

# EINLADUNG

zum Vortrag von  
**Prof. Dr. Uli Dusek**

Centre for Isotope Research (CIO) - Energy and Sustainability Research Institute  
Groningen (ESRIG), University of Groningen

## An isotope view on sources of carbonaceous aerosols

**am Dienstag, 25. April 2017, um 17:30 Uhr**

Ort: Lise-Meitner-Hörsaal, Fakultät für Physik, Universität Wien,  
1090 Wien, Strudlhofgasse 4 / Boltzmannngasse 5, 1. Stock

*Barrierefreier Zugang: Boltzmannngasse 5, Lift, 1. Stock rechts über den Gang zum Hintereingang des Hörsaals*

Air pollution by microscopic particles (aerosols) is one of the biggest environmental problems today, especially in developing countries and Asia, causing illness and death of millions yearly. Understanding the of organic aerosols, as well as their effect on human health are among the biggest challenges in aerosol research today. After inorganic aerosols were reduced successfully, organic compounds have in many places become the dominant aerosol component, and the complex chemistry of organic aerosols prevents efficient reduction strategies. Many open questions remain regarding the formation, transformation and effects of organic aerosols and new research approaches are needed to answer these questions.



The presentation will focus on the potential of carbon isotopes to shed new light on the sources of organic aerosols. The radioactive carbon isotope  $^{14}\text{C}$  allows to distinguish fossil fuel sources of aerosol from contemporary sources of aerosol. The stable carbon isotope  $^{13}\text{C}$  can trace several other important sources. Results from recent isotope studies in the Netherlands, Brazil, Lithuania, and China will be used to illustrate the promise of these methods, and crucial open research questions will be highlighted.

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