

Air Quality Monitoring
Opening opportunities through
new technologies and data analysis

**Conference with
Posters and Exhibition**

**Organised by the
Automation and Analytical Management Group -
Royal Society of Chemistry**

Wednesday 12th & Thursday 13th December 2012

**At The Royal Society of Chemistry,
Burlington House, Piccadilly,
London W1J 0BA**

**Email: conference@aamg-rsc.org
Website: <http://www.aamg-rsc.org>**

Air Quality Monitoring - Opening opportunities through new technologies and data analysis

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The Royal Society of Chemistry, Burlington House, Piccadilly, London

Introduction

Monitoring of air quality takes place for two related reasons - checking for compliance with legislation, and improving our understanding of air pollution and its effects. While regulatory measurement dominates in terms of national-scale, long-term monitoring, it necessarily entails caution about changing metrics, measuring technologies and monitoring strategies, which may otherwise improve our understanding and, as a consequence, enhance our scope for interventions to improve air quality.

In recent years, many new technologies have been developed that promise valuable information that was not available before, for example highly time-resolved data to improve source attribution. Other developments offer opportunities for new measurement strategies to clarify spatial variations of pollution within cities, or personal exposure. With these developments have come new ways of collecting and analysing data, and synergistic development of models.

This conference will address these developments and the new opportunities that they offer. It will be introduced by internationally recognised experts to set the scene at the national and European level and will bring together leading scientists and policy makers, to provide a broad and up-to-date survey of the measurement, regulatory and scientific issues. The conference will also provide an update on the European-funded AirMonTech project which aims to harmonize current air pollution monitoring techniques and to advise on future monitoring technologies and strategy.

Wednesday 12th December

10:00 Registration

Session 1: An Overview and Discussion on New Technologies and Methods

Chair: **Peter Woods**, NPL, Middlesex, UK

10:30 Air Quality Monitoring Technologies - An Update from the AirMonTech Project Covering their Current State and Emerging Themes

Christophe Hueglin, EMPA, Switzerland and
Ernie Weijers, ECN, Netherlands

11:00 Some Proposed Recommendations for Regulatory Urban Air Quality Monitoring Looking Ahead to 2020

Paul Quincey, NPL, Middlesex, UK

11:30 The Key Air Quality Metrics and Technologies, and Specific Research Needs in Relation to Future Air Quality Monitoring
Thomas Kuhlbusch, IUTA e.V. Germany

12:00 Discussion

12:30 Short Presentations by Exhibitors

13:00 **Lunch - Exhibition & Posters**

Session 2: Non-regulatory networks and data analysis

Chair: **Theo Hafkenscheid**, RIVM, Netherlands

14:00 UK Eutrophying and Acidifying Atmospheric Pollutants Monitoring (UKEAP): Results and Future outlook
Y S Tang, CEH, Edinburgh, UK

14:30 Chemical Climatology: A Brief History and Application to the UKEMEP Supersites
Christopher Malley, CEH, Edinburgh, UK

15:00 Novel Approaches for Extracting Added Value from Large Data Sets of Ambient Pollutant Concentrations
Richard Brown, NPL, Middlesex, UK

15:30 **Tea / Coffee - Exhibition & Posters**

16:00 Recent Data Analysis Developments in the Openair Software Package
David Carslaw, King's College London, London, UK

16:30 The Application of Artificial Neural Networks for Discrete Wavelength Retrievals of Atmospheric Nitrogen Dioxide from Space
James Lawrence, University of Leicester, Leicester, UK

17:00 Biomass Combustion : Tools and Research Needs to Calibrate and Assess Actions Aimed to Improve Air Quality
Joelle Colosio, ADEME, Paris, France

17:30 End of Day One

Thursday 13th December

09:30 Tea /Coffee - Exhibition and Posters

Session 3: PM in the UK

Chair: To be confirmed

10:00 Launch of Defra's Air Quality Expert Group Report on PM_{2.5} in the UK

Paul Monks, *University of Leicester, Leicester, UK*

10:30 Source Apportionment of Airbourne Particulate Matter: Estimation Of the Road Traffic Exhaust and Non-Exhaust Contributions to Particle Number and Mass

Roy Harrison, *University of Birmingham, Birmingham, UK*

11:00 Tea, Coffee - Exhibition

Session 4: New Techniques

11:30 New Highly Resolved Chemical Speciation Measurements of PM in London

David Green, *King's College London, London, UK*

12:00 Measuring ppb Gas Concentrations in Air Quality Networks Using Low Cost Sensors

John Saffell, *Alphasense, Essex, UK*

12:30 Hemispherical Scanning Imaging DOAS: Resolving Nitrogen Dioxide in the Urban Environment

Roland Leigh, *University of Leicester, Leicester, UK*

13:00 Lunch - Exhibition & Posters

Session 5: Soot Measurement

Chair: To be confirmed

14:00 Soot Measurements in Amsterdam: Black Smoke and Black Carbon vs Elemental Carbon

Pavlos Panteliadis, *GGD, Amsterdam, Netherlands*

14:30 Dual-spot Aethalometer: Online Characterization of Aerosol "loading" Effect Parameter K

Luka Drinovec, *Aerosol d.o.o., Ljubljana, Slovenia*

15:00 The Use of a Mobile Platform to Assess the Spatial and Temporal Variability of Urban UFP and BC Concentrations

Joris Van den Bossche, *VITO, Mol, Belgium*

15:30 Tea / Close of Conference

How To Register

Early registration is requested due to limited number of delegate places and catering requirements. Please complete and return the registration form as soon as possible.

Registration Fees:	Non Members	£220
	Member RSC	£185
	Students/Retired	£ 95

The registration fee includes attendance at the meeting together with coffee, lunch and afternoon tea/coffee.

Payment of registration fees:

- By Cheque made payable to: **AAMG-RSC**
- By Credit Card (note that AMEX and DINERS cards are not accepted)

Venue

The Royal Society of Chemistry
Burlington House,
Piccadilly
London W1J 0BA

Maps and details will provided upon registration

Registration Contact

Conference Secretary, AAMG-RSC, PO Box 174, Manchester M24 4XZ, UK
Email: conference@aamg-rsc.org Fax: +44 (0) 161 610 3939

AAMG Treasurer

Dr R Narayanaswamy, address as above
Tel +44 (0) 7974 515265 Fax: +44 (0) 161 610 3939

Notes

- 1) Fees are not normally refundable but are transferable. If for any reason the organisers should cancel the conference then fees will be refunded.
- 2) The registration fee includes attendance at the meeting together with coffee, lunch and afternoon tea/coffee, as appropriate.
- 3) The organisers reserve the right to alter the programme.

Data Protection Act. The information on this form will be retained (1) for the purpose of administering this meeting, in particular for producing a list of participants for distribution at the meeting, and (2) in order that information on future meetings can be sent to you. Please write to the meeting contact if you object.

Registration Form

Please complete this form after referring to the registration information and return by post, fax or email to:

AAMG-RSC, PO Box 174, Manchester. M24 4XZ, UK
Fax No: +44 (0) 161 610 3939 Email: conference@aamg-rsc.org

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Delegate Name & Title

Position

Organization

Address

Post Code

Telephone No:

Fax No:

Email

Special Requirements

Signature

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	Member RSC	£185
	Student/Retired	£ 95

Payment:

(Please tick payment method)

By Cheque

Please make cheque payable to: **AAMG-RSC**

Credit/Debit Card

Please complete details below

Credit Card Details (Please note that AMEX or DINERS cards cannot be accepted)

Card Type: Visa Mastercard Maestro

Card Number:

Valid from

Expiry Date

Card Issue No: (Maestro only)

Card Security Code (last 3 digits on reverse of credit card):

Cardholder Name

Statement Address

Post Code

Contact Tel No (not mobile)

Signature of Cardholder

Date