



American Chemical Society

Call for Papers

Black Carbon as Geosorbent and Beyond: Contaminant Sorption, Soil Fertilization, and Carbon-Negative Strategy

At 240th ACS National Meeting & Exposition

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Abstract Deadline: **March 22, 2010**

Black carbon such as char, charcoal, and soot is a thermally condensed carbon-rich material that has been recognized as surface active materials impacting the mobility and bioavailability of chemicals in soils and sediments. Black carbon is a normal component of soils and sediments due to atmospheric deposition of soot and natural and human-caused fires. In addition, laboratory/field studies and traditional farming practices suggest that deliberately-added black carbon (as charcoal, “biochar”) can impact soil fertility, crop production, and nutrient availability. Considering the recalcitrant nature of black carbon (mean residence time of hundreds of years or longer in soil), its production on a large scale is a potential strategy for sequestering carbon from the atmosphere and helping to mitigate climate change. Fundamental mechanistic knowledge of the interactions of black carbon with organic and inorganic chemicals of both natural and anthropogenic origin and with biological soil constituents is necessary to predict the roles of black carbon under given environmental settings, and to engineer black carbons that will best meet specific environmental applications. This symposium will bring together researchers investigating black carbon and activated carbon in multidisciplinary fields including contaminant sorption, function as a soil amendment, ecological impacts, and pyrolysis process optimization.

The topics that would be covered in this session include, but are not limited to:

- Sorption structure-reactivity relationships, hysteresis, sorbent aging, and impact of natural substances on sorption processes.
- Interaction of bacteria, fungi, and other organisms with black carbon.
- Design, production, and characterization of useful carbons; *e.g.*, biochar, activated carbon.
- Naturally-occurring black carbon; its decomposition and role in soil ecosystems.
- Economic and environmental impact and energy budget assessment for the commercialization of biochar.

Please submit your abstracts using (<http://abstracts.acs.org>). Any other inquiries should be directed to Symposium Organizers:

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