

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

COST Action TD1105

WGs & MC Meeting at PRAHA (CZ), 5-7 October 2016

New Sensing Technologies for Air Quality Monitoring

Action Start date: 01/07/2012 - Action End date: 30/04/2016 - Year 4: extension – 30/11/2016

SIG 1 SUMMARY REPORT OF ACTIVITIES



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

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EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY





Context of the SIG-1

- Special Interest Group 1 – Network of spin-off – involve, at present, 11 spin-off and/or start-up from 8 different COST Countries that develop their economic activities on the four principal areas of the Action (Sensor Material and Nanotechnology, Sensors, devices and systems for AQC, Environmental measurements and air-pollution modelling, protocols and standardisation methods).
- The network **will favour the reciprocal exchanges for knowledge transfer towards industrial and project partnership** and will be useful to **boost the exploitation of the research results** and to promote technology transfer towards new business models based on green economy and environmental sustainability.



Objectives of the SIG-1

- Favour reciprocal knowledge between innovative SME in the field of AQC
- Contribute to the state-of-the-art report focusing on actual technology needs, future perspectives, integration possibilities, standards, protocols and guidelines for future agenda
- Mapping the similar or complementary industrial organizations (i.e., spin-off, start-up, spin-out etc.) in the EU area involved in the fields covered by the Action
- Define and propose new cooperative instruments for EU spin-offs and innovative SME
- Support to define Action position papers in the knowledge transfer in air quality control (AQC) issues for future research and innovation agenda

Activities of the SIG 1

- Information on EU instruments and opportunities (EEN, Call, Program etc.)
- Collection of the Research Products of the SME in the Action
- Collection of the R@I needs
- List of the Research Goals and Challenges for Spin-off and SME
- Create a Focus Group on Innovation in Sensors
- Creation of a virtual linked community
- Presentation of the SIG1 to the Conference « COST Actions: A great opportunity as incubator » Bruxelles = 2014
<http://www.cost.eu/events/actionsincubators>

<https://youtu.be/BkZdCwHygQw>



Name:.....Surname:.....
Institution/Company and Country:.....
e-mail:.....
(Contact details of one who fills out the format)

SIG 1 - Network of Spin-offs
RESEARCH GOALS AND INNOVATION REQUIREMENTS

CHALLENGES

Please describe the main CHALLENGES in your opinion and in your specific field of expertise with regard to Air Quality Control (maximum 2000-3000 characters including spaces)



FOCUS GROUP Meeting on Innovation on Environmental Sensor Technologies



Focus Group Meeting
of COST Action TD1105
organized by
SIEMENS AG - Corporate Technology
Otto-Hahn-Ring 6,
81739 Munich, Germany



MEETING VENUE:
SIEMENS AG
Meeting Room: 31425
Otto-Hahn-Ring 6,
81739 Munich, Germany



Research Goals in Air Quality Control

- 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, NGO, etc.).



THANKS FOR YOU ATTENTION!