



COST

European Network on New Sensing Technologies for Air Pollution Control and Environmental Sustainability - *EuNetAir*

COST Action TD1105

WGs and MC Meeting at Cambridge, 18-20 December 2013

Action Start date: 01/07/2012 - Action End date: 30/06/2016

Year 2: 1 July 2013 - 30 June 2014 (*Ongoing Action*)

Research and Innovation Needs of SIG1

Agenzia nazionale per le nuove tecnologie,
l'energia e lo sviluppo economico sostenibile

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EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY



European Network on New Sensing Technologies
for Air-Pollution Control and Environmental Sustainability



Challenges in Air Quality Control

- Low power devices, long lifetime and maintenance free
- Convince the market that new air quality network can improve the quality of life.
- Engage the citizens through citizens observatories.
- Convince the public institutions of the impact of odour nuisance.
- To work in harsh environments.

Research Goals in Air Quality Control

Already listed in Research Needs of WGs !!

- Greater communication distances for wireless network of sensors.
- New sensors for odour assessment.
- Air-quality case-studies, stability assessment.
- Calibration strategies for low cost sensing devices.
- Work on POP (persistent organic pollutant) detection.
- Biosensor based on enzyme for dioxin and POP, work on POP detection.
- Chemical and radiation environmental monitoring.
- Ozone (O₃) sensors, NO_x and CO and CO₂ sensors for automotive application.
- Improve stability of available sensors, compatibility with CMOS microelectronics, soft CMOS post-processing methods for reproducible high throughput manufacturing.
- Toxic and explosive (hydrogen) gas leakage.
- VOC detection developing sensors modules and sensor systems.
- Indoor air quality control, leak detection.
- Odour monitoring system (odour telephone).
- Enhancement of the sensing properties by introducing functional receptive groups.
- Coupling different transduction modes in the same device.

Priority Innovation Requirements in Air Quality Control

- Evaluate market opportunities for encouraging EU investment in specific topic of AQC and direct SME, RD effort.
- Develop legislation in different areas of air quality control.
- Push the creation, extension and adoption of regulations (i.e. methodologies, guidelines) at EU levels.
- Low cost devices and easy to use for odour monitoring.
- Training school for new “*ambassadors*” that can promote air quality management.
- Engage the citizens of the AQC concept.
- Education and dissemination of AQC concept (schools, institutions, sales, politicians, ONG, etc.).

Proposed activity from SIG1 during UCAM Meeting

- News for SME and spin-off on research opportunities.
- Periodical survey on recent relevant patents on AQC topics.
- Lobbying in AQC on specific topics.
- Promote partnership instruments.
- Connection with local and regional TT network to intercept opportunities.
- Communication of business opportunities.
- LinkedIn group of SIG1 (with no email alert !!).
- Partnership and common link with EEN organization.

CONCLUSIONS

IT IS A HUGE AMOUNT OF WORK !!

