, Germany

In 1987, Fritz Pragst left the Department of Chemistry of Humboldt University and joined the Institute of Forensic Medicine of the same university where he became a *Dozent* (equivalent to Assistant Professor), and in 1996 he became Professor. In 1987, Pragst did not want to leave ECL and physical organic chemistry because he loved that science, but the particular situation in the Department of Chemistry made it impossible for him to stay. Sadly, he could not know that the political changes which happened to occur only 2 years later in 1989 would have opened him that freedom of research in his beloved field of science. For organic electrochemistry, for his colleagues and pupils, his move to forensics was a very sad loss, but it was a great gain for forensic chemistry and analysis. Pragst dived energetically into that field which was very new to him, and he contributed so substantially to that science that he was awarded the title of an honorary doctor in 2006. He is the recipient of three major awards in forensic chemistry and toxicology (the Alan Curry Award of the TIAFT in 2007,

the Jean-Servais-Stas award in 2009, and the Konrad-Händel award in 2010). So far, Pragst has published 207 papers, out of which the first 92 concern organic electrochemistry, the following concern forensic chemistry. This publication record mirrors very well his two outstanding carriers.

The two authors of this editorial had the great fortune to have worked with Fritz Pragst during his electrochemical research period, one (J. L.) as postdoc, and the other (F. S.) in an informal cooperation at the department. Everybody who knows Pragst will praise his scientific wisdom which he liked to share so easily and his great human qualities, his unassumingness, and his kind and gentle manner. Pragst always sticks to his principles and never let himself be corrupted by the circumstances. His humble straightness is an example for all who know him. This special issue is a very personal *Thank You* to Fritz Pragst, a *Thank You* for what he has given us in science and in life up to now, *Good luck* for all his future activities, *All the best* for himself and his family, and *See you soon again!*