

The Center of Materials and Nanotechnologies (CEMNAT)
cordially invites you to a lecture by

Prof. Philip K. Hopke

Clarkson University New York, USA

"An Introduction to Source Apportionment"

"Úvod do metod identifikace zdrojů atmosferického znečištění"

Date: Monday 13 September 2021

Time: 13:30 – 15:00

Venue: Lecture hall H1, nám. Čs. legií 565, 2nd floor,
FEI building, University of Pardubice

Abstract

Air pollution and particularly particulate pollution from smaller particles (PM_{2.5}, particles with aerodynamic diameters $\leq 2.5 \mu\text{m}$) is now recognized as a major environmental problem resulting in multiple adverse health effects (morbidity and mortality), visibility impairment, ecosystem damage, and climate effects. To adequately manage air quality and reduce the anthropogenic drivers of PM_{2.5}, it is necessary to identify and quantitatively apportion the airborne PM mass to its sources. An important approach to doing source apportionments is with receptor models. These data analysis tools utilize chemical composition data and utilize the specific patterns of chemical constituents in PM to provide quantitative separation of the mass to the identified sources. In this presentation, the evolution of source apportionment from its beginnings in the 1960s up to current capabilities will be described with illustrative examples.

More about Prof. Hopke

Prof. Philip K. Hopke is the Bayard D. Clarkson Distinguished Professor Emeritus at Clarkson University, and former Director of the Center for Air Resources Engineering and Science (CARES), and former Director of the Institute for a Sustainable Environment (ISE). His Scholar h-index is 80, and his 942 papers have been quoted more than 30,000 times.

Prof. Hopke's research interests are in the areas of multivariate statistical methods for data analysis; characterization of source/receptor relationships for ambient air pollutants; sampling, chemical and physical characterization of airborne particles; experimental studies of homogeneous, heterogeneous, and ion-induced nucleation; indoor air quality; and exposure and risk assessment.

