

Hacquebard Medal – Canadian Society for Coal Science and Organic Petrology

Presented by Dave Marchioni during the TSOP Annual Business Meeting lunch, Sept 25, 2009, Gramado, Brazil

At the Joint 61st ICCP/26th TSOP meeting held in Gramado, Brazil in September, the Canadian Society for Coal Science and Organic Petrology presented the Hacquebard Medal to Prof. Dr. W.D. Kalkreuth of the Federal University of Rio Grande do Sul in Porto Alegre, Brazil, and formerly of the Geological Survey of Canada.

The Hacquebard Medal is the Society's highest award, made to a member of CSCOP who has had a long and distinguished career in coal science and whose work in advancing coal science and organic petrology has been recognized both nationally and internationally.

The award is in memory of Dr. Peter Hacquebard, a pioneer in coal geology and organic petrology in Canada. Peter came to Canada from the Netherlands and served a long and distinguished scientific career with the Geological Survey of Canada. Most of those years were spent at the Atlantic Geoscience Centre in Halifax.

Peter's contributions to geoscience in general and to organic petrology in particular, established much of the basic understanding of coal geology in Canada. He was one of the first in North America to publish extensively on topics in coal petrology. Peter's work and reputation inspired numerous people to follow his lead into coal petrology and to make significant contributions to Canadian and International coal geoscience.

Wolfgang Kalkreuth is a very worthy recipient, who has had a long and distinguished career and has made significant and wide-reaching contributions to coal petrology and organic geochemistry in Canada and in several other countries.

Dr. Kalkreuth came to Canada from Germany after gaining an MSc in geology from the University of Berlin and a PhD in organic geochemistry from the University of Aachen. In 1989 he was awarded the Habilitation degree from the University of Berlin – the highest scientific award in European Academia and equivalent to a Doctorate of Science.

He spent a year as a Research Associate at the University of Sherbrooke in Quebec before joining the Geological Survey of Canada at the institute of Sedimentary and Petroleum Geology in Calgary in 1980 and where he remained as a highly influential researcher until 1996.

During Dr Kalkreuth's 17 year tenure at GSC Calgary he made a major contribution to coal geoscience – not only in Canada but in several other parts of the world. At the time of his departure from the Geological Survey of Canada he had produced an impressive number of research publications on a wide range of topics and including:

- 60 papers in recognized scientific journals

- 20 contributions to conference proceedings
- 30 papers in departmental and government publications
- 25 Special Publications including Lecture Notes, Field Trip Guides and Chapters in Text Books.

These publications were made individually or in many cases with many different collaborators - signaling Wolfgang's ability to find and work co-operatively with researchers from different fields.

His contributions cover a wide range of topics which can be summarized in a few broad categories:

- **Thermal maturation in the Rocky Mountain Foothills and Ranges** and adjacent foreland of the Western Canada Sedimentary Basin, including the timing of maturation and the relationship to hydrocarbon potential,
- **Compositional Characteristics of Canadian coals** from all parts of the country and the implications for the depositional environments of these coals and for their utilization,
- **Characterization of Canadian Oil Shale Deposits** and their oil and gas potential,
- **Alternative Utilization Potential of Canadian Fossil Fuels** including peat, lignites, bituminous coals and anthracites. This work included experiments on coal gasification and liquefaction, pyrolysis and combustion of coal and peat.
- **Characterization of Dispersed Organic Matter** using conventional methods and two new approaches using 3D fluorescence spectroscopy and infrared spectroscopy

One of Wolfgang's greatest attributes lies in envisioning areas of needed research and in obtaining the support and funding for these projects. This ability has been clearly demonstrated in his research record and since his move to Porto Alegre, where in a very short time he assembled a very functional research laboratory, an enthusiastic team of young research students and importantly, the funds to support them.

Another important aspect of Wolfgang's career has been his active involvement in scientific societies. At TSOP he served as Councilor from 1986 to 1998 and as Vice President in 2005-06.

With ICCP he has served as an officer of Commission II for 13 years between 1991 and 2003, first as Secretary and then as Chair of that Commission. During these years significant developments occurred in Commission II with the creation of new working groups on enhanced coalbed methane recovery and CO₂ storage, qualifying vitrinite for reflectance measurements in DOM, reactivation of the group on environmental application of organic petrology, and establishment of a working group in conjunction with TSOP to produce a classification of dispersed organic matter.

He has also served as Convener of several working groups in Commission II including the group on Dispersed Organic Matter Characterization, the Vitrinite Classification Editorial Group and the Working group on the Dispersed Organic Matter Atlas.

Finally he has given time and inspiration to students in his role as an adjunct professor at both the University of Berlin and at Dalhousie University in eastern Canada and in a sabbatical year at the University of Cologne. While in Canada he advised and provided formal supervision to ten post-graduate students.

And today that role continues as Wolfgang has established a well-equipped and busy research laboratory here in Porto Alegre and has several graduate students working with him on a range of projects. He has continued his active research role and has published at least 30 scientific papers and been the principal adviser to 7 graduate students.

Previous recipients of the Hacquebard Medal are the late Dr. Alexander Cameron, Dr. Fari Goodarzi and Prof. Dr. Marc Bustin.