



Breath analysis workshop

5-6 April 2011

Location: VSL, the Netherlands

The wealth of substances present in an individual's breath can reveal a great deal about the person's health status. Worldwide research is focused on the use of breath analysis for early disease detection. Key to this are the identification of biomarkers of disease and development of sensitive instrumentation to quantify the low levels. The use of laser spectroscopic methods has increased dramatically for this purpose due to recent advances in photonics.

'Breath analysis as a diagnostic tool for early disease detection' is a joint FP7-EURAMET research project focusing on the development of spectroscopic techniques for the identification and accurate quantification of biomarkers in human breath.

The workshop aims to disseminate the results of the project to the wider audience and discuss related research and development topics.

Costs of the workshop are 175 euro and include drinks, lunches, conference dinner and transport from the conference hotel to VSL.

Registration: www.vsl.nl/emrp/breath-analysis/528

For more information contact
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Day 1 (Tuesday 5 April)

10:30-10:50	RECEPTION with COFFEE/TEA
10:50-11:00	Opening
11:00-11:30	Prof. Terence Risby, Johns Hopkins Bloomberg School of Public Health, USA. Real time breath analysis a potential role for infrared laser spectroscopy
11:30-12:00	Dr. Gerard Wysocki, Princeton University, USA, Compact laser spectroscopic trace-gas sensors for breath analysis and air pollution exposure monitoring
12:00-12:30	Dr. Grant Ritchie, Oxford Medical Diagnostics, UK, Studies of human breath mass spectra for biomarker identification in cystic fibrosis: progress and possibilities
12:30-13:30	LUNCH
13:30-14:00	Dr. Sywert Brongersma, Holst Centre, IMEC, the Netherlands, Low-power gas/vapor sensing solutions for wireless autonomous systems
14:00-14:30	Dr. Stefan Persijn, VSL, the Netherlands, <i>Title tba</i>
14:30-15:00	Prof. Patrick McCann, University of Oklahoma, USA, Breath Analysis with Mid-Infrared Diode Lasers
15:00-15:20	COFFEE/TEA
15:20-15:50	Marcus Sowa, Institut für Lasermedizin, Germany, Infrared Cavity Leak-Out Spectroscopy for Biomedical Investigations
15:40-16:20	Dr. Hans Naus, OGS Systems, the Netherlands, Breath analysis: why IR and why Laser?
16:20-16:50	Dr. Jan Petersen, DFM, Denmark, Laser spectroscopic measurements of CO ₂ at 1.57 and 2.04 μm
16:50-17:20	Dr. Frans Harren, Radboud University, the Netherlands, Fast & sensitive multi-component exhaled breath analysis; comparison between laser & mass spectrometer-based methods
19:00-end	DINNER
Day 2 (Wednesday 6 April)	
9:00-9:30	RECEPTION with COFFEE/TEA
9:30-10:00	Dr Olav Werhahn, PTB, Germany, Metrology meets spectroscopy meets breath analysis.
10:00-10:30	Dr. Daniele Romanini, CNRS, France, <i>Title tba</i>
10:30-11:00	Dr. Lars Nielsen, DFM, Denmark, Fitting line profiles to optical transmission spectra of gases
11:00-11:30	Dr. Sacco te Lintel Hekkert, Sensor Sense, the Netherlands, Laser based trace gas detectors; sensitivity outside the lab
11:30-12:00	Prof. Markus Sigrist, ETH, Switzerland, Infrared laser spectroscopy in medical sensing applications
12:00-13:00	LUNCH
13:00-13:30	Dr. Markus Metsälä, University of Helsinki, Finland, HCN in exhaled breath and emitted from skin
13:30-14:00	SenzAir, the Netherlands, Diagnostic potential of breath analysis; biomarker validation and clinical applications
14:00-14:30	Prof. Ove Axner, Umeå University, Sweden, Sub-second detection of ppb concentrations of nitric oxide by Faraday rotation spectrometry based on a cw DFB quantum cascade laser working at 5.33 μm
14:30-15:00	Dr. Jean-Jacques Zondy, LNE-INM-CNAM, France, A 500-GHz mode-hop-free tunable OPO: application to CRDS of CH ₄
15:00-16:15	Tour to VSL laboratories & Drinks