

Chemical & Environmental Engineering 2009 - 2010 Colloquium Series



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Source Apportionment of Primary and Secondary Organic Aerosol using Molecular Markers

Organic compounds in atmospheric particulate matter have been used in source apportionment models to quantify the sources of carbonaceous aerosol in the atmosphere. The first use of these organic compounds, or molecular markers, was completed in the mid-1990s. Since that time, the knowledge of molecular markers and their use in source apportionment models has significantly advanced. Although laboratory studies of aerosols suggest that molecular markers undergo chemical reactions on the time scale of regional and global transport, atmospheric studies of real world aerosols suggest that these compounds are sufficiently stable for source apportionment calculations. The seminar will provide background on molecular markers and their use in source apportionment models, as well as the intercomparison of molecular marker source apportionment models with other methods that are used to understand the primary and secondary organic aerosol in the atmosphere. Examples of source apportionment models will be provided that cover work in Nepal, Pakistan, the Middle East and Mexico City, and will include the use of molecular markers to understand sources of primary and secondary organic aerosol.

Friday March 5, 2010

9:30 - 10:30 AM

Bourns Hall A265

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