

Synchrotron-XRF in air pollution science: The APART project.

ReferentIn **Nicolas Bukowiecki**

DiskussionsleiterIn **Anke Weidenkaff**

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Inhalt

Trace elements are ubiquitous in ambient air and are subject to ongoing research on possible adverse health effects. Besides the bare health aspect, trace element detection in the sense of fingerprint analysis of different sources has become important in the last years. Fingerprint analysis helps to identify different sources in the complex ambient air mix and is enhanced by techniques with high sensitivity. The APART (Abrasion PARTicles produced by road traffic) aims at finding the contribution of abrasion particles from road, tirewear, brake abrasion etc. The projects makes use of Synchrotron-XRF to obtain hourly elemental mass concentrations, which give specific fingerprint signatures for the various sources. To quantify the different source contributions, the fingerprint measurements are embedded into a large set of aerosol, gasphase, meteorological and traffic count measurements.

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Empa
Überlandstrasse 129
CH-8600 Dübendorf
Telefon + 41 (0)1 823 55 11
Telefax + 41 (0)1 821 62 44
Email contact@empa.ch
Internet www.empa.ch