

# 8th International Activated Carbon Conference Show Review

**T**he 8th Annual International Activated Carbon Conference (IACC-8) and optional training courses took place on Sept. 18–23. This article provides a brief review of some of the activities and summaries of the speakers' topics.

#### Speaker Presentations

Several speakers addressed current carbon issues. Lawyer Ronald Kuis discussed environmental residues from the WWII efforts. He also suggested that the activated carbon industry participate in clean-up efforts.

George Alther, president of Biomin, presented a segment on isotherm and mini-column performance (accelerated column testing) data that compared organoclays and activated carbons. Alther said that the use of organoclays in front of activated carbons adsorption systems can extend the service life of the carbon seven to nine times in real-world applications.

Addressing solutions for what currently is a very important topic, methyl tertiary butyl ether (MTBE), Calgon Carbon Corp. staff members Neal Megonnell and Andrew McClure presented information on Filtrasorb 600, a new activated carbon designed to provide superior MTBE adsorption from potable water supplies.

#### Electronic Business

The water treatment industry has seen a rapid advancement in e-commerce. The e-commerce speakers had significant information for attendees about e-business on the Web. Many future developments lie ahead for e-business in the industry and we can expect to see more companies getting involved.

Joseph Ku and Bill Rovesti from United Manufacturing International (UMI) teamed up to discuss Chinese carbon's impact in the world market. Dr. Ku discussed past and present state-of-manufacturing and marketing in China. Dr. Rovesti discussed marketing when the material is important in U.S. distribution channels and steps for ensuring consistent quality of carbon originating in China. Together they discussed plans to develop an e-business to connect Chinese carbons to firms needing this medium. It also

would provide connectivity to associated carbon service providers.

Rich Capp from Professional Analytical Computer Services, Inc., discussed the needs and process to establish an e-business exchange between sorbent manufacturers and suppliers and end-users of products and services. Capp proposed to make this new e-business exchange a service to be delivered by the IACC staff under his leadership. Those interested in being listed as suppliers and purchasers of sorbent media and associated services should contact Capp (Rcapp@aol.com).

Professor John Pinkerton from Geneva College made a presentation addressing the Internet, e-commerce history and future opportunities for the activated carbon industry. He outlined the next generation of the Internet expected from current research and development projects. He expressed the need for an Internet search engine for the activated carbon industry and transaction costs in conventional and the new e-business models. Transaction costs can be reduced from a dollar to a penny, he reported. Dr. Pinkerton also addressed the negative views of e-business and what needs to be done to neutralize these perceived negative aspects.

The final speaker addressing e-commerce and the Internet was Dr. Jenny Servo from Dawnbreaker, Inc., who spoke on commercializing new technologies. She discussed alternative commercialization strategies and the trend of using the Internet. Federal and state agencies now are providing requests for proposals and submission of proposals via the Web.

#### New Methods Development

Methods development for the activated carbon industry was discussed with topics such as data for a new microwave-based ashing method to determine the percent ash in activated carbon samples. Granular, powdered and pelleted activated carbons percent ash using the new microwave determination was compared with the approved American Society for Testing and Materials (ASTM) method, reported Professional Analytical and Consulting Services (PACS). The company reported the new microwave method produced data similar to the ASTM method in a fraction of the time the ASTM method required.

Dr. Ralph Lai from the DOE National Energy Technology Center (NETC) in Pittsburgh, Pa., presented "New Mathematical Concept for the Simulation of Adsorption Isotherms." A unified proportionality equation was introduced to describe the new model. Selected examples in catalysis, kinetics, surface chemistry and adsorption were given for illustration and demonstration of Dr. Lai's new mathematical concept.

Dr. Amos Turk, an IACC Hall-of-Fame awardee, presented a paper titled "Heat of Immersion Test Method: An ASTM Standard?" Dr. Turk provided the important steps in the ASTM process to establish new test methods for the activated carbon industry. ASTM test methods are designed for unused carbons and provide information useful to the purchasing decision for specific applications. The heat-of-immersion test is designed to estimate the remaining adsorption space in unused and partially used carbons. This new test method is

based on the heat given off when the carbon is immersed in a solvent.

Neal Megonnell from Calgon Carbon Corp. discussed the development of a new measurement developed by Calgon to provide proper accounting for an activated carbon's trace removal capacity (TRC). This TRC method allows the ranking of various activated carbons in accordance with their capacity at trace levels. Calgon has available an application bulletin titled *Addition of Trace Capacity Number as a Measure of Carbon Performance in Trace Removal Applications*.

#### Mercury Chemisorption for Remediation

Several speakers dealt with the subject of mercury emissions from electric power plants and water stream applications. The EPA is under Congressional order to decide the extent of mercury regulation.

Professor Terry Collins from Carnegie Mellon University presented "Green Chemistry: Sustaining a High Technology Civilization." Dr. Collins presented a patented way to dechlorinate water and wastewater, a function activated carbon is well-known to accomplish at point-of-use filters for home owners.

#### About the Authors

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### Hall of Fame Award

Gordon Culp received the Hall of Fame Award at a luncheon honoring the new Hall of Fame recipient. Culp has been instrumental in the use of granular activated carbon (GAC) in the municipal potable water industry. Culp, from Smith Culp Consulting in Las Vegas, described the evolution and future of GAC treatment for municipal water and wastewater, predicting that GAC applications will increase substantially because of the increased demand for reclaimed wastewater of high quality, increasingly stringent drinking water regulations for many organic compounds and as an adsorbent/biological filter media for ozonated waters.