



Ken B. Anderson

"Green" Routes to Using Coal - Making Chemical Feedstocks from Coal by Dissolution in Water

The Technology

For some people, "coal" is a dirty word. It conjures negative associations with pollution, climate change and other undesirable impacts. The real problem, however, is not with the material itself, but with the way in which we use it.

Oxidative Hydrothermal Dissolution (OHD) is a novel technology developed at SIU that uses coal in an entirely new way - dissolving the coal in water at high temperature and pressure. OHD converts the coal to products that can be used to make fuels, or can be purified and used to make polymers like polyesters for a wide range of end products. OHD does not require expensive or toxic catalysts or solvents, produces very little carbon dioxide, and does not produce other potentially harmful emissions usually associated with conventional uses of coal (such as combustion for electricity generation).

SIU has licensed this technology to a spin-off company called Thermaquatica LLC, which is now pushing ahead with further development aimed at scale-up and commercial deployment.



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Dr. Ken B. Anderson is founder and CEO of Thermaquatica Inc. He developed the OHD concept, and has served as principal investigator on grants funded by the State of Illinois to explore the concept, develop the fundamental technology, and he is now overseeing efforts to scale up the technology for commercialization. He is an organic geochemist with more than 20 years experience in coal science and related areas. He is currently holds the rank of full professor within the Department of Geology at SIU Carbondale. Dr. Anderson received his PhD in chemistry from the University of Melbourne, Australia in 1989. Prior to joining SIUC he was a research scientist at Argonne National Laboratory from 1994-2003 and worked for Amoco Oil Company from 1991-1994.