

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

COST Action TD1105

4th MC Meeting at Queens' College

University of Cambridge

Cambridge, 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*)

 **cost**
EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY



Michele PENZA

Function in the Action: Chair

ENEA / Italy



1. Welcome to Participants

SECOND SCIENTIFIC MEETING
 Working Groups and Management Committee
 University of Cambridge, Queens' College, 18 - 20 December 2013
 Queens' College, Silver Street, CB3 9ET, Cambridge, UK

GENERAL PROGRAMME

- **Participating Parties: 28**
- MC Meeting Participants: 40+ (TBC)

Meeting AGENDA					
18 Dec. 2013 - Wednesday					
08:30 - 18:00		REGISTRATION			
09:00 - 10:00		WELCOME SESSION			
10:00 - 11:00		PLENARY SESSION 1			
11:00 - 11:30		<i>Coffee-Break</i>			
11:30 - 13:00		PLENARY SESSION 2			
13:00 - 14:00		<i>Lunch</i>			
14:00 - 15:00		POSTER SESSION 1			
15:00 - 17:00		WG1 Meeting	WG2 Meeting	WG3 Meeting	WG4 Meeting
17:00 - 17:30		<i>Coffee-Break</i>			
17:30 - 18:30		WG1 Meeting	WG2 Meeting	WG3 Meeting	WG4 Meeting
18:30		<i>Gathering of Day</i>			
20:30 - 23:00		<i>Social Dinner at Old Hall in Queens' College</i>			
19 Dec. 2013 - Thursday					
09:00 - 18:00		REGISTRATION			
09:00 - 09:30		Wrap-Up and Inputs from Action TD1105			
09:30 - 11:00		SIG1 Meeting	SIG2 Meeting	SIG3 Meeting	SIG4 Meeting
11:00 - 11:30		<i>Coffee-Break</i>			
11:30 - 13:00		SIG1 Meeting	SIG2 Meeting	SIG3 Meeting	SIG4 Meeting
13:00 - 14:00		<i>Lunch</i>			
14:00 - 15:00		POSTER SESSION 2			
15:00 - 16:00		Action WGs GENERAL ASSEMBLY			
16:00 - 17:00		Action SIGs GENERAL ASSEMBLY			
17:00 - 17:30		<i>Coffee-Break</i>			
17:30 - 18:30		Round-Table and DISCUSSIONS			
20:30		<i>Free Dinner</i>			
20 Dec. 2013 - Friday					
09:00 - 13:00		MANAGEMENT COMMITTEE MEETING			
13:00 - 14:00		<i>Lunch</i>			
14:30		Meeting Closing			

2. Adoption of Agenda

Draft Agenda
4th Management Committee Meeting
COST Action TD1105

European Network on New Sensing Technologies for Air-Pollution Control and Environmental Sustainability
University of Cambridge, Queens' College, Silver Street, CB3 9ET, Cambridge, UK
20 December 2013, 9:00 - 14:30

To be completed by the meeting secretary and circulated to the MC, the DC Rapporteur(s) and the COST Office (Science and Administrative Officer)

Any new Topics to be introduced in Agenda ?

Planned Coffe-break after discussion of the issue 8. APC (from DC)

1. Welcome to participants
2. Adoption of agenda
3. Approval of minutes and matters arising of last meeting
4. Update from the Action Chair
 - a. Status of Action, including participating countries
 - b. Action budget status
 - c. STSM status and new applications
5. Promotion of gender balance and of Early Stage Researchers (ESR)
Update from the Grant Holder
6. Update from the COST Office
7. Update from the DC Rapporteur
8. Annual Progress Conference (preparation and/or feedback from DC)
9. Follow-up of MoU objectives
 - a. Progress report of working groups
10. Scientific planning
 - a. Scientific strategy
 - b. Action Budget Planning
 - c. Long-term planning (including anticipated locations and dates of future activities)
 - d. Dissemination planning (Publications and outreach activities)
11. Requests for new members
12. Non-COST applications to the Actions
13. AOB
14. Location and date of next meeting
15. Summary of MC decisions
16. Closing

3. Approval of minutes and matters arising of last meeting

DOODLE Survey to

- **Minutes of 3rd MC Meeting (Barcelona, 21 June 2013)** *launched on July 2013. Hardpaper file circulated in MC.*
- **Yearly Financial Report (YFR) (1 July 2012 - 30 June 2013)** *closed on November 2013. Hardpaper file sent to the Action two Financial Rapporteurs (Eduard Llobet, Ivan Nedkov) for checking and signature, as requested by COST procedure.*

MC needs to approve:

- **3^o MCM Minutes (Barcelona)**
- **YFR Year 1 (1 July 2012 - 30 June 2013)**

3. Approval of minutes and matters arising of last meeting

- **Annamaria Demarinis, as Action Scientific Secretary, is eligible to be reimbursed for MC Meetings, if MC approves.**
- **COST Office is agrees, if MC approves.**

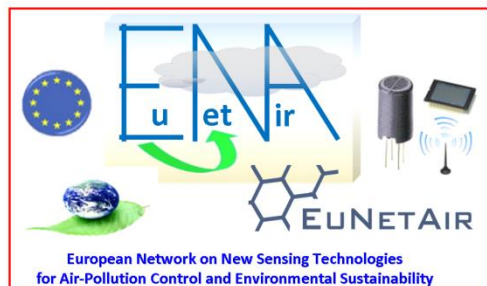
MC approves ?

to be included in the 4° MCM Minutes (Cambridge)

4. Update from the Action Chair

a. Status of Action, including participating Countries

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- **CSO Approval:** 01 Dec. 2011
- **Kick-off Meeting:** 16 May 2012
- **Start of Grant:** 01 July 2012
- **End of Grant:** 30 June 2016

www.cost.eunetair.it

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EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY

MC Chair:

Dr. Michele Penza, ENEA, IT
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MC Vice Chair:

Prof. Anita Lloyd Spetz
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Rapporteur ESSEM:

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Rapporteur MPNS:

Prof. Joaquim Manuel Vieira (PT)
jvieira@cv.ua.pt

Rapporteur CMST:

Prof. Antonio Lagana (IT)
lagana05@gmail.com

4. Update from the Action Chair

a. **Status** of Action, including participating Countries



PARTIES

Already accepted MoU: 28 Countries

Austria, Belgium, Bulgaria, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Latvia, The Former Yugoslav Republic of Macedonia, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom.

Non-COST Countries

Australia, Canada, China, Morocco, Russia, Ukraine, USA

MC is informed on the new COST Parties: AT

New procedure e-COST introduced by coming COST Vademecum

Country

MC Members (52): Male (73%) - Female (27%)

Austria	Dr. Anton KOCK
Belgium	Dr Jan THEUNIS; Dr Anne-Claude ROMAIN
Bulgaria	Dr Dimiter SYRAKOV; Dr Ivan NEDKOV
Czech Republic	Dr. Vera KURKOVA; Dr. Zdenek ZELINGER
Denmark	Prof. Ole HERTEL
Finland	Prof. Kaarle HAMERI; Prof. Jyrki LAPPALAINEN
France	Prof. Marcel BOUVET; Prof. Jerome BRUNET
Germany	Prof. Andreas SCHUETZE; Dr Corinna HAHN
Greece	Prof. George PAPADOPOULOS; Prof. Kostas KARATZAS
Hungary	Ms Krisztina LABANCZ; Dr Zita FERENCZI
Iceland	Dr Arngrimir THORLACIUS
Ireland	Dr. Francesco PILLA; Prof. John WENGER
Israel	Dr. Liad ORTAR; Prof. Hossam HAICK
Italy	Dr Michele PENZA; Prof. G. SBERVEGLIERI; Dr. G. DE GENNARO
Latvia	Dr Iveta STEINBERGA
Macedonia Rep.	Dr. Igor ATASANOV; Dr. Ljupcho GROZDANOVSKI
Netherlands	Dr Sywert BRONGERSMA; Dr. Ernie WEIJERS
Norway	Dr Nuria CASTELL BALAGUER; Dr. Philipp SCHENEIDER
Poland	Dr Monika KWOKA; Prof. Janislaw GAWRONSKI
Portugal	Prof. Bernadete RIBEIRO; Prof. Carlos BORREGO
Romania	Dr Marcel IONICA; Dr Roxana Mioara PITICESCU
Serbia	Dr. Anka CVETKOVIC
Slovenia	Dr Grisa MOCNIK; Dr Raheela ZABKAR
Spain	Prof. Juan Ramon MORANTE; Prof. Eduard LLOBET VALERO
Sweden	Prof. Anita LLOYD SPETZ; Prof. Ingrid BRYNTSE
Switzerland	Dr Danick BRIAND; Dr. Nicolas MOSER
United Kingdom	Dr John SAFFELL; Prof. Roderic JONES
Turkey	Prof. Zafer ZIYA OZTURK; Prof. Mehmet Fatih DANISMAN

MC Chair: Michele Penza, ENEA, IT

MC Vice Chair: Anita Lloyd Spetz, Linkoping University, SE

Grant Holder: Eurice GmbH, Saarbrucken, DE

Country

MC Substitutes (27)

Austria	Dr Stefan DEFREGGER
Belgium	Dr Julien DELVA
Czech Republic	Dr. Roman NERUDA
Denmark	Dr. Lise Lotte SORENSEN
Finland	Prof. Jorma KESKINEN
France	Dr Jean SUISSE Prof. Alain PAULY
Germany	Dr. Daniela SCHONAUER-KAMIN Dr. Thomas KUHMBUSCH
Greece	Prof. George KIRIKIADIS Dr. Roberto SIMMARANO
Italy	Dr. Marco ALVISI Dr. Saverio DE VITO
Netherlands	Dr. Rene OTJES
Poland	Prof. Jacek SZUBER
Portugal	Dr. Joao Paulo TEIXEIRA
Romania	Dr. Cristina RUSTI Dr. Marcel Adrian IONICA
Slovenia	Prof. Andrej DOBNIKAR
Spain	Prof. Albert ROMANO-RODRIGUEZ Dr. Jordi LLOSA
Sweden	Dr Ulf THOLE Dr. Marina VOINOVA
Switzerland	Dr Christoph HUEGLIN
UK	Prof. Julian GARDNER Dr Robin NORTH Prof. Florin UDREA

MANAGEMENT COMMITTEE
Kick-off Meeting at Brussels on 16 May 2012

COST Action TD1105 EuNetAir: WORKING GROUPS

WG1: Sensor materials and nanotechnology	Sub-WG1.1: Metal oxides nanostructures for AQC fas sensors
	Sub-WG1.2: Carbon nanomaterials for AQC gas sensors
	Sub-WG1.3: Emerging sensor materials (organic/inorganic, hybrid, nanocomposites, polymers, functional)
WG2: Sensors, devices and systems for AQC	Sub-WG2.1: Gas nanosensors and new transducers
	Sub-WG2.2: Portable gas sensor-systems
	Sub-WG2.3: Wireless technology and AQC sensors network
	Sub-WG2.4: Intelligence algorithms and distributed computing for networked AQC gas sensors
WG3: Environmental measurements and air-pollution modelling	Sub-WG3.1: Environmental measurements at laboratory and in field air-quality stations
	Sub-WG3.2: Air-quality modeling and chemical weather forecasting
	Sub-WG3.3: Harmonisation of environmental measurements
WG4: Protocols and standardisation methods	Sub-WG4.1: Protocols, standards and methods for AQC by analyzers/instruments (no-sensors) technologies
	Sub-WG4.2: Protocols, standards and methods for AQC by sensors (no-analyzers) technologies
	Sub-WG4.3: Benchmarking of new products and market of commercial AQC sensors

4. Update from the Action Chair - a. **Status** of Action

- **SIG 1**: *Network of Spin-offs*
- **SIG 2**: *Smart Sensors for Urban Air Monitoring in Cities*
- **SIG 3**: *Guidelines for Best Coupling Air Pollutant-Transducer*
- **SIG 4**: *Expert comments for the Revision of the Air Quality EU Directive*



Special Interest Groups

Ad-Hoc Groups



MANAGEMENT COMMITTEE:

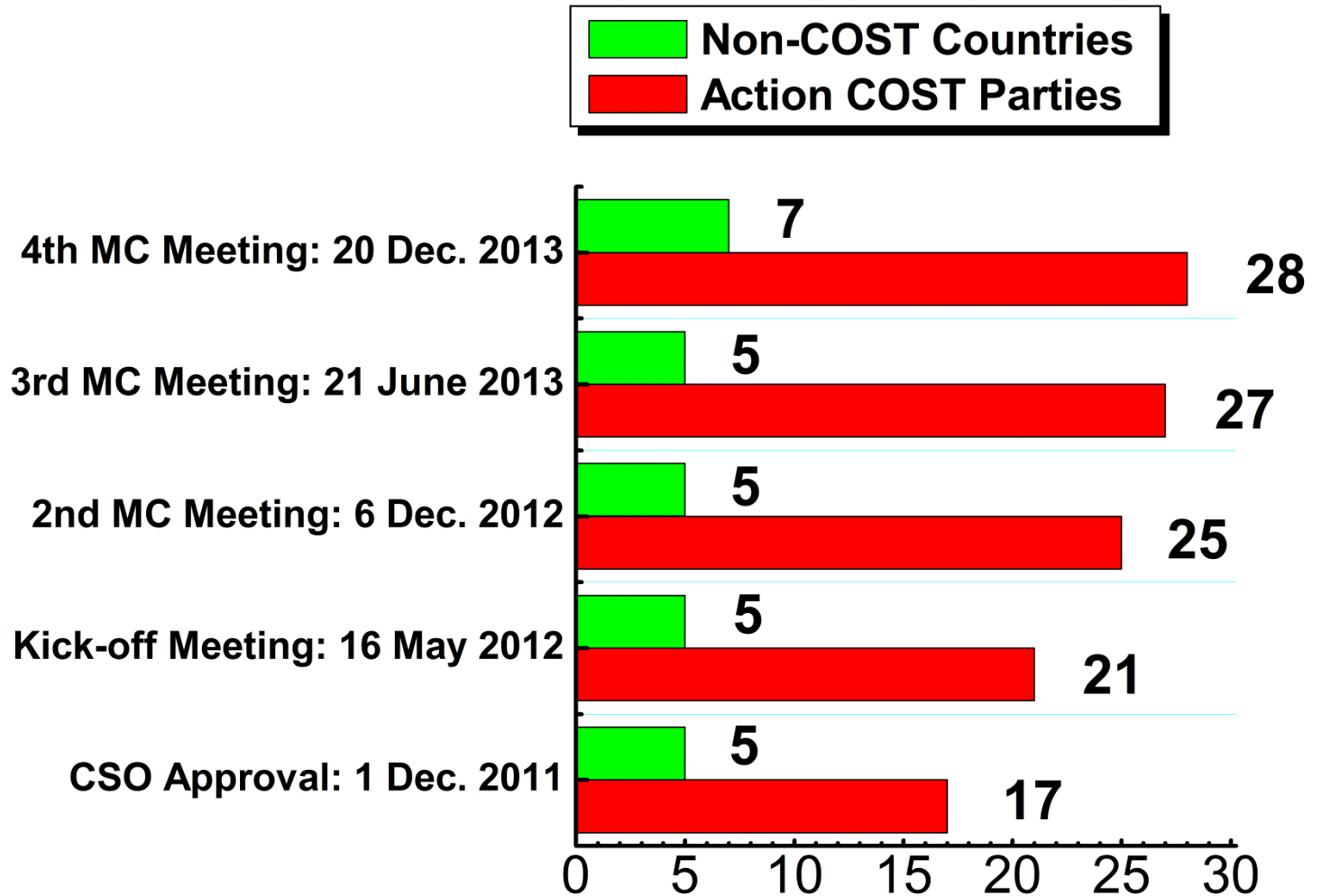
CORE-GROUP & STEERING COMMITTEE

- *Editorial Board*
- *Dissemination Committee*
- *Training Schools Committee*
- *Gender Balance Committee*
- *Short-Term Scientific Mission (STSM) - Early Stage Researchers (ESR) Committee*
 - *Intellectual Property Rights (IPR)*
 - *Local Organizing Committee (LOC)*
 - *International Stakeholders*

4. Update from the Action Chair

a. **Status** of Action, including participating Countries

COST Action TD1105 EuNetAir is growing up



4. Update from the Action Chair

c. **STSM status** and new applications

CALL for Short Exchange Visits (STSM - Short Term Scientific Mission)

- **2° Call launched September 2013**
- Second Period: **1 July 2013 - 30 June 2014**

New Sensing Technologies for Air-Pollution Control and Environmental Sustainability

- functional nanomaterials, advanced gas sensors, sensor-systems, artificial intelligence for gas sensing, air-quality modeling, environmental measurements, chemical weather forecasting, standards, methods and protocols for air quality control
- **Who ?**
 - **1. Early Stage Researchers (High Priority)**
 - 2. Experienced scientists
 - assure gender balance, promote “women in science and technology”

4. Update from the Action Chair

c. **STSM status** and new applications

CALL for Short Exchange Visits (STSM - Short Term Scientific Mission)

- **Where ?**
 - a) *To an Institution in another COST participating Country or formally approved host institution in a Non-COST Country*
 - b) *From a formally approved Home Institution in a Near Neighbour Country (NNC) to another COST participating Country.*

**Additional resources from Action Budget
to fund more STSMs (from 15 to >15).**

- Travelling costs and subsistence:
- Travel: 300 EUR recommended
- Subsistence: 60 to 90 EUR / day
- max. 2500 EUR (max 3500 EUR for ESR)
- Paid after approval scientific report

1 month visits

30 days at 60 €/day	2.100 €
travel	300 €
total	2.400 €

2 visits

4.800 €

1 week (5 days) visits

5 days at 90 €/day	450 €
travel	300 €
total	750 €

4 visits

3.000 €

total

7.800 €

Total budget

8.000 €

4. Update from the Action Chair

c. **STSM status** and new applications

CALL for Short Exchange Visits (STSM - Short Term Scientific Mission)

- **When ?**
 - Open call
 - Periodic decision every 2 - 3 months
 - 01/01/2014
 - 01/04/2014
 - 30/04/2014 (*depending on available budget*)
 - At least 3-4 weeks before the mission starts
- **How ?**
 - E-mail to COST Action TD1105 Chair – verification of eligibility
 - On-line Registration of applicant (<https://e-services.cost.eu/stsm>)
 - Send Application
 - Assessment and selection
 - More Info on Call for STSM on the Action website (www.cost.eunetair.it)

4. Update from the Action Chair

c. **STSM status** and new applications

Total budget Year 2: 25.800 EUR

Granted up to Now: 14.000 EUR

→ 15 STSMs planned in the W&B Plan Year 2

→ 7 STSMs have been granted and carried out

- Improvement of atmospheric microsensor prototypes and software development for managing their operation
- Cambridge Air Pollution Sensor Network
- Test of LTCC based devices for detection of content of particles
- Sensing and filtering properties of nanocarbonaceous materials for the development of relevant sensor-systems dedicated to environmental air monitoring
- Functionalized nanocarbonaceous materials for sensing and filtering properties towards VOCs
- p-Type sensing metal oxides
- Environmental measurements and air-pollution modeling. PART II

→ 1 STSM have been granted and will be carried out Feb 2014

- Single Nanowire contacted by Electron Beam Lithography

→ 2 pending applications for evaluation early January

- Evaluation of micro-sensors against standard methods for air quality control during field campaigns
- Implementation of nanostructured MOX gas sensors on plastic foil substrate and its integration

→ Deadlines for next STSMs Applications: 01/01/2014 and 01/04/2014

http://www.eunetair.it/cost/documenti/COST_TD1105_Call-STSM_Year2_FINAL_V2.pdf

4. Update from the Action Chair c. STSM status and new applications

- 10 STSMs approved and ongoing in the Action TD1105 (Year 2) (1/2)

Nr	ESR Applicant	Topic of STSM	Tutor of Home Institution	Tutor of Host Institution	Period of STSM Duration of STSM	Grant requested	NOTE
1	Siamak Aram PhD Student Siamak.aram@polito.it	Improvement of atmospheric microsensor prototypes and software development for managing their operation	Eros Pasero; Politecnico di Torino, Turin (IT)	Kostas Karatzas, Aristotle University of Thessaloniki, Thessaloniki (EL), kkara@eng.auth.gr	26 Aug - 26 Sept 2013 1 Month	1400 €	Approved by STSM Committee 20/08/13
2	Michael Mueller Postdoc EMPA michael.mueller@empa.ch	Cambridge Air Pollution Sensor Network	Christoph Hueglin, EMPA (CH)	Roderic Jones, Department of Chemistry, University of Cambridge, Cambridge (UK), rlj1001@cam.ac.uk	1 - 21 Sept 2013 3 Weeks	2500 €	Approved by STSM Committee 20/08/13
3	Christian Bur joint PhD student at Saarland University, Germany and Linking University, Sweden c.bur@lmt.uni-saarland.de	Test of LTCC based devices for detection of content of particles	Andreas Schütze, Lab. for Measurement Technology, Saarland University, Campus A5 1, D-66123 Saarbrücken (DE)	Jari Juuti, Microelectronics and Material Physics Laboratories, Oulu University, Oulu (FI), jajuu@cc.oulu.fi	6 - 18 Oct 2013 2 weeks	1900 €	Approved by STSM Committee 20/08/13
4	Amadou Ndiaye Postdoctoral researcher amalat2005@yahoo.fr	Sensing and filtering properties of nanocarbonaceous materials for the development of relevant sensor-systems dedicated to environmental air monitoring	Institut Pascale, Université Blaise Pascal, Clermont-Ferrand (FR)	Marco Alvisi, ENEA, Brindisi, (IT), marco.alvisi@enea.it	22th to 27th September 2013 1 week	1000 €	Approved by STSM Committee 09/09/13
5	Jerôme Brunet Associate Professor brunet@univ-bpclermont.fr	Sensing and filtering properties of nanocarbonaceous materials for the development of relevant sensor-systems dedicated to environmental air monitoring	Institut Pascale, Université Blaise Pascal, Clermont-Ferrand (FR)	Michele Penza, ENEA, Brindisi, (IT), michele.penza@enea.it	22th to 27th September 2013 1 week	1000 €	Approved by STSM Committee 29/08/13
6	Vassilis Binas Post-doctoral research associate binasbill@iesl.forth.gr	p-type sensing metal oxides	George Kiriakidis Foundation for Research and Technology - FORTH / Institute of Electronic Structure and Laser, Ionias 1, Heraklion, Crete (EL)	Barbara Malic, Jozef Stefan Institute, Electronic Ceramics Department, Ljubljana (SI), Barbara.malic@ijs.si	8 - 30 Sept 2013 3 weeks	2500 €	Approved by STSM Committee 29/08/13

Inputs from Action GB Committee

In the action (TD1105) **about 25% of the participants are female**, which is in line with the fact that technological and scientific sector of this action is male-dominated. In order to approach a 50% gender balance, for example the Management Committee Vice-Chair, Prof. Anita Lloyd Spetz, is female.

To achieve better gender balance in Working Groups women researchers are encouraged to participate in Short Term Scientific Missions, Training Schools and the overall COST actions.

During Rome meeting (Dec. 2012) only 20% of speakers were females. Also, the Rome SIG4 session were composed by 60% female speakers. Finally, significant progress in gender balance at Duisburg meeting (March 2013) was achieved with 45% of female speakers.

In last meeting **at EEA in Copenhagen** (October, 3-4, 2013), a substantial number of female speakers participated. Sessions were chaired to almost 45% by females, and 34% of session presenters were female speakers. The highest numbers of female speakers were in sessions concerning **Environmental Measurements and Modelling** (Session 7) and **Standardization of Methods for Air-Pollution Commercial Sensors** (Session 9).

5b. Promotion of Early Stage Researchers (ESRs)

Social Scientific ESRs Network (SSEN) by LinkedIn

- Open Group on [LinkedIn "EuNetAir"](#), launched in October 2012.
- Aim: to promote connections between EuNetAir COST Action's ESRs, to create a community connecting ESRs for current and future Science and Technology activities on AQC Technologies, **not only from inside Action but also outside Action community.**
- Invitations sent out to Action participants and members.
- **> 60 Participants** to date.

The screenshot shows the LinkedIn interface for the 'EuNetAir' group. At the top, the LinkedIn logo and navigation menu are visible. The group name 'EuNetAir' is prominently displayed. Below the group name, there are tabs for 'Discussions', 'Members', 'Promotions', 'Jobs', 'Search', 'Manage', and 'More...'. The 'Members' tab is selected, showing a list of 9 members. The members listed are: Maria del Mar Viana (YOU), Michele Penza (1st), Nuria Castell-Balaguer (1st), Annamaria Demarinis (2nd), Thomas Kuhbusch (2nd), Gallium L., and Marco A. Each member profile includes a small profile picture, name, and a brief description of their research or location. On the left side of the group page, there is a 'Search members' section with a search bar and a 'Search' button. Below that is a 'Group Statistics' section with a blue banner that says 'CHECK OUT INSIGHTFUL STATISTICS ON THIS GROUP' and a large number '759' representing the number of members. There is also a 'New Members: Last 7 Days' section showing a list of new members, including Marco Alvisi.

MORE ESRs TO BE LINKED !

Mar Viana and Mariacruz Minguillon
Early Stage Researcher Evaluation Committee
Social Scientific ESRs Network Moderator

4. Update from the Action Chair

b. Action budget status

Status of the First Year

- Total instalment from COST Office to GH UNIBA for the First Year: **161,600 EUR** (Action Budget for the period: **1 July 2012 - 30 June 2013**);
- In **November 2013** the Final Financial Report has been approved by COST Finance Department and the GH UNIBA has to transfer back the **Unused Funds as EUR 25,412.35**



FP7 Grant - Yearly Financial Report (YFR)				
COST Action Number and Title	TD1105 - European Network on New Sensing Technologies for Air-Pollution Control and Environmental Sustainability - EuNetAir			
Period of reporting	2012-07-01 to 2013-11-29			
Grant Holder (institution)	University of Bari "Aldo Moro"			
Grant Holder (contact person)	Dr Gianluigi DE GENNARO			
Grant Holder (country)	Italy			
Cash Payments from ESF-COST to the Grant Holder				
		From	To	
(1)	Grant Duration	2012-07-01	2013-06-30	
(2)	Grant Budget	139,900.00 EUR		
	Total Budget Increase	21,700.00 EUR		
	Total Budget	161,600.00 EUR		
		Payments BUDGET	Payments ACTUALS	Date Paid
(3)	Payments Schedule			
	(3.1) First Payment	105,040.00 EUR	90,935.00 EUR	2012-08-14
	(3.2) Second Payment	56,560.00 EUR	70,665.00 EUR	2013-04-23
(4)	Sub-total payments	161,600.00 EUR	161,600.00 EUR	
			Actuals+Accruals	Total
(5)	Eligible costs till 2013-11-29		136,187.65 EUR	136,187.65 EUR
(6)	Outstanding balance / Carry-over			
	Carry-over to next period		-25,412.35 EUR	-25,412.35 EUR
(7)	In favour of the Grant Holder			

As reported in the Yearly Financial Report:

Table 1 - Eligible costs	Contract Budget EUR a	Actuals EUR b	Accruals EUR c	Total eligible EUR d=b+c	Delta EUR g=d-a
A. Science Expenditure					
A1. Total Meetings (*)	109,765.00	82,174.84	0.00	82,174.84	-27,590.16
A2. Total STSMs (*)	10,000.00	17,125.00	0.00	17,125.00	7,125.00
A3. Total Training Schools (*)	16,000.00	16,553.54	0.00	16,553.54	553.54
A4. Total Dissemination, publications (*)	4,000.00	2,586.00	0.00	2,586.00	-1,414.00
A5. Total OERSA(**) (*)	835.00	50.62	0.00	50.62	-784.38
Total Science Expenditure (sum: A1 to A5)	140,600.00	118,490.00	0.00	118,490.00	-22,110.00
B. FSAC (Max. 15% of A) (***)	21,000.00	17,697.65	0.00	17,697.65	-3,302.35
C. Total Eligible Costs (= A+B)	161,600.00	136,187.65	0.00	136,187.65	25,412.35

Details for meetings expenditure:

Total Meetings		Paid	Accruals	Total
Meeting 1	Cracow, 14/09/2012	3884.10 EUR	0.00 EUR	3884.10 EUR
Meeting 2	Halkidiki, 29/09/2012	2609.42 EUR	0.00 EUR	2609.42 EUR
Meeting 3	Crete, 21/10/2012	3890.10 EUR	0.00 EUR	3890.10 EUR
Meeting 4	Rome, 04-06/12/2012	35353.17 EUR	0.00 EUR	35353.17 EUR
Meeting 5	Duisburg, 04-06/03/2013	16915.68 EUR	0.00 EUR	16915.68 EUR
Meeting 6	Barcelona, 20/06/2013	2807.77 EUR	0.00 EUR	2807.77 EUR
Meeting 7	Barcelona, 21/06/2013	16714.60 EUR	0.00 EUR	16714.60 EUR
Total		82174.84 EUR	0.00 EUR	82174.84 EUR

YFR Year 1: Details for STSMs expenditure:

Name of scientist	M/F	Home Institution	Host Institution	ESR	Start Date	End Date	Days	Amount
List of paid STSMs								
Ms Simona Catino	F	LEnviroS Ltd, IT	Center for Environmental Biology SIIAF - Stable Isotopes and Instrumental Analysis Facility, PT	Yes	15/04/2013	15/05/2013	31	2100.00
Mr Martin Kunz	M	Max-Planck-Institute for Biogeochemistry, DE	SenseAir AB, SE	Yes	17/04/2013	14/05/2013	28	2300.00
Ms Ana Sofia Godinho Da Fonseca	F	Institute of Environmental Assessment and Water Research (CSIC), ES	University of Helsinki, Division of Atmospheric Sciences, FI	Yes	02/05/2013	02/06/2013	32	2000.00
Ms Mariola Brines Perez	F	Institute of Environmental Assessment and Water Research IDAEA-CSIC, ES	University of Helsinki, Division of Atmospheric Sciences, Department of Physics, FI	Yes	03/05/2013	10/05/2013	8	850.00
Ms Vania Martins	F	IDAEA-CSIC, ES	University of Helsinki, FI	Yes	04/05/2013	10/05/2013	7	750.00
Mr Victor Epitropou	M	Aristotle University of Thessaloniki, EL	Finnish Meteorological Institute, FI	No	12/05/2013	18/05/2013	7	1200.00
Dr Amgrimur Thorlacius	M	Agricultural University of Iceland, IS	University of Bergen, Institute of chemistry, NO	No	12/05/2013	02/06/2013	22	1775.00
Dr Jens Eriksson	M	Linkoping University , SE	Saarland University, DE	Yes	20/05/2013	04/06/2013	16	1750.00
Dr Donatella Puglisi	F	Linkoping University, SE	Saarland University, DE	Yes	20/05/2013	04/06/2013	16	1750.00
Dr Magda Brattoli	F	Chemistry Department - Bari University, IT	Faculte des Sciences - Universite de Liege, BE	Yes	26/05/2013	08/06/2013	14	1700.00
	M	Middle East Technical University, Department of Chemistry, TR	Optoelectronics Research Centre, University of Southampton, UK	Yes	27/05/2013	31/05/2013	5	950.00
Sub-total ACTUAL Amounts - Paid STSMs								17125.00 EUR
List of STSMs still to be reimbursed - Accruals								
<i>No more STSM still to be reimbursed.</i>								
Sub-total ACCRUED Amounts - STSMs still to pay								0.00 EUR
STSM Total								17125.00 EUR

**YFR Year 1:
Details for
Training School
expenditure.**

**Barcelona
13-15 June 2013**

1	2	3	4	5	6	7
Trainees name	Country	Gender				Total amount
List of reimbursed trainees						
1	Dr Igor Atanasov	MK	M			600.00
2	Mr Manuel Bastuck	DE	M			600.00
3	Mr Christian Bur	DE	M			600.00
4	Dr Simona Catino	IT	F			600.00
5	Mr Kajetan Dzierżanowski	PL	M			600.00
6	Mr Jurgi Gonzalez De Chavarri	ES	M			600.00
7	Dr Abhishek Kumar	FR	M			600.00
8	Ms Yu-Hsuan Kang	SE	F			600.00
9	Dr Annalisa Marzocca	IT	F			600.00
10	Dr Amadou Ndiaye	FR	M			600.00
11	Mr Lander Rojo	ES	M			600.00
12	Ms Cristina Rusti	RO	F			600.00
13	Dr Michal Segal Rozenhaimer	IL	F			600.00
14	Dr Erdem Sennik	TR	M			600.00
15	Dr Joris Van Den Bossche	BE	M			600.00
16	Dr Fatima Rabia Ozemre	TR	F			600.00
Sub-total ACTUAL Amounts - Paid (EUR)						9600.00
List of trainees still to be reimbursed - Accruals(*)						
<i>No more trainee still to be reimbursed.</i>						
Sub-total ACCRUED Amounts - Still to pay (EUR)						0.00
Total Trainees costs (EUR)						9600.00

1	2	3	4	5	6	7	8	9	
Trainers name	Country	Gender	Travel amount	Local Transport amount	Accommodation	Daily meals	Other expenses	Total amount	
List of reimbursed trainers									
1	Dr Saverio De Vito	IT	M	497.97	25.00	120.00	40.00	0.00	682.97
2	Prof. Eduard Llobet Valero	ES	M	92.80	69.70	0.00	40.00	0.00	202.50
3	Dr Michele Penza	IT	M	0.00	29.40	360.00	100.00	0.00	489.40
4	Prof Thu-Hoa Tran-Thi	FR	F	313.29	87.90	240.00	120.00	0.00	761.19
5	Prof Jurgen Wollenstein	DE	M	252.48	25.00	360.00	60.00	120.00	817.48
Sub-total ACTUAL Amounts - Paid (EUR)								2953.54	
List of trainers still to be reimbursed - Accruals(*)									
<i>No more trainer still to be reimbursed.</i>									
Sub-total ACCRUED Amounts - Still to pay (EUR)								0.00	
Total trainers costs (EUR)								2953.54	

LOCAL ORGANISER SUPPORT



Local organiser costs	Total amount
Actuals - amount paid already	4000.00
Accruals - still to pay	0.00
Total amount	4000.00

**YFR Year 1:
Details for
Dissemination
expenditure**

List of Paid Dissemination instruments	
Title	Newsletter, Leaflet, Brochure and other expenditures
Type	Other
Name of the publisher	Tipolito Vitetum snc - Litografia Tipografia
Invoice Date	2013-07-25
Amount PAID	1400.00
Additional comment	Distribution List: Action Members
Title	Establishment of website (hard disks)
Type	Other
Name of the publisher	SIM NT srl
Invoice Date	2013-08-01
Amount PAID	316.00
Additional comment	Distribution List: MC members
Title	Newsletter, Leaflet, Brochure and other expenditures
Type	Other
Name of the publisher	Tipolito Vitetum snc - Litografia Tipografia
Invoice Date	2013-01-24
Amount PAID	800.00
Additional comment	Distribution List: Action Members
Title	Newsletter, Leaflet, Brochure and other expenditures
Type	Other
Name of the publisher	IGIGRAFICA di Gernone Ilaria
Invoice Date	2013-03-11
Amount PAID	70.00
Additional comment	Distribution List: Action Members
List of Dissemination instruments still to be reimbursed - Accruals	
<i>No more dissemination still to be reimbursed.</i>	

Updating from the Grant Holder

Step back of Mandate of GH from UNIBA due to contradicting IT Fiscal Laws

COST rules contradict Italian Reimbursement Fiscal Laws and new GH is expected at 3rd MC meeting (21 June 2013):

- Flat Rate is considered an Income in IT Fiscal Laws.
- National Taxation Scheme must be applied by IT GH such as 20% for IT Participants and 30% for Non-IT Participants.
- Fiscal Statement of Taxation will be sent to Participants from GH UNIBA for Income 2013 in the next period February-April 2014.
- This was the cause of delay in reimbursements and the main reason to step back of IT GH in order to create future better relationships in the Action TD1105.

Updating from the Grant Holder

Timing of Passing from Old GH to New GH

Old GH UNIBA will complete ALL EXPENDITURES related to Year 1 (1 July 2012 - 30 June 2013).

New GH Eurice will assume the role starting from Year 2 (1 July 2013 - 30 June 2016) by the signature of the Grant Agreement between COST Office and Eurice Legal Representative, after MC election and registration in the Minutes of 3° MC meeting at Barcelona.

4. Update from the Action Chair

Dr. Corinna Hahn
Scientific Representative GH
Eurice GmbH, Germany

b. Action budget status

Status of the Second Year (1 July 2013 - 30 June 2014)

- First instalment from COST Office to GH: **105,300.00 EUR** (65% of 139,900.00 EUR - Action Budget for Second Year: 1 July 2013 - 30 June 2014)
- Second instalment is expected to arrive in February 2014 (35%) from the COST Office to GH EURICE



Updating from the Grant Holder

EURICE GmbH, Saarbrücken - Germany



YEAR 2: 1 July 2013 - 30 June 2014	PLANNED	PAID
Meetings	92700	26430,46
Training School	18500	0
Short Term Scientific Missions	25800	0
Dissemination	3500	0
Other Expenses Related To Scientific Activities	500	0
TOTAL SCIENCE EXPENDITURE	141000	26430,46

Dr. Corinna Hahn
GH Action MC Member

% used: 18,75%

Updating from the Grant Holder

Status of payments and First-Year budget

Meetings

[Action] TD1105 – European Network On New Sensing Technologies For Air-Pollution Control And Environmental Sustainability

Start	End	City	Type	Title	Participants*				Status
					Forecast	Estimation	Claims	Payments	
2013-08-28	2013-08-28	Saarbrucken	Core Group Meeting	Core-Group Meeting for New GH Eurice	[3 / 8]	[3/2]	[3 / 3]	[3 / 3]	Paid
2013-10-03	2013-10-04	Copenhagen	Working Group Meeting	New Sensing Technologies and Methods for Air-Pollution Monitoring	[20 / 50]	[40/39]	[37 / 40]	[0 / 35]	TBR
2013-12-18	2013-12-20	Cambridge	Management Committee...	Second Scientific Meeting, Working Groups and Management Committee	[40 / 50]	[43/43]	[5 / 43]	[0 / 0]	Planned

Payment status as of December 19, 2013

Payments to be approved**

#	Beneficiary	Country	Position	Accom.	Meals	Travel	Local Transport	Others	Total
Meeting Participants									
1	Dr Marco Alvisi	IT	MC Substitute	360.00	80.00	867.33	25.00	0.00	1 332.33
2	Dr Igor Atanasov	MK	MC Member	240.00	40.00	375	0.00	0.00	655.00
3	Prof Carlos Borrego	PT	MC Member	240.00	20.00	823.4	25.00	0.00	1 108.40
4	Mr Giuseppe Carella	IT	Other (e.g. observer, etc)	360.00	100.00	633.3	25.00	0.00	1 118.30
5	Dr Mehmet Fatih Dan1_Man	TR	MC Member	360.00	60.00	450.4208	26.88	0.00	897.30
6	Dr Saverio De Vito	IT	MC Substitute	360.00	40.00	724	19.35	120.00	1 263.35
7	Dr Annamaria Demarinis Lioitile	IT	Core Group Member	360.00	100.00	653.3	50.50	0.00	1 163.80
8	Mr Thilo Erbertseder	DE	Expert/Invited Speaker	360.00	80.00		25.00	0.00	465.00
9	Dr Ljupcho Grozdanovski	MK	MC Member	240.00	40.00	375	26.81	0.00	681.81
10	Prof Cristina Guerreiro	NO	Expert/Invited Speaker	240.00	60.00	187.621	53.82	0.00	541.44
11	Ms Corinna Hahn	DE	MC Member	240.00	60.00	331.52	61.00	0.00	692.52
12	Dr Niina Halonen	FI	WG Member [WG1]	240.00	40.00	392.36	0.00	0.00	672.36
13	Dr Hai-Ying Liu	NO	WG Member [WG1]	120.00	20.00	79.8966	46.38	0.00	266.28
14	Dr Rahela Zabkar	SI	MC Member	120.00	20.00	306.78	25.00	20.00	491.78
Totals (EUR)				3 840.00	760.00	6199.9284	409.74	140.00	11 349.67

Payment status as of December 19, 2013

Payments still to be reviewed and edited***

#	Beneficiary
---	-------------

Meeting Participants

1	Dr Wenche Aas
2	Dr Vivien Bright
3	Prof. Ingrid Bryntse
4	Prof. Anita Lloyd Spetz
5	Dr Isabella Marr
6	Dr Mariacruz Minguillon
7	Dr Michael Mueller
8	Dr Markus Noren
9	Dr Michele Penza
10	Dr Ulrich Quass
11	Dr Katarzyna Raulin
12	Dr Anne-Claude Romain
13	Prof. Andreas Schuetze
14	Dr Erdem Sennik
15	Dr Carsten Ambelas Skjoth
16	Dr Iveta Steinberga
17	Dr Jean Suisse
18	Prof. Dimiter Syrakov
19	Dr Joao Paulo Teixeira
20	Dr Rob Van Schaijk

STSM first batch 2nd status

STSM name	Status	Amount	Payment status
Siamak Aram	Approved	1400	In Progress
Michael Müller	Approved	2500	In Progress
Christian Bur	Approved	1900	In Progress
Amadou Ndiaye	Approved	1000	In Progress
Jerome Brunet	Approved	1000	In Progress
Ana Sofia Godinho de Fonseca	Approved	1500	In Progress
Vassilios Binas	Waiting for report	2500	Waiting for approval

6. Update from the COST Office

Science Officer: Deniz Karaka, ESSEM

Administrative Officer: Kent Hung, ESSEM

- **Deniz Karaca**

New Science Officer of Action TD1105

Inputs from SO

7. Update from the DC Rapporteur(s)

ESSEM Rapporteur: Kostantinos Kourtidis, EL - Demokritos University of Thrace

MPNS Rapporteur: Joaquim Manuel Vieira, PT - University of Aveiro

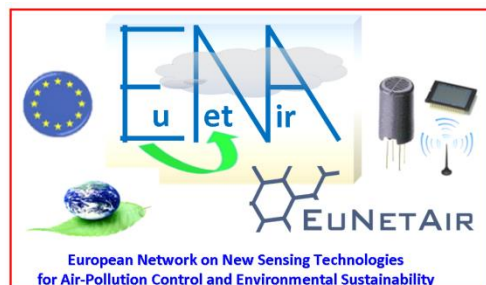
CMST Rapporteur: Antonio Laganà, IT - Università di Perugia

ESSEM Rapporteur: Not attending

MPNS Rapporteur: Not Attending

CMST Rapporteur: Attending

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MC Chair:	Dr. Michele Penza, ENEA, IT michele.penza@enea.it
MC Vice Chair:	Prof. Anita Lloyd Spetz Linköping University, SE spetz@ifm.liu.se
Grant Holder:	Dr. Corinna Hahn, Saarbrücken, DE c.hahn@eurice.eu
Scientific Secretary:	Dr. Annamaria Demarinis Loiotile annamaria.demarinis@uniba.it
Science Officer:	Dr. Deniz Karaca deniz.karaca@cost.eu
Administrative Officer:	Dr. Kent Hung kent.hung@cost.eu
Rapporteur ESSEM:	Prof. Kostantinos Kourtidis (GR) kourtidi@env.duth.gr
Rapporteur MPNS:	Prof. Joaquim Manuel Vieira (PT) jvieira@cv.ua.pt
Rapporteur CMST:	Prof. Antonio Lagana (IT) lagana05@gmail.com

8. Annual Progress Conference - Preparation and/or feedback from DC

Earth System Science and Environmental Management

Annual Progress Conference 2013

“Bundesanstalt für Geowissenschaften und Rohstoffe (BGR)”
Federal Institute for Geosciences and Natural Resources

2, Stilleweg - 30419 Hannover, Germany

12th and 13th June 2013

13th June 2013

Moderator: Ulrike Pechinger

09:00 – 09:30 TD0803 | Detecting evolutionary hot spots of antibiotic resistances in Europe (DARE) | Despo Fatta-Kassinou (Vice-Chair) | Ertan Durmusoglu (Rapporteur)

09:30 – 10:00 ES1106 | Assessment of EUROpean AGRiculture WATER use and trade under climate change (EURO-AGRIWAT) | Anna Dalla Marta (Chair) | Ipek Erzi (Rapporteur)

10:00 – 10:30 ES1105 | Cyanobacterial blooms and toxins in water resources: Occurrence, impacts and management | Triantafyllos Kaloudis (Chair) | Dick Blaauboer (Rapporteur)

10:30-11:00 Coffee (including poster review)

Moderator: Dick Blaauboer

15:45 – 16:00 Keynote – EUMETNET Programme phase 2013-2017 | Dick Blaauboer

16:00 – 16:30 ES1005 | Towards a more complete assessment of the impact of solar variability on the Earth's climate | Katje Matthes (Vice-Chair) | Hugo De Backer (Rapporteur)

16:30 – 17:00 ES1004 | European framework for online integrated air quality and meteorology modelling | Alexander Baklanov (Chair) | Teresa Abrantes (Rapporteur)

17:00 – 17:30 TD1105 | European Network on New Sensing Technologies for Air-Pollution Control and Environmental Sustainability - EuNetAir | Michele Penza (Chair) | Konstantinos Kourtidis (Rapporteur)

17:30 – 18:00 ES0804 | Advancing the integrated monitoring of trace gas exchange between biosphere and atmosphere | Lutz Merbold (Chair) | Ulrike Pechinger (Rapporteur)

18:00 – 18:10 Closing remarks – Ipek Erzi

**Monitoring Progress Report
submitted to COST Office
by 30 April 2013 (Year 1)**

**TD1105 APC 2013:
Hannover, Germany
12-13 June 2013**

12th June 2013

09:00 – 09:20 Opening by ESSEM Domain Committee C
Welcome by the local organiser, Michael M

Moderator: Dick Blaauboer

09:20 – 09:50 ES0901 | European procedures for flood f
Kjeldsen (Chair) | Stelios Pashiardis (Rapporteur)

09:50 – 10:20 ES1006 | Evaluation, improvement and g
prediction and response tools for airborne
(Chair) | Vidmantas Ulevicius (Rapporteur)

10:20 – 10:50 ES0806 | Stable Isotopes in Biosphere-At
Nina Buchmann (Chair) | Maris Klavins (Rapporteur)

10:50 – 11:10 Coffee (including posters review)

8. Annual Progress Conference - Preparation and/or feedback from DC

Earth System Science and Environmental Management

Annual Progress Conference 2013

“Bundesanstalt für Geowissenschaften und Rohstoffe (BGR)”

Federal Institute for Geosciences and Natural Resources

2, Stilleweg - 30419 Hannover, Germany

12th and 13th June 2013

**Monitoring Progress Report
submitted to COST Office
by 30 April 2013 (Year 1)**

**TD1105 APC 2013:
Hannover, Germany
12-13 June 2013**



9. Follow-up of MoU Objectives - List of Meetings



COST ACTION TD1105 MEETINGS 2012-13 (Year 1)

COST ACTION TD1105 *EuNetAir*

Kick-off Meeting of Action Management Committee

COST Office, 16 May 2012, Brussels (BE)

COST ACTION TD1105 *EuNetAir*

First Meeting and 2nd Management Committee and Working Groups

ENEA Headquarters, 4-6 December 2012, Rome (IT)


COST ACTION TD1105 *EuNetAir*

WG3-WG4 Meeting joined to AirMonTech project

Fraunhofer Inhaus Zentrum, 4-6 March 2013, Duisburg (DE)

COST ACTION TD1105 *EuNetAir*

3rd Management Committee Meeting (21 June 2013)

Training School (13-15 June 2013) 

Open Satellite Workshop (20 June 13)

inside *Transducers-2013*, 16-20 June 2013, Barcelona (ES)

9. Follow-up of MoU Objectives

a1. Progress report of working groups

**Definition of composition of WGs, SIGs, Ad-Hoc Groups
is going towards consolidation.....**

Expression of Commitment !!!

WGs Composition:

- WG1: ca. 25 participants
- WG2: ca. 40 participants
- WG3: ca. 35 participants
- WG4: ca. 25 participants

SIGs Composition:

- SIG1: ca. 15 participants
- SIG2: ca. 30 participants
- SIG3: ca. 15 participants
- SIG4: ca. 25 participants

- Total Number of Participants: 150 (80% active)
- Early Stage Researchers (ESRs) involved: 45 (30%)
- Females involved: 38 (25%)
- MC Members: 52 - Male: 39 (73%); Female: 13 (27%)
- MC Substitutes: 27 - Male: 23 (84%); Female: 4 (16%)

9. Follow-up of MoU Objectives

a2. Progress report of working groups

Rome Workshop addressing this issue:

Updating of Scientific Programme with Action Priorities were cited in the Rome Meeting Minutes and uploaded in the Action webpages.

Cambridge Meeting addressing to Research & Innovation Needs in connection to Rome Meeting

- from WG1 Leader: Definitions of objectives discussed in WG meeting
- from WG2 Leader: Definitions of objectives discussed in WG meeting
- from WG3 Leader: Definitions of objectives discussed in WG meeting
- from WG4 Leader: Definitions of objectives discussed in WG meeting
- from SIG1-4 Leader: Definitions of objectives discussed in each SIG meeting

9. Follow-up of MoU Objectives

a3. Progress report of working groups

Rome, Italy

1st Scientific Meeting

Working Groups and Management Committee of Action TD1105:

Co-Chairs: M. Penza, ENEA, Italy and All WGs and SIGs Leaders or Vice-Leaders

50+ Speakers involved from 21 COST Countries and 1 Non-COST Countries

100+ Participants attending to WGs, SIGs and 2° MC Meeting

Meeting Programme and Workplan Updating at Action webpages:

www.cost.eunetair.it



IN SCIENCE AND TECHNOLOGY

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COST Action TD1105

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

FIRST SCIENTIFIC MEETING

Working Groups and Management Committee
Rome, 4 - 6 December 2012

ENEA Headquarters, Lungotevere Thaon de Revel, 76, Rome, Italy

GENERAL PROGRAMME

COST Action TD1105 Scientific Workplan

Action Core-Group: Working Groups and Sub-Working Groups Leaders		
ROLE - TASK	NAME	COUNTRY
MC Chair	Dr. Michele Penza ENEA	Italy
MC Vice-Chair	Prof. Anita Lloyd Spetz Linköping University	Sweden
WG1-Leader (Coordinator) Sensor Materials and Nanotechnology	Prof. Juan Ramon Morante IREC	Spain
WG2-Leader (Coordinator) Sensors, Devices and Systems for AQC	Prof. Andreas Schuetze Saarland University	Germany
WG3-Leader (Coordinator) Environmental Measurements and Air-Pollution Modelling	Prof. Ole Hertel Aarhus University	Denmark
WG4-Leader (Coordinator) Protocols and Standardisation Methods	Prof. Ingrid Bryntse SenseAir SA	Sweden
STSM Coordinator	Dr. Jan Theunis VITO	Belgium
WebMaster Coordinator	Dr. Marco Alvisi ENEA	Italy
Scientific Secretary	Dr. Annamaria Demarinis Loiotile, University of Bari	Italy

SCIENTIFIC WORKPLAN of COST Action TD1105 updated at Rome Meeting:

WG1: the overall objectives of the WG1 are to develop new **sensor materials** and nanotechnologies such as metal oxides nanostructures, carbon nanomaterials and emerging materials (organic/inorganic, hybrid, nanocomposites, polymers, functional, etc.) for air-quality monitoring.

WG2: the overall objectives of the WG2 are to develop **new gas sensors**, new transducers, portable gas sensor-systems, wireless technology and AQC sensors network, intelligent algorithms and distributed computing for networked sensors applied to air-quality monitoring.

WG3: the overall objectives of the WG3 are to perform **environmental measurements at laboratory and in field air-quality stations**, air-quality modelling and chemical weather forecasting, harmonisation of environmental measurements.

WG4: the overall objectives of the WG4 are to perform **protocols, standards and methods for AQC** including conventional analyzers/monitors and sensor technologies. Benchmarking of new products and market of commercial AQC sensors.

SIG1: the overall objectives of the SIG1 are to develop a **network of spin-offs** at European level starting from existing national activities on environmental technologies/modelling inside Action partnership for new business.

SIG2: the overall objectives of the SIG2 are to develop **smart sensors and wireless networks for urban air monitoring in cities** including academia and SMEs from Action partnership.

SIG3: the overall objectives of the SIG3 are to develop **guidelines for best coupling air-pollutant and transducer** to be applied for environmental monitoring.

SIG4: the overall objectives of the SIG4 are to perform **expert comments for the Revision of the Air Quality Directive 2008/50/EC.**

9. Follow-up of MoU Objectives – a4. Progress report of working groups

Tuesday, 5 March 2013

COST Action TD1105 EuNetAir SESSION

FRAUNHOFER INHAUS Zentrum, on Campus Duisburg of University of Duisburg-Essen
Forsthausweg 1, D-47057 Duisburg, Germany

4-6 March 2013, Duisburg, Germany Special Session Action TD1105: Environmental Case Studies from Mediterranean, Central and Eastern Europe

Co-Chairs: M. Penza, ENEA, Italy and Hans-Guido Muecke, CC WHO Europe, Germany

12 Speakers involved from 10 COST Countries
80+ Participants attending to Special Session



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COST Action TD1105

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

AirMonTech FP7 Project

Air Pollution Monitoring Technologies for Urban Areas

JOINT SCIENTIFIC MEETING

COST Working Groups WG3-WG4 Meeting and AirMonTech Project Workshop
Duisburg, 4 - 6 March 2013

FRAUNHOFER INHAUS CENTER, Forsthausweg 1, 47057 Duisburg, Germany



EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY

Time	Event
12:00 - 18:00	COST Event Registration
14:00 - 18:30	Environmental Case Studies from Mediterranean, Central and Eastern Europe Chairpersons: <u>Michele Penza</u> , Action Chair - ENEA, Brindisi, Italy. <u>Hans-Guido Muecke</u> , WHO Collaborating Centre for Air Quality Management and Air Pollution Control - Federal Environment Agency, Berlin, Germany
14:00 - 14:20	COST Action TD1105: European Network on New Sensing Technologies for Air-Pollution Control and Environmental Sustainability. Overview and Plans of COST Action TD1105 Michele Penza, Action Chair, ENEA, Italy
14:20 - 14:40	The AGUILA Network for Air Quality Assurance and Quality Control Programmes In Europe Annette Borowiak, JRC, Institute for Environment and Sustainability, Ispra, Italy
14:40 - 15:00	Air Quality In Ukraine: Measurement Methods and Applied Technologies Olena Turco, Marzeyev Institute for Hygiene and Medical Ecology, Kiev, Ukraine
15:00 - 15:20	Measurement of PM Pollutants Accumulated on Plants Leaves In Poland Helena Gawronska, Warsaw University of Life Science, Warsaw, Poland
15:20 - 15:40	Air Quality Measurements and Modelling In Hungary Zita Ferenczi, Hungarian Meteorological Service, Budapest, Hungary
15:40 - 16:00	Air Quality Modelling In Slovenia Rahela Zabkar, University of Ljubljana, Ljubljana, Slovenia
16:00 - 16:30	Coffee Break
16:30 - 16:50	Assessment of Air Quality In Cities of Russian Federation: Monitoring, Modeling, Health Aspects Sergey Chicherin, Main Geophysical Observatory / MGO - St. Petersburg, Russia
16:50 - 17:10	Air Quality Monitoring System In the Moscow Region: Measurement Methods and Techniques Olga Kislova, SEPI Mosecomonitoring, Department for Nature Resources Management and Environmental Protection, Moscow, Russia
17:10 - 17:30	Emergency Response and Chemical Weather Forecast Systems In NIMH, Bulgaria Dimitar Syrakov, Bulgarian Academy of Sciences, Sofia, Bulgaria
17:30 - 17:50	Air Quality Modelling In Latvia: Challenges and Failures Iveta Steinberga, University of Latvia, Riga, Latvia
17:50 - 18:10	Source Apportionment of Carbonaceous Aerosols and Other Pollutants In Central Europe Grisa Mocnik, Aerosol dooo, Ljubljana, Slovenia
18:10 - 18:30	Air Quality Monitoring In the Republic of Macedonia Igor Atanasov, Ministry of Environment and Physical Planning, Skopje, Republic of Macedonia
18:30	Closure of COST Action TD1105 EuNetAir Session

9. Follow-up of MoU Objectives – a5. 1ST Training School of Action

Green Week 2013 satellite event



Training school on Environmental Technologies and Air-Quality Monitoring

Green Week 2013 satellite event



Training school on Environmental Technologies and Air-Quality Monitoring

13-15 June 2013
08:30 - 18:30

Barcelona
Spain



ec.europa.eu/environment/greenweek



UNIVERSITAT de BARCELONA
MIND-IN2UB, Dept d'Electronica
c/ Marti I Franques, 1 - E-08028
Barcelona, Spain



CSIC-IDAEA
c/ Jordi Girona, 18 - E-08034
Barcelona, Spain




 In collaboration with the
 

PROGRAMME

13 June 2013 Thursday

08:30-17:00 REGISTRATION
09:00-09:45 Welcome Address

A. Romano-Rodriguez (*U. Barcelona, Spain*)

ACTIVE MATERIALS FOR SENSOR FABRICATION

09:45-11:00 Metal Oxides

11:00-11:30 Break
11:30-13:00 Carbon-based materials
13:00-15:00 Lunch

J.R. Morales (*IREC and U. Barcelona, Spain*)

E. Nebet (*U. Rovira i Virgili, Spain*)

SENSORS AND TRANSDUCERS - PART 1

15:00-17:30 Conductometric Sensors, Capacitive Sensors and Other Sensing Platforms

P. Hernández-Ramírez (*IREC and U. Barcelona, Spain*);
O. Casals, J.D. Prades and A. Romano-Rodriguez (*U. Barcelona, Spain*)

14 June 2013 Friday

SENSORS AND TRANSDUCERS - PART 2

09:30-11:00 Optical Detection Methods

11:00-11:30 Break
11:30-13:00 Sensors for indoor air quality and health
13:00-15:00 Lunch
15:00-16:00 Electrochemical Sensors

J. Wöllenstein (*U. Freiburg and Fraunhofer Gesellschaft, Germany*)

T. Tran-Thi (*CEA-Saclay, France*)

J. Wöllenstein (*U. Freiburg and Fraunhofer Gesellschaft, Germany*)

16:00-16:30 Break

SMART SENSING TECHNOLOGIES AND ALGORITHMS

16:30-17:30 Signal Processing
17:30-18:30 Computational Intelligence for Smart Sensors and Sensor Network

20:30 School dinner (date to be announced)

A. Pardo (*U. Barcelona, Spain*)

S. De Vito (*ENEA, Italy*)

15 June 2013 Saturday

ENVIRONMENTAL MONITORING

09:30-10:30 Overview of environmental measurements
10:30-11:30 Black carbon measurements
11:30-12:00 Break and walk to the air quality monitoring station
12:00-13:00 Visit to the air quality monitoring station at CSIC

13:00-15:00 Lunch
15:00-15:30 Gas sensors: Principle of Operations and Sensor Parameters
15:30-18:00 Presentation of own research activities by trainees
18:00-18:30 Certificate of Attendance Ceremony and Farewell

M. Viana (*CSIC, Spain*)

G. Mocnik (*Aerosol doo, Slovenia*)

M. Viana and M.C. Minguiñón (*CSIC, Spain*)

M. Penza (*ENEA, Italy*)

Received Trainees Applications: 39
Participating Trainees: 36
Assigned Trainees Grants: 20
Involved Trainers: 14
COST Countries involved: 15



COOPERATION IN SCIENCE AND TECHNOLOGY

1ST TRAINING SCHOOL OF COST ACTION TD1105: 13-15 June 2013

9. Follow-up of MoU Objectives – a6. International Workshop

1st INTERNATIONAL WORKSHOP of COST Action TD1105:

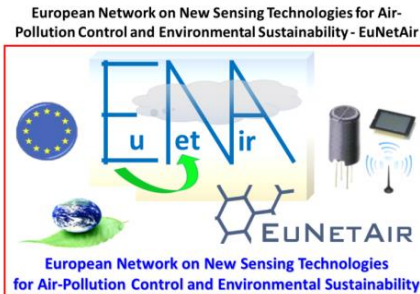
New Sensing Technologies and Transducers for Air-Quality Monitoring

Barcelona. 20 June 2013

FIRST INTERNATIONAL WORKSHOP on New Sensing Technologies and Transducers for Air-Quality Monitoring

Barcelona, 20 June 2013

Barcelona International Convention Centre (CCIB)
Plaça de Willy Brandt, 11-14, E- 08019 Barcelona, Spain



AGENDA	
20 June 2013 - Thursday	
16:00 - 20:00	REGISTRATION to COST Action Satellite WORKSHOP
16:30 - 18:30	COST Action Session 1
18:30 - 19:00	Break
18:30 - 19:00	COST Action Poster Session
19:00 - 20:00	COST Action Session 2
20:00 - 20:10	Workshop Adjourns and Farewell

Co-Chairs: M. Penza, ENEA, Italy and Eduard Llobet,
Universitat Rovira I Virgili, Spain

10 Speakers from 10 COST and 2 Non-COST Countries

30+ Participants attending to Open Satellite Workshop

COST Action TD1105 EuNetAir

OPEN SATELLITE WORKSHOP to
Transducers 2013 - Eurosensors XXVII

9. Follow-up of MoU Objectives – a6. International Workshop

1st INTERNATIONAL WORKSHOP of COST Action TD1105:

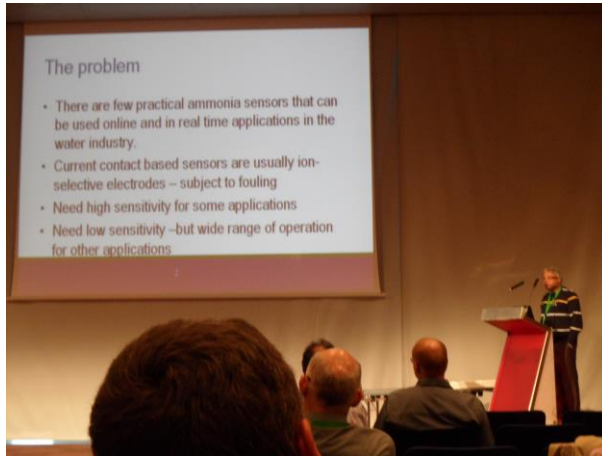
New Sensing Technologies and Transducers for Air-Quality Monitoring

Barcelona, 20 June 2013

FIRST INTERNATIONAL WORKSHOP on New Sensing Technologies and Transducers for Air-Quality Monitoring

Barcelona, 20 June 2013

Barcelona International Convention Centre (CCIB)
Plaça de Willy Brandt, 11-14, E- 08019 Barcelona, Spain



AGENDA	
20 June 2013 - Thursday	
16:00 - 20:00	<i>REGISTRATION to COST Action Satellite WORKSHOP</i>
16:30 - 18:30	COST Action Session 1
18:30 - 19:00	<i>Break</i>
18:30 - 19:00	COST Action Poster Session
19:00 - 20:00	COST Action Session 2
20:00 - 20:10	<i>Workshop Adjourns and Farewell</i>

COST Action TD1105 EuNetAir

**OPEN SATELLITE WORKSHOP to
Transducers 2013 - Eurosensors XXVII**

The 17th International Conference
on Solid-State Sensors,
Actuators and Microsystems



*The 17th International Conference
on Solid-State Sensors,
Actuators and Microsystems
June 16-20, 2013, Barcelona, Spain*

9. Follow-up of MoU Objectives – a7. International Workshop

WG1-WG4 MEETING of COST Action TD1105:

New Sensing Technologies and Methods for Air-Quality Monitoring

Copenhagen, 3 - 4 October 2013

European Environment Agency



EEA, Copenhagen, 3-4 Oct.2013

WG1-WG4 MEETING on New Sensing Technologies and Methods for Air-Pollution Monitoring

European Environment Agency (EEA)
Copenhagen, 3 - 4 October 2013

Kongens Nytorv 6, 1050 Copenhagen, Denmark



EEA Meeting Participants: 55



WG1-WG4 Meeting AGENDA	
3 October 2013 Thursday Morning	COST Action TD1105 EuNetAir
09:00 - 18:00	REGISTRATION
9:00 - 9:30	Welcome Address from EEA and COST Action
9:30 - 11:00	Session 1: COST Action Plenary Session
11:00 - 11:30	Coffee Break
11:30 - 13:00	Session 2: Oral Presentations
13:00 - 14:00	Lunch offered by COST Action organization
3 October 2013 Thursday Afternoon	COST Action TD1105 EuNetAir
14:00 - 14:30	Session 3: Oral Presentations
14:30 - 15:30	Session 4: Poster Presentations
15:30 - 17:00	Session 5: Oral Presentations
17:00 - 17:30	Coffee Break
17:30 - 18:50	Session 6: Oral Presentations
20:30 - 23:00	Social Dinner
4 October 2013 Friday Morning	COST Action TD1105 EuNetAir
09:00 - 13:00	REGISTRATION
09:00 - 11:00	Session 7: Oral Presentations
11:00 - 11:30	Coffee-break
11:30 - 13:00	Session 8: Oral Presentations
13:00 - 14:00	Lunch offered by COST Action organization
4 October 2013 Friday Afternoon	COST Action TD1105 EuNetAir
14:00 - 15:30	Session 9: Oral Presentations
15:30 - 16:30	Session 10: Discussion and Future Plans of Action
16:30	End of the WG1-WG4 Meeting and Farewell

COST Action TD1105 *EuNetAir* WG1-WG4 MEETING:

New Sensing Technologies and Methods for Air-Pollution Monitoring

- **Special Issue Urban Climate (Elsevier)**

Proceedings of the Action EEA Meeting open to external contributors.

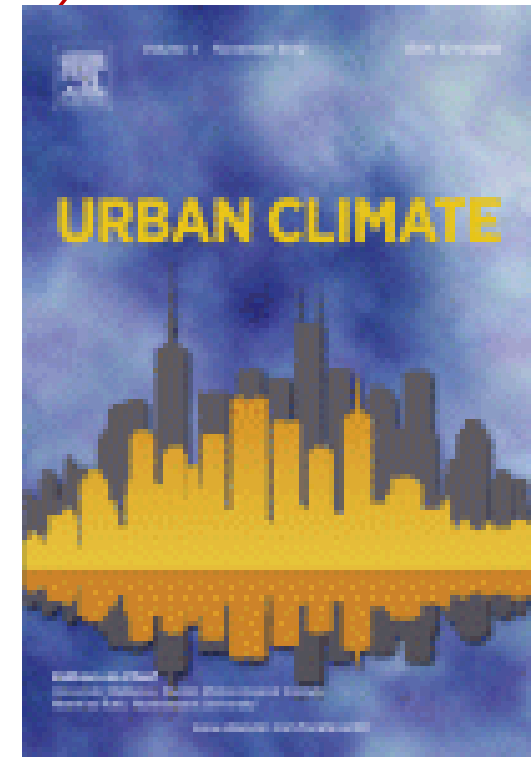
Peer-review process (<http://ees.elsevier.com/uclim/>)

- *Guest Editors:*

- ✓ Michele Penza, ENEA, Italy
- ✓ Anita Lloyd Spetz, Linkoping University, Sweden
- ✓ Ole Hertel, Aarhus University, Denmark
- ✓ Ulrich Quass, IUTA eV, Germany

- **Deadline for submission: 15 January 2014**

- Expected Publication: *June 2014*



9. Follow-up of MoU Objectives – a8. International Workshop

COST Action TD1105 at FP7 Project MACPoll WORKSHOP:

Metrology of Sensors for Air-Quality Monitoring

JRC-Ispra, Italy, 19 November 2013

09:00 Welcome & Introduction: The MACPoll project –A. Borowiak/M. Gerboles/J. Walden

Micro-Sensors & Air Pollution – (WP 4 of MACPoll)

Chair: Michele Penza. Rapporteur: Jan Theunis

09:15 *EuNetAir* – Michele Penza, ENEA, IT

09:35 *Sensor principles and sensor system performance* – Andreas Schuetze, Saarland University, DE

10:05 *On the use of Sensors* – Jan Theunis (VITO)

10:35 COFFEE BREAK

11:00 *The graphene sensor* – Serguei Novikov, University of Aalto, FI

11:30 *Calibration of Small Resistive Commercial Sensors to measure O₃*, Manuel Aleixandre, CSIC, ES

11:45 *O₃ and NO₂ sensor validation* – Laurent Spinelle, JRC, EC

12:15 *Summary and discussion* – Michele Penza, Jan Theunis, Michel Gerboles

12:45 LUNCH BREAK

9. Follow-up of MoU Objectives – a9. Dissemination Events

COST ACTION TD1105 DISSEMINATION EVENTS



IMCS 2012
The 14th International Meeting on Chemical Sensors
May 20 - 23, 2012, Nürnberg/Nuremberg



Special Session: **Chemical Sensors and New Technologies for Air-Pollution Control**

COST Action TD1105 EuNetAir

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

IMCS 2012 - The 14th International Meeting on Chemical Sensors, May 20-23, 2012 - Nuremberg, Germany



SGS 2012

VIII International Workshop on Semiconductor Gas Sensors

September 11 - 15, 2012, Cracow, Poland



3th Intelligent Systems for Quality of Life information Services Workshop (ISQL 2012)

8th AIAI Conference, September 27- 30, 2012, Halkidiki, Greece



TCM 2012

The 4th International Symposium on Transparent Conductive Materials

October 21- 26, 2012, Hersonissos, Crete, Greece



IN SCIE



10. Scientific planning - a. Scientific strategy

Main Activities planned in the Year 2 (1 July 2013 -30 June 2014):

- **15 STSMs:** 9 STSMs of 5 days and 6 STSMs of 1 month (30 days), **or equivalently.**
- **WG1-WG4 Meeting**, European Environment Agency (EEA), Copenhagen, Denmark, 3 - 4 October 2013. **OK**
- **WG1-WG4 Meeting**, Cambridge, 18 - 19 Dec. 2013 (joined to 4th MC Meeting) **OK**
- **2nd Action Workshop** on New Sensing Technologies for Indoor and Outdoor Air Quality Control, 25 - 26 March 2014 (to be confirmed), Brindisi, Italy **UPCOMING**
- **2nd Training School of Action**, 09 - 11 April 2014 (tbc), Saarbrucken, Germany
- **EMRS-2014 Symposium**, 26 - 30 May 2014, Lille, France - **1st Action TD1105 International Conference** as planned in MoU (joined to 5th MC Meeting)
- **RESEARCH & INNOVATION NEEDS** on *Air Quality Monitoring: Models, Methods, Standards and Technologies*, June 2014 (To be defined). Release 1.
- **NEWSLETTER: Issue 3** (Nov-Dec. 2013) **OK**; **Issue 4** (April-May 2014)
- **LEAFLET/BROCHURE:** UPDATED Issues
- **4th MC Meeting:** 20 Dec. 2013, Cambridge, UK, organized at Queens' College **OK !**
- **5th MC Meeting:** 30 May 2014 (tbc), Lille, France, at EMRS-2014 Spring Meeting
- **DISSEMINATION & OUTREACH ACTIVITIES**

10. Scientific planning - b. Action Budget Planning for Year 2

DESCRIPTION OF ACTIVITIES	BUDGET (€)
15 STSMs: 9 STSMs (5 days) and 6 STSMs (30 days), <i>or equivalently</i> .	25.800
WG1-WG4 Meeting , European Environment Agency, Copenhagen, DK, 3 - 4 Oct. 2013	18.000
WG1-WG4 Meeting , Cambridge, UK, 18 - 19 Dec. 2013 (joined to 4 th MCM)	12.000
2nd Action Workshop on <i>New Sensing Technologies for Indoor and Outdoor Air Quality Control</i> , 25 - 26 March 2014 (to be confirmed), Brindisi, Italy	12.000
2nd Training School , 09 - 11 April 2014 (tbc), Saarbrucken, Germany	18.500
EMRS-2014 Symposium , 26 - 30 May 2014, Lille, France - 1st Action TD1105 International Conference as planned in MoU (joined to 5 th MCM)	19.000
STATE-OF-THE-ART on <i>Air Quality Monitoring: Models, Methods, Standards and Technologies</i> , June 2014 (To be defined). Release 1.	1.000
NEWSLETTER: Issue 3 (Nov-Dec. 2013); Issue 4 (April-May 2014)	1.500
LEAFLET/BROCHURE: UPDATED Issues	
4th MC Meeting: 20 Dec. 2013, Cambridge, UK, organized at Queens' College	19.700
5th MC Meeting: 30 May 2014 (tbc), Lille, France, EMRS-2014 Spring Meeting	12.000
DISSEMINATION & OUTREACH ACTIVITIES	2.000
TOTAL SCIENCE EXPENDITURE	141.000
Financial & Scientific Administration and Coordination (max 15%)	21.000
TOTAL EXPENDITURE	162.000

10. Scientific planning

c. Long-term Planning including anticipated locations and dates of future activities.

c1: WG1-WG4 Meeting at European Environment Agency, 3-4 October 2013, Copenhagen, DK, (1/2)

Valentin Foltescu, EEA,
Copenhagen, Denmark
as Host-Supervisor

Project Manager
Air Quality Reporting and
Assessment

- **WG1-WG4 Meeting on *New Sensing Technologies and Methods for Air-Pollution Monitoring* at the European Environment Agency (EEA), Copenhagen (Denmark), 3 - 4 October 2013:** The WG1-WG4 Meeting (WGM) will be held at EEA, Copenhagen (Denmark). The core-issues of the COST Action TD1105 will be surveyed and presented as current results and scientific and technological breakthrough. WG1-WG4 Meeting will discuss on *New Sensing Technologies and Methods for Air-Pollution Monitoring* in a multidisciplinary interdisciplinary approach aiming to provide harmonized environmental measurements, exchange of best practices, air quality control, data quality, methods and will be organized and open to external participants for Scientific discussions on the real critical environmental issues across Europe with emphasis at COST Action TD1105 (Parties on May 2013). Speakers from environmental agencies, academic institutions will be encouraged to participate and give input on critical hot-spots existing in the Europe zone. Discussions between Action TD1105 participants, international experts, speakers and international institutional organizations delegates (e.g., WHO Europe, DG ENV, DG RTD, European Environment Agency) are strongly expected. At the open WG1-WG4 Meeting of the Action TD1105, a strong impact on focusing of the critical environmental issues would be mutual benefit.

DONE!

10. Scientific planning

c. Long-term Planning including anticipated locations and dates of future activities.

c1: WG1-WG4 Meeting at European Environment Agency, 3-4 October 2013, Copenhagen, DK, (2/2)

**Valentin Foltescu, EEA,
Copenhagen, Denmark
as Host-Supervisor**

**Project Manager
Air Quality Reporting and
Assessment**



European Environment Agency



Dr Michele Penza
Action TD1105 EuNetAir Chair
ENEA – Technical Unit of Brindisi
PO BOX 51 Br-4
Strada Statale 7 Appia km 706
72100 Brindisi
Italy

19 March 2013
ACC/VFO/sto

Reg. EEA 31993

Subject: COST Action TD1105 European Network on New Sensing Technologies for Air-Pollution Control and Environmental Sustainability – EuNetAir (16 May 2012 – 15 May 2016). Action Workshop/Meeting hosted at European Environment Agency (EEA), Copenhagen, Denmark, 3-4 October 2013

Dear Dr. Penza,

It is a great pleasure to offer hosting at the European Environment Agency (EEA), Copenhagen (Denmark) on 3 - 4 October 2013 an Event of the Action TD1105 to support the planned workshop/meeting with a wide attendance of local and international experts, researchers, scientists, practitioners and stakeholders from COST Countries and Non-COST Countries at worldwide level.

Here, I confirm the availability of a free-of-charge conference room and Wi-Fi connection (50+ expected participants) for the Action TD1105 Event on 3-4 October 2013. EEA will not be responsible for other local costs such as coffee or catering. Such expenditures would be covered by the agreement between the Action TD1105 and the operational costs. This agreement does not involve the EEA.

Therefore, I declare my availability /willingness to:

Host the COST Action TD1105 *EuNetAir* meeting at EEA (Copenhagen) in a suitable conference-room.

Yours Sincerely,

Valentin Foltescu
Project manager
Air quality reporting and assessment

DONE!

10. Scientific planning

c. Long-term Planning including anticipated locations and dates of future activities.

c2: **WG1-WG4 Meeting** jointly **4th MCM**, 18-20 Dec. 2013, **Cambridge**, UK

- **MC Meeting 1 (4th MCM of Action) jointly to WG1-WG4 Meetings University of Cambridge (UK), 18 - 20 December 2013:** The fourth MC Meeting (MCM) jointly with WG1-4 Meeting (WGM) will be held at Queens' College, University of Cambridge (Action partner), tentatively organized with a Plenary Session (*first day afternoon*), four parallel sessions (one per WG) and a common session of the WG1-4 and the four Special Interest Groups (SIGs) (*full second day*), and finally, a MC Meeting (*third day morning*). At the Plenary Session and the SIG and SIGs Meetings and/or MC Meeting, it is planned to invite several external experts at the Key Sessions, including the Plenary Session and at least 2 Invitees to Key Sessions. The Plenary Session will present state-of-the-art of the Action for Europe and the Action for research, academy, university, industry, environmental agencies, international stakeholders, policy makers and institutional managers is widely planned with large outreach and dissemination activities, at high expected impact.

IN PROGRESS

10. Scientific planning

c. Long-term Planning including anticipated locations and dates of future activities.

c3: **2nd Action Workshop**, 25-26 March 2014, **Brindisi**, Italy

- **The 2nd International Workshop of the COST Action TD1105 on New Sensing Technologies for Indoor and Outdoor Air Quality Control at ENEA, Brindisi (Italy), 25 - 26 March 2014:** The 2nd International Workshop on *New Sensing Technologies for Indoor and Outdoor Air Quality Control* will be held at ENEA (Italian National Agency for New Technologies, Energy and Sustainable Economic Development), Brindisi Research Center (Italy). This second workshop of the Action TD1105 *EuNetAir* follows the first organized at Barcelona (20 June 2013) as Satellite Event inside *Transducers 2013 - Eurosenors XXVII*, as planned in the MoU roadmap. The core-issues of the COST Action TD1105 on the new sensing technologies for indoor and outdoor monitoring and air quality control will be surveyed by Action partners with emphasis at sensor materials, functional materials, nanotechnologies for gas sensors, low cost and low-power chemical sensors, portable systems, sensor-instrumentations, pollution modelling, methods, measurements and protocols for air quality control and environmental monitoring systems. Participants will include scientists and other specialists from environmental monitoring, air quality control, indoor air quality, and other related fields. The workshop will be encouraged to participate in the ongoing research and existing collaborative projects, such as the EU FP6 project ENVIS (2008/50/EC and EU FP7 project ENVIS-2 (2008/50/EC)). The workshop will be organized by the COST Action TD1105 participants, including international organizations delegates and policy-makers are strongly expected. A strong impact on focusing of the critical environmental issues related to the new sensing technologies for indoor and outdoor monitoring and air quality control would be mutual benefit.

Planned

10. Scientific planning

c. Long-term Planning including anticipated locations and dates of future activities.

**c4: EMRS-2014
Symposium, 26-30 May
2014, Lille, France -
1st Action TD1105
International Conference
as planned in MoU
(joined to 5th MCM) (1/5)**

- **MC Meeting 2 (5th MCM of Action) connected to the 1st International Conference as International Symposium at European Materials Research Society - EMRS-2014, Spring Meeting 2014, Lille (France), 26 - 30 May 2014:** The fifth MC Meeting (MCM) will be held at Lille (France), connected to the *EMRS-2014 International Symposium on Advanced Functional Materials for Environmental Monitoring and Applications*, extension from EMRS-2014 and substitution at Strasbourg, presumably to be held on 30 May 2014, at the end of the EMRS-2014 Symposium. This Symposium was approved on a competitive basis by the Board of Direction of the European Materials Research Society (EMRS) as event in the Spring Meeting 2014 and embedded in the big international conference *EMRS-2014* (over 2000 delegates expected). The *International Symposium as International Conference of the Action* was proposed by the Action organizers: Michele Penza (Action Chair), ENEA, Italy; Anita Lloyd-Spez (Action Vice-Chair), University of Linköping, Sweden; Albert Romano-Rodriguez (MC Substitute), Universitat de Barcelona, Spain; Yongxiang Li (Non-COST partner), Chinese Academy of Sciences, Shanghai, China; Meyya Meyyappan (Non-COST partner), NASA Ames Research Center, USA). The program of the *Action International Conference 1* is planned tentatively for 4 full-day (26-29 May 2014), followed by the 5th MCM (compatibly on 30 May 2014). At the *Action International Conference 1*, at least 8 well-established Invited Speakers and excellent Keynote Speakers from Non-COST partnership and International Experts will be involved to a Talk on current state-of-the-art of the Action S&T core-issues. A Steering Committee of the International Symposium (Conference) will be established with participation of the Action partners. The program of the *Action International Conference 1* will include the 2nd Conference of the Action special sessions embedded, Action presenters included in conference program, and other expenditures for dissemination of achieved Action results.

Planned

- **Title:** Advanced Functional Materials for Environmental Monitoring and Applications
- **Suggested journal for publication of manuscripts:** Journal of Sensors and Sensor Systems (JSSS), Copernicus
- **Suggested symposium organizers:**
 - **Michele PENZA**, ENEA, Brindisi, Italy
 - **Anita LLOYD SPETZ**, Linköping Univ/ Univ of Oulu, Sweden/ Finland
 - **Albert ROMANO-RODRIGUEZ**, University of Barcelona, Spain
 - **Yongxiang LI**, Shanghai Institute of Ceramics - Chinese Academy of Sciences
 - **Meyya MEYYAPPAN**, NASA Ames Research Center, USA

- **Hot topics to be covered by the symposium (600 characters):**

- Advanced gas sensing nanomaterials
 - New (nano)sensors for monitoring gaseous pollutants.
 - New sensors for monitoring fine and ultrafine particles
 - Single-chip devices and portable gas-sensor systems.
 - Modeling of materials, sensors and sensor systems, air quality
 - Computational intelligence for sensor devices and modules
 - Air quality mapping using traditional instruments
 - Protocols and standardization methods for air quality monitoring by gas and particle sensors and systems
-
- **Other events taking place in 2014 focusing on the same or similar topics**
 - **IMCS** (International Meeting on Chemical Sensors) 2014 will take place in Argentina in March. However, the proposed conference session will include more technologies like mapping of environment to produce reference data. Also, new protocols and standardization methods will have a strong focus.
 - **Eurosensors** normally takes place in September, same discussion as above.

EMRS-2014 Symposium B:

Advanced Functional Materials for Environmental Monitoring and Applications



www.european-mrs.com

SPRING MEETING

2014

Lille
Congress Center
France

May 26th-30th

CALL FOR PAPERS

Conference chairs:
Ian BOYD, Univ. of Brunel, U.K.
Gilles DENNLER, IMRA Europe, France
Roberto FARIA, Univ. of São Paulo, Brazil
Roberto FORNARI, IKZ-Berlin, Germany
Elvira FORTUNATO, FCT-UNL, Portugal

Bilateral Energy conference. 

Hans RICHTER, GFWW, Germany
William TUMAS, NREL, USA



SPRING MEETING

May 26-30, 2014

Lille

Deadline for
abstract submission:

January 16, 2014

SCIENTIFIC PROGRAMME

MATERIALS FOR ENERGY AND ENVIRONMENT

- A. Thin film chalcogenide photovoltaic materials
- B. Advanced functional materials for environmental monitoring and applications
- C. Solid state ionics: thin films for energy and information applications
- D. Phonons and fluctuations in low dimensional structures

NANOMATERIALS

- E. Defect-induced effects in nanomaterials
- F. Established and emerging nanocolloids: from synthesis & characterization to applications
- G. Carbon- or nitrogen-containing nanostructured thin films
- H. AUTEC 2014 - Analytical techniques for precise characterization of nano-materials
- I. Solution processing and properties of functional oxide thin films and nanostructures

MATERIALS AND LIGHT

- J. Laser interaction with advanced materials: fundamentals and applications
- K. Challenges for group III nitride semiconductors for solid state lighting and beyond
- L. Chromogenic materials and devices

HYBRID, ORGANIC AND BIO-MATERIALS

- M. Molecular materials - Towards quantum properties
- N. Converging technology for nanobioapplications
- O. Computational modelling of organic semiconductors: from the quantum world to actual devices
- P. Carbon materials: surface chemistry and biomedical applications
- Q. Hybrid materials engineering in biology, chemistry and physics
- R. Towards lightweight and flexible electrochromic devices
- S. Memristor materials, mechanisms and devices for unconventional computing

CRYSTAL GROWTH IN MATERIALS SCIENCE

- T. Non-classical nucleation and crystallization*
- U. Crystal growth related twins and point defects in semiconductors and dielectrics*
- V. Effect of natural and forced convection in materials crystallization*

BILATERAL ENERGY CONFERENCE

- W. Materials research for group IV semiconductors: growth, characterization and technological developments
- X. Advanced materials and characterization techniques for solar cells II
- Y. Crystals for energy conversion and storage*
- Z. Materials and complex interface architectures for solar thermal and solar fuel devices
- AA. Organic photovoltaics / polymer solar cells

* Jointly organized with the following: Organized on European Council

WORKSHOP: grand challenges in materials

Deadline for abstract submission: 16 Jan 2014

EMRS-2014 Symposium B Proceedings
In Special Issue JSSS
Journal of Sensors and Sensor Systems

Symposium B:

Advanced functional materials for environmental monitoring and applications

About three quarters of the European population
Environmental sustainability of the urban society
based on functional materials have been develop
up the possibility to develop a new generation of a
personal level and system levels.

Hot topics to be covered by the symposium:

The specific technological areas are:

- Advanced gas sensing semiconducting materials
- Hybrid materials and nanocomposites for gas sensing
- Catalytic sensing materials
- Device fabrication, packaging, testing and aging
- New (nano)sensors for monitoring gaseous and liquid pollutants
- Ab initio modeling of gas/surface interaction
- Surface-sensitive spectroscopies for studying sensor/gas interaction
- Modeling of materials, devices and sensor systems
- Functional applications

Symposium organizers:

Michele Penza
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m.meyyappan@nasa.gov

E-MRS SPRING
MEETING 2014

May 26th-30th - Lille Congress Center, France

CALL FOR PAPERS

Deadline for abstract submission: January 16th, 2014



Including Bilateral Energy Conference

E-MRS **MRS** MATERIALS RESEARCH SOCIETY
Advancing materials. Improving the quality of life.

cost
EUROPEAN COOPERATION I

**DEADLINE FOR ABSTRACTS:
16 JANUARY 2014**

B. Advanced Functional Materials for Environmental Monitoring and Applications

Summary:

About three quarters of the European population lives in urban areas. The urban environment has a profound effect on people's health and well-being. Environmental sustainability of the urban society is a key issue in the era of smart cities and information services for the quality of life. Solid state sensors based on functional materials have been developed for several decades and recent improvements in nanotechnology and multifunctional materials have open up the possibility to develop a new generation of sensitive, selective and stable sensors, with largely improved capacity to give relevant information both on a personal level and system levels.

Hot topics to be covered by the symposium:

- Advanced gas sensing semiconducting materials
- Hybrid materials and nanocomposites for gas sensing
- Catalytic sensing materials
- Device fabrication, packaging, testing and aging
- New (nano)sensors for monitoring gaseous and liquid pollutants
- Ab initio modeling of gas/surface interaction
- Surface-sensitive spectroscopies for studying sensor/gas interaction
- Modeling of materials, devices and sensor systems
- Functional applications

Tentative list of invited speakers:

- S. Christiansen, Max-Planck Institute, Erlangen, Germany.
- M. Eickhoff, University of Giessen, Germany.
- H. Haick, Technion, Israel Institute of Technology, Haifa, Israel.
- J. Li, NASA, Ames Research Center, USA.
- J. R. Morante, IREC, Barcelona, Spain.
- R. Pearce, National Physics Laboratory, London, UK.
- R. Penner, University of California Irvine, USA.
- P. Wang, Zhejiang University, China.

Principal organizer:

Dr. Michele Penza

Italian National Agency for New Sensing Technologies, Energy and Sustainable Economic Development

PO BOX 51 Br-4, I-72100 Brindisi (Italy)

Phone number: +39 0831 201422

Fax number: +39 0831 201423

michele.penza@enea.it

Potential overlaps with: No overlap identified.

10. Scientific planning

c. Long-term Planning including anticipated locations and dates of future activities.

c5: Training School, **31 March - 2 April 2014 (TBC)**, Saarbrücken, Germany

(1/4)

- 2nd **TRAINING SCHOOL** COST Action TD1105, Saarbrücken, April 2014, and hosted by **Prof. Andreas Schuetze**, Saarland University, Germany.
- Prof. Albert Romano-Rodriguez, University of Barcelona, Spain, in collaboration with *Action Training Schools Coordinator*

- **Training School**
Action TD1105 2nd Training School - Saarland University, Saarbrücken (Germany), 09 - 11 April 2014: The *three-day* Training School from Wednesday to Friday will be tentatively organized towards at least 20 reimbursed trainees and at least 5 reimbursed trainers, mainly from COST partnership. This 2nd Training School of the COST Action TD1105 *EuNetAir* follows the first Training School, already planned at Barcelona (University of Barcelona) on June 2013 in the first Year (2012-13). This Open 2nd Training School will be devoted to specific core-issues of the Action TD1105 such as nanostructures, sensor materials, gas sensors, devices, sensing technologies, portable sensor systems, sensor nodes, sensor networks, environmental measurements, models, standards and protocols. Graduated students, PhD students, Post-Doc, Early Stage Researchers will be involved from COST partnership and a fruitful exchange of knowledge and research experiences from senior teachers to young trainees is highly expected. The Training School will be organized under supervision of Prof. Andreas Schuetze (Saarland University, Department of Mechatronics, Lab for Measurement Technology), DE MC Member. The Training School Committee of the Action TD1105, chaired by Prof. Albert Romano-Rodriguez (University of Barcelona), will be involved in the organization of school with help to define program, to contact renowned trainers, to select motivated trainees, to support general affairs. This 2nd Training School will pursue a multidisciplinary approach and high education with theoretical and experimental lessons from several domains and complementary disciplines as well.

In the case of remaining budget at the end of the Second Period due to saving management, this will be preferably used to increase the amount of trainees to be reimbursed from the Action partners. The scheduled dates of the 2nd Training School at Saarbrücken could be modified and revised to match and adapt the needs of the Action TD1105 planning.

10. Scientific planning

c. Long-term Planning including anticipated locations and dates of future activities.

c5: Training School, **31 March - 2 April 2014 (TBC)**, Saarbrücken, Germany

(2/4)



2nd EuNetAir training school



Focus topic:

**Optimized operation of solid state gas sensors,
especially for low concentrations**

- 2nd **TRAINING SCHOOL** COST Action TD1105, Saarbrücken, March-April 2014, and hosted by **Prof. Andreas Schuetze**, Saarland University, Germany.

- 2nd **TRAINING SCHOOL COST**
Action TD1105, Saarbrücken,
March-April 2014, and hosted by
Prof. Andreas Schuetze, Saarland
University, Germany.

(3/4)

Day 1: Monday, 31 March 2014: Sensor fundamentals and state of the art

Session 1: Welcome and Introduction to the Lab for Measurement Technology

9:30 – 10:00	Welcome, introduction to LMT and to the training school program Andreas Schütze, USAAR-LMT
10:00 – 10:45	Novel gas mixing system and its validation for low VOC concentrations Martin Leidinger, USAAR-LMT
10:45 – 11:15	<i>Coffee Break</i>

Session 2: Introduction of the Participants

11:15 – 12:15	Introduction of training school participants: <i>Each person should briefly introduce with 2 slides in 2 minutes</i>
12:15 – 14:00	<i>Lunch Break combined with Poster session</i> additionally: lab visit (group 1)

Session 3: Sensor fundamentals

14:00 – 15:00	Microstructured metal oxide gas sensors NN, SGX Sensortech S.A. (<i>tbc</i>)
15:00 – 16:00	Gas-sensitive field effect devices Mike Andersson, U Linköping, Applied Sensor Science Group
16:00 – 16:30	<i>Coffee Break</i>

Session 4: State-of-the-art

16.30 – 18:00	JRC Ispra gas mixing system and sensor validation tests Michel Gerboles, JRC Ispra, Italy (<i>tbc</i>)
18.00 – 18:45	Performance examples of dynamically operated gas sensors: Adicos: Industrial Early Fire Detection Technology Selective VOC detection at ppb levels against background Tilman Sauerwald, USAAR-LMT

(4/4)

- 2nd **TRAINING SCHOOL COST** Action TD1105, Saarbrücken, March-April 2014, and hosted by **Prof. Andreas Schuetze**, Saarland University, Germany.

Day 2: Tuesday, 1 April 2014: Dynamic sensor operation

Session 5: Dynamic operation of MOS sensors

9:00 – 10:30	Temperature cycled operation and systematic optimization Steve Semancik, NIST, USA (<i>tbc</i>)
10:30 – 11:00	<i>Coffee Break</i>
11:00 – 12:30	Electrical Impedance Spectroscopy for MOS sensors Marco Schüler, USAAR-LMT
12:30 – 14:00	<i>Lunch Break combined with Poster session</i> additionally: lab visit (group 2)

Session 6: Novel sensor operating approaches

14:00 – 15:30	Ionization based gas sensing Andreas Helwig, EADS, Germany (<i>tbc</i>)
15:30 – 16:00	<i>Coffee Break</i>
16:00 – 17:30	Optical excitation of gas sensors Thorsten Wagner, University of Paderborn, Germany
17:30 – 18:15	Gate Bias Cycling for gas-sensitive field effect transistors Christian Bur, USAAR-LMT and U Linköping, Applied Sensor Science Group
18:15	<i>End of day 2</i>
19:30	<i>Social dinner</i>

Day 3: Wednesday, 2 Apr 2014: Data processing and practical demonstrations

Session 7: Data acquisition and signal processing, part 1

9:00 – 10:30	Fundamentals of signal processing Andreas Schütze, USAAR-LMT
10:30 – 11:00	<i>Coffee Break</i>
11:00 – 13:00	Demonstration of gas sensors and operating platforms 3S – Sensors, Signal Processing, Systems: OdorChecker, SniffChecker SGX Sensortech (<i>tbc</i>) SenSIC (<i>tbc</i>) Micronas: integrated GasFET and test kits NIST (<i>tbc</i>) Odometrix USAAR-LMT: Combined EIS/TCO and GBCO/TCO platforms
13:00 – 14:30	<i>Lunch Break combined with Poster session</i>

Session 8: Data acquisition and signal processing, part 2

14:30 – 16:30	Practical examples for signal processing using the LMT toolbox: effects of normalization and feature extraction on PCA/LDA performance Christian Bur, Thomas Fricke, USAAR-LMT
16:30 – 17:00	<i>Coffee Break</i>
17:00 – 17:45	Outlook: advanced gas sensor systems Michele Penza, Chair COST network EuNetAir, ENEA, Italy (<i>tbc</i>)
17:45	<i>End of the training school</i>

10. Scientific planning

c. Long-term Planning including anticipated locations and dates of future activities.

c6: ISOCS Short Course Winter 2014, **9 - 14 February 2014**, Les Houches-Chamonix Valley, France



ISOCS Short Course Winter 2014

9 – 14 February 2014 – Les Houches – Chamonix Valley France

ÉCOLE DE PHYSIQUE
des HOUCHES



Université
Joseph Fourier
GRENOBLE

cost
EUROPEAN COOPERATION
IN SCIENCE AND TECHNOLOGY



Reactivity of solids, Kinetics,
Catalysis, Definitions and
Applications of
Chemical Sensors

© JESS STOCK

(2/3)

Develop your knowledge on chemical sensors systems and applications at the ISOCS Short Course in Les Houches (Chamonix Valley), France

This Short Course will cover topics including:

- Adsorption and kinetics of transformation in solids
- Catalysis for gas-solid interactions
- Point defects in solids
- Biosensors
- Electronic Noses and their application
- Definition of sensors
- Nano-sensor preparation
- Automotive gas sensors
- Food application of Electronic Nose
- Practical demonstrations
- Presentation COST Action EuNetAir

Speakers

- Prof. Michèle Pijolat, EMSE St-Etienne
- Dr. Philippe Vernoux, Institute of Catalysis Lyon
- Dr. Jean-Paul Viricelle, EMSE St-Etienne
- Prof. Krishna Persaud SCEAS University of Manchester
- Prof. Julian Gardner, University of Warwick
- Prof. Corrado Di Natale, University Tor Vergata, Roma
- Prof. Elisabetta Comini, University of Brescia
- Prof. Christophe Pijolat, EMSE St-Etienne
- Dr. Veronica Sberveglieri, University Modena e Reggio Emilia
- Dr. Jan Mitrovics, JLM Innovation, Tübingen, Germany
- Dr. Michele Penza, ENEA, Brindisi, Italy

Who should attend?

The Short Course is ideal for anyone with an interest in chemical sensors and olfaction, and is new to the field; for example, PhD students, researchers, technologists and industrialists.

Short Courses organized by ISOCS are a unique combination of fundamental theory lectures and practical application exercises. They provide an introduction into selected topics of current research and new developments in the area of chemical sensing and olfaction. Most lecturers will be present throughout the duration of the course. Ample opportunity is given for discussion and networking.



Register now! Limited places available only!

For more information please visit www.olfactionsociety.org/wintercourse2014

10. Scientific planning

(3/3)

c6: ISOCS Short Course Winter 2014, **9 - 14 February 2014**, Les Houches-Chamonix Valley, France

ISOCS
International Society for
Olfaction and Chemical Sensing



COST Action TD1105 is asked to fund:

- **3 Grants for Trainees**
- **2 Grants for Trainers**
- The price (**795 €**) includes ACCOMODATION (single room) and MEALS.
- Travelling costs (about **205 €**) should be added to the individual Grant.
- *EuNetAir* could support 5 Grants (3 Trainees + 2 Trainers) with a **TOTAL BUDGET as 5000** € (5 Grants x 1000 €).
- A Call for Trainees could be launched in Action partnership, if MC approves.

10. Scientific planning

c. Long-term Planning including anticipated locations and dates of future activities.

c6: RESEARCH & INNOVATION NEEDS on Air Quality Monitoring: Models, Methods, Standards and Technologies, June 2014. Release 1.

Proposal from Action Chair **for RESEARCH & INNOVATION NEEDS** as described in MoU and as output of Action EuNetAir in the med-term

- **First Draft: March 2014 (Brindisi Workshop)**
- **Final Release: June 2014**

10. Scientific planning

c. Long-term Planning including anticipated locations and dates of future activities.

c7: **Aveiro Joint-Exercise Intercomparison**, April 2014. (1/3)

Joint-Exercise IDAD with SGX Sensortech

Evaluation of micro-sensors against standard methods for air quality control during field campaigns



- The application of new sensors side by side with standardised equipment in field studies will allow assessing the reliability and uncertainty of these low-cost sensors, especially regarding an accurate detection of pollutant concentration peaks.
- The measurement campaigns of O_3 , NO_2 , CO/VOC are being conducted in two major Portuguese airports, Lisbon and Oporto, in 6 monitoring sites, from October 2013 to February 2014.

10. Scientific planning

c. Long-term Planning including anticipated locations and dates of future activities.

c7: **Aveiro Joint-Exercise Intercomparison**, April 2014. (2/3)

EuNetAir Air Quality Joint-Exercise Intercomparison 2014

Air quality campaign at Aveiro city centre 2014



**Continuous measurements CO, benzene, NO_x, SO₂, PM₁₀, VOC
Temperature, humidity, wind velocity, wind direction, solar radiation, precipitation**

**All COST partners are invited to install their micro-sensors
side by side with our air quality standardised equipment.**

10. Scientific planning

c. Long-term Planning including anticipated locations and dates of future activities.

c7: **Aveiro Joint-Exercise Intercomparison**, April 2014. (3/3)

Suggested Timetable

Location: Aveiro city (Portugal).

Tentative starting AQ campaign: April 2014 (tbc).

Duration of AQ campaign: 2 weeks (tbc).

Local Organization: IDAD - Carlos Borrego, Ana Margarida Costa

**Invited people: Sensor producers, research teams,
Practitioners from EuNetAir partnership
Including External contributions.**

Output: Joint Publications; Meeting on Results, other.

Support from Action: STSM, Travelling, Accommodation, Meals.

NO FUNDING for RESEARCH.

10. Scientific planning

c. Long-term Planning including anticipated locations and dates of future activities.

c8: **Suggestions from MC Members to organize EuNetAir Events for Year 3.**

Year 3: 1 July 2014 - 30 June 2015

- **Time to prepare Work & Budget Plain (WBP): Febr. - March 2014**
- **Suggestions from MC Members: January 2014.**
- **Preference: Countries not yet hosted EuNetAir Events.**
- **Events to be hosted: Workshops, Training Schools, Winter Schools, Short Courses, WGs Meetings, MC Meetings, other.**
- **Main feature of Host City: Cheap and not expensive event !**

10. Scientific planning

d. Dissemination Planning (Publications and outreach activities).

d1: Action website: www.cost.eunetair.it



Action website:

www.cost.eunetair.it

hosted by ENEA

Dr. Marco Alvisi, Webmaster Coordinator

Sebastiano Dipinto, Valerio Pfister, Gianfranco Zingarelli, Webmaster Team

10. Scientific planning

d. Dissemination Planning (Publications and outreach activities).

d2: NEWSLETTER, LEAFLET, BROCHURE (1/2)



Issue 1: published on Dec. 2012 ✓

Issue 2: published on June 2013 ✓

Issue 3: planned on Dec. 2013 ✓

Issue 4: planned on May 2014 ✓



Brochure

Leaflet

Release 1:
published on January 2013

OUTREACH ACTIVITIES from Action TD1105 (2/3)



EuNetAir Newsletter

COST Action TD1105 Iss. 3/Dec. 2013

Editorial

M. Penza

This 3rd issue of Newsletter covers the Action grant period June-December 2013 to disseminate the networking activities and current research results in environmental science and technology from COST Action TD1105 (www.cost.eu/netair). European Network on New Sensing Technologies for Air-Pollution Control and Environmental Sustainability - EuNetAir, edited half-yearly in the next four years (2012-2016) by an Editorial Board, chaired by Prof. Ralf Moos (University of Bayreuth, DE) with Editorial Board Manager Daniela Schönauer-Kamin (University of Bayreuth, DE).

The excellent teams of over 170 involved international experts such as scientists, researchers, technologists, modellers, SMEs managers from 28 COST Countries, 4 International Partner Countries (IPCs) and 3 Near Neighbour Countries (NNC) are working hard to contribute to the objectives and work plan of COST Action TD1105 in the air quality monitoring including environmental technologies, nanomaterials, gas sensors, smart systems, air-pollution modelling, measurements, methods, standards and protocols. The concerted COST Action TD1105 is very pleased to present the networking/dissemination results of the national/international research from Action partnership to various international conferences/workshops such as 1st International Workshop on New Sensing Technologies and Transducers for Air Quality Monitoring (June 20, 2013, Barcelona, Spain) as open satellite workshop to Transducers 2013 - Eurosensors



XXVII and WG1-WG4 Meeting on New Sensing Technologies and Methods for Air-Pollution Monitoring (European Environment Agency, October 3-4, 2013, Copenhagen, Denmark). In these two meetings, over 80 Participants from at least 25 COST Countries were involved with a large participation and target audience. In this Newsletter we will give an update on the outcome of these workshops.

Special acknowledgements to the COST Office Director (Dr. Monica Dietl) for her Letter of Support

received and read to the EEA meeting in Copenhagen. Many thanks for sharing the prestigious inputs on networking and "common brains" community to generate new knowledge for science, technology and innovation. The COST Action TD1105 will hold the 2nd Scientific Meeting including Working Groups Meeting and 4th Management Committee Meeting at Queens' College, University of Cambridge, Cambridge (UK), December 18-20, 2013. The 3rd Management Committee Meeting of EuNetAir was held at IREC in Barcelona (Spain), June 21, 2013. The 3rd MCM decided to elect a new Grant Holder (GH) as Eurice GmbH, Saarbrücken (Germany). Special thanks to the old GH as University of Bari, Bari (Italy).



The First Training School of EuNetAir on Environmental Technologies and Air-Quality Monitoring was held at University of Barcelona, Electronics Department, Barcelona (Spain), June 13-15, 2013, with 39 trainees and 9 trainers from at least 20 COST Countries. This event was labelled as Green Week 2013 Satellite, by DG ENV.



EuNetAir supported 11 Short Term Scientific Missions (STSMs) in the Year 1 (July 1, 2012 - June 30, 2013) for visit and exchange of motivated Early Stage Researchers and experienced scientists from a laboratory to another one in order to start and consolidate new international research collaborations in the whole area of EuNetAir topics. Finally, EuNetAir, represented by Action Chair, participated to the COST Annual Progress Meeting in Hannover (Germany), June 12-13, 2013, to report on progress of the Action TD1105 activities to the ESSEM Committee related to the first grant period (July 1, 2012 - June 30, 2013). The feedback from other Action Chairs and DC Rapporteur was highly positive and encouraging. On behalf of Action Management Committee, I would like to thank ALL Action participants for their valuable scientific work, kind availability and great enthusiasm that will make our Action very successful as an excellent S&T platform to address the upcoming Horizon 2020!

Prof. Ralf Moos, *Editor-in-Chief*

Dr. Daniela Schönauer-Kamin, *Editorial Board Manager*

University of Bayreuth, Germany

NEWSLETTER

Issue 3: published on Dec. 2013 ✓

INTERVIEW on Air Quality Report 2012-2013 in Europe has been recorded (www.cost.eunetair.it)

INTERVIEW by Action Chair (Dr. Michele Penza, ENEA, Italy) with Dr. Cristina Guerreiro, Leader Report 2003 on Air Quality Status in Europe, NILU, Norway. Copenhagen, 3 - 4 October 2013 at EEA Meeting

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



EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY

OUTREACH ACTIVITIES from Action TD1105 (3/3)

#1: INTERVIEW on FP7 Graphene Flagship has been recorded and to be uploaded (www.cost.eunetair.it)

**INTERVIEW by Action Chair (Dr. Michele Penza, ENEA, Italy) with Prof. Andrea C. Ferrari, Chairman of Executive Board of FP7 Flagship Graphene, University of Cambridge, UK.
Cambridge, 18 - 20 December 2013 at Queens' College**

#2: INTERVIEW on US EPA Roadmap for Next Generation Air Monitoring has been recorded and to be uploaded (www.cost.eunetair.it)

**INTERVIEW by Action Chair (Dr. Michele Penza, ENEA, Italy) with Dr. Tim Watkins, Deputy Director for US EPA' Air, Climate and Energy Program, US Environmental Protection Agency, USA.
Cambridge, 18 - 20 December 2013 at Queens' College**

10. Scientific planning

d. Dissemination Planning (Publications and outreach activities).

d3: INTERNATIONAL INNOVATION, September-December 2013

..... Details and definitions are in progress

Euro 2000 per 3 printed pages of Interview on Action activities
Including hardpaper issue (50 copies per MC Members)
and pdf file for dissemination

10. Scientific planning

d4: DISSEMINATION PLAN

Dr. Fabio Galatioto

Chair of Dissemination Committee

International Meeting on Chemical Sensors

16-19 March 2013, Buenos Aires (Argentina)

<http://www.imcs2014.org/>

2nd Action Workshop

25-26 March 2014, Brindisi (Italy)

2nd Training School

9-11 April 2014, Saarbrücken (Germany)

Sensor + Test 2014

The measurement fair

3-5 June 2014, Nuremberg (Germany)

<http://www.sensor-test.de>

17. ITG / GMA-Fachtagung „Sensoren und Messsysteme“

3-4 June 2014, Nuremberg (Germany)

<http://www.sensor-test.de>

E-MRS 2014, including EuNetAir Action Symposium

26-30 May 2014, Lille (France)

<http://www.emrs-strasbourg.com/index.php>

5th MC Meeting

30 May 2014, Lille (France)

11. Requests for new members - List of New WGs Members (1/2)

New Affiliations: 7

COST ACTION TD1105 – 4th MCM in Cambridge, 18-20 December 2013

7 NEW AFFILIATIONS from 4 Countries

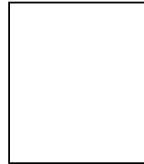
Nr	NAME	ORGANIZATION	COUNTRY	EXPERTISE / KEYWORDS	WG INTERESTED	E-MAIL
1	Hanns-Erik Endres	Fraunhofer EMFT, Munich	GERMANY	Silicon technology, flexible electronics, chemical sensor materials and the capability of system integration. Applied research into sensors and actuators for man and the environment.	WG1-WG4 SIG2-SIG4	hanns-erik.endres@emft.fraunhofer.de
2	Carsten Ambelas Skjoth	University of Worcester, Worcester	UK	Aeroallergens in Urban Areas by Unmanned Airborne Vehicles (UAV)	WG3, SIG2	c.skjoth@worc.ac.uk
3	Jurgen Frick	University of Stuttgart, Stuttgart	GERMANY	Cost-effective Tools for Better Indoor Environment in Retrofitted Energy-Efficient Buildings.	WG2, WG3, SIG2	Jurgen.Frick@mpa.uni-stuttgart.de
4	John Wenger	University College Cork	IRELAND MC Member	Chemical composition and sources of PM _{2.5} in EU Cities. Gas analysers and aerosol techniques (TEOM, EC/OC, SMPS, OPC, aerosol mass spectrometry, off-line chemical analysis) for environmental measurements.	WG3, SIG2, SIG4	j.wenger@ucc.ie
5	Carlos Canè	CSIC	SPAIN	Devices, Gas Sensors and Microsystems for AQC	WG1, WG2, SIG2	
6	Chris Payne	ION Science Ltd	UK	PID Detector, detection	WG2, WG3, WG4, SIG2	chris.payne@ionscience.com
7	Peter Morris	ION Science Ltd	UK	PID Detector, detection	WG2, WG3, WG4, SIG2	peter.morris@ionscience.com

11. Requests for new members - List of New WGs Members (2/2)



COST Action TD1105 Affiliation/Information Form

Photo is optional.



COST Action TD1105 Information Form for New Action Participants and New Working Group Members

Personal Details	
1. Surname	
2. First name(s)	
3. Email	
4. Institute/company	
5. Address	
6. Postal address	
7. Telephone	
8. Fax	
9. Mobile	
Background related to the COST Action (research activities, institute/company background in relation to COST Action, etc) (Max 10 lines)	
Personal Activities related to the COST Action (Max 10 lines)	
Planned contribution to the COST Action (Max 10 lines)	
Involved member of:	
MC	<input type="checkbox"/>
CG	<input type="checkbox"/>
SC	<input type="checkbox"/>
WG 1	<input type="checkbox"/>
WG 2	<input type="checkbox"/>
WG 3	<input type="checkbox"/>
WG 4	<input type="checkbox"/>
SIG 1	<input type="checkbox"/>
SIG 2	<input type="checkbox"/>
SIG 3	<input type="checkbox"/>
SIG 4	<input type="checkbox"/>
OTHER	<input type="checkbox"/>
Remarks (Max 10 lines)	

**Application Form
filled by New Members
asked by email and replied filled.**

Please, New WG Member and/or Action Participant should provide own CV (max 1 page)

12. Non-COST applications to the Action

(1/2)

List of Non-COST Members: New NNC and IPC

EuNetAir: List of Experts from NNC and IPC



170 EXPERTS from **28** COST Countries and **7** Non-COST Countries



AU - Australia

Dr. Phil MARTIN



CA - Canada

Prof. John YEOW



CN - China

Dr. Yongxiang LI

Dr. Zhifu LIU



RU - Russian Federation

Dr. Alexey VASILIEV



US - United States

Prof. Andrei KOLMAKOV

Dr. Meyya MEYYAPPAN



MA - Morocco

Dr. Radouane LEGHRIB

Dr. Houda LAHLOU



UA - Ukraine

Dr. Olena TUROS

Dr. Arina PETROSIAN

Dr. Oksana ANANYEVA

Dr. Liudmyla MYKHINA

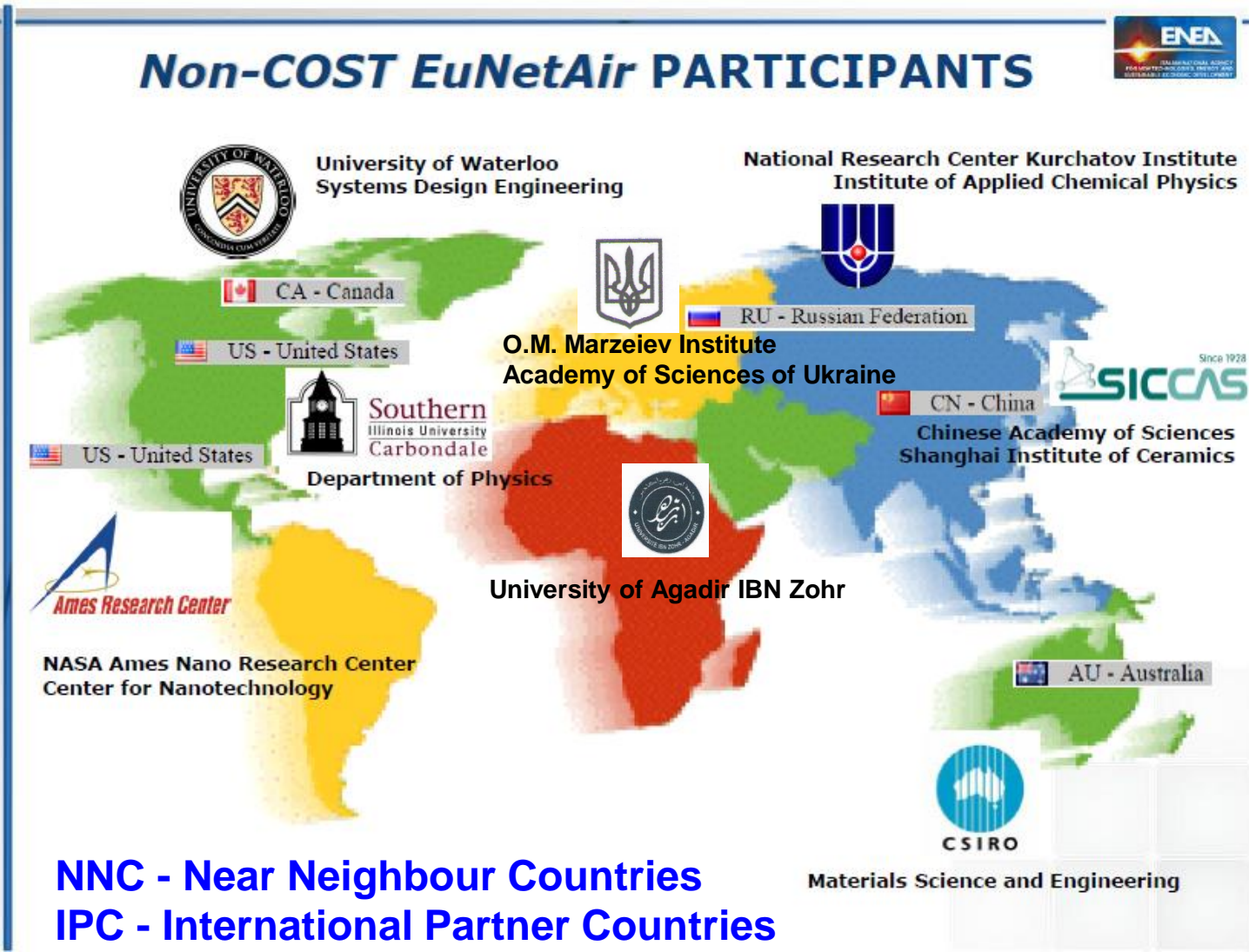
Dr. Liliia PETRUK

Dr. Tetiana MAREMUKHA

7 Non-COST Countries and 8 Non-COST Institutions

Non-COST Countries:
Australia, Canada, China,
Morocco, Russia, **Ukraine**,
USA

Non-COST Institutions:
CSIRO (**Australia**);
University of Waterloo
(**Canada**); Chinese Academy
of Sciences, Shanghai
Institute of Ceramics
(**China**); University of Agadir
IBN Zohr (**Morocco**);
National Research Center
Kurchatov Institute (**Russia**);
O.M. Marzeiev Institute for
Hygiene and Medical
Ecology of Academy of
Science of Ukraine
(**Ukraine**); Southern Illinois
University Carbondale,
NASA Ames Research
Center (**USA**).



NNC - Near Neighbour Countries
IPC - International Partner Countries

13. AOB of the Action - List of AOB

- **Spin-offs activities** from *Action TD1105*: **at least 4 FP7 NMP research proposals** have been submitted for funding on October 2013 at the **first-stage level**. Results of these Applications were released on December 2012 !
- **It is a pleasure to announce that SensIndoor has been granted:**
- GERMANY (Andreas Schuetze, Saarland University, Coordinator): **SensIndoor**, FP7-NMP-2013.SMALL-7, “*Nanotechnology-based intelligent multi-SENsor System with selective pre-concentration for Indoor air quality control*”. Project Partners: USAAR-LMT (Germany), NanoSense (France), Fraunhofer Institute for Chemical Technology (Germany), UO-FETF (Finland), Linkoping University (Sweden), SenSiC (Sweden), SGX (Switzerland), 3S (Germany), Picodeon (Finland), Eurice (Germany), under negotiation. **6 Partners of winner project are from Action TD1105.**

13. AOB of the Action - List of AOB

- **Joint-Publications** should be encouraged more.
 - PAPERS
 - A **List of Joint-Publications** (Year 1: 2012-13) from Action is downloadable at Action webpages (www.cost.eunetair.it) in the Section **LIBRARY - Publications**
 - **Other JOINT-PUBLICATIONS are HIGHLY welcomed !**

Publications of EuNetAir participants

List of publications related to EuNetAir

- [1] A. Vásquez Quintero, B. van Remoortere, E. C. P. Smits, J. van den Brand, D. Briand, H. F. M. Schoo, N. F. de Rooij, *Microelectronic Engineering* **2013**, 110, 52–58.
- [2] T. H. Nguyen, E. Chevallier, J. Garcia, T. D. Nguyen, A. M. Laurent, C. Beaubestre, P. Karpe, T. H. Tran-Thi, *Sensors and Actuators B: Chemical* **2013**, 187, 622–629.
- [3] J. Rossignol, G. Barochi, B. De Fonseca, J. Brunet, M. Bouvet, A. Pauly, L. Markey, *Sensors and Actuators B: Chemical* **2013**, 189, 213–216.
- [4] A. Lloyd Spetz, J. Huotari, C. Bur, R. Bjorklund, J. Lappalainen, H. Jantunen, A. Schütze, M. Andersson, *Sensors and Actuators B: Chemical* **2013**, 187, 184–190.
- [5] J. Huotari, J. Lappalainen, J. Puustinen, A. Lloyd Spetz, *Sensors and Actuators B: Chemical* **2013**, 187, 386–394.
- [6] M. Bouvet, J. M. Suisse, T. Sizun, A. Kumar, G. Barochi, B. De Fonseca, J. Rossignol, *Sensors and Actuators B: Chemical* **2013**, 187, 204–208.
- [7] M. I. Mead, O. A. M. Popoola, G. B. Stewart, P. Landshoff, M. Calleja, M. Hayes, J. J. Baldovi, M. W. McLeod, T. F. Hodgson, J. Dicks, et al., *Atmospheric Environment* **2013**, 70, 186–203.
- [8] J. Hue, M. Dupoy, T. Bordy, R. Rousier, S. Vignoud, B. Schaerer, T. H. Tran-Thi, C. Rivron, L. Mugerli, P. Karpe, *Sensors and Actuators B: Chemical* **2013**.
- [9] R. Beelen, G. Hoek, D. Vienneau, M. Eeftens, K. Dimakopoulou, X. Pedeli, M.-Y. Tsai, N. Künzli, T. Schikowski, A. Marcon, *Atmospheric Environment* **2013**.
- [10] M. Eeftens, M.-Y. Tsai, C. Ampe, B. Anwander, R. Beelen, T. Bellander, G. Cesaroni, M. Cirach, J. Cyrus, K. de Hoogh, et al., *Atmospheric Environment* **2012**, 62, 303–317.
- [11] M. N. Descamps, T. Bordy, J. Hue, S. Mariano, G. Nonglaton, E. Schultz, T. H. Tran-Thi, S. Vignoud-Despond, *Sensors and Actuators B: Chemical* **2012**, 170, 104–108.
- [12] H. Haberl, D. Sprinz, M. Bonazountas, P. Cocco, Y. Desaubies, M. Henze, O. Hertel, R. K. Johnson, U. Kastrup, P. Laconte, et al., *Energy Policy* **2012**, 45-222, 18–23.
- [13] C. Bur, P. Reimann, M. Andersson, A. Lloyd Spetz, A. Schütze, *Microsyst Technol* **2012**, 18, 1015–1025.
- [14] J. Courbat, D. Briand, L. Yue, S. Raible, N. F. de Rooij, *Sensors and Actuators B: Chemical* **2012**, 161, 862–868.
- [15] O. Hertel, C. A. Skjøth, S. Reis, A. Bleeker, R. M. Harrison, J. N. Cape, D. Fowler, U. Skiba, D. Simpson, T. Jickells, et al., *Biogeosciences* **2012**, 9, 4921–4954.
- [16] C. Bur, P. Reimann, M. Andersson, A. Schütze, A. L. Spetz, *IEEE Sensors J.* **2012**, 12, 1906–1913.
- [17] D. Baumgardner, O. Popovicheva, J. Allan, V. Bernardoni, J. Cao, F. Cavalli, J. Cozic, E. Diapouli, K. Eleftheriadis, P. J. Genberg, et al., *Atmos. Meas. Tech.* **2012**, 5, 1869–1887.

14. Location and date of next MC Meeting

26-30 May, 2014, Lille, France

5th MC Meeting, 30 May 2014

Lille, France

connected to

EMRS-2014. Symposium B

Lille, 26 - 29 May 2014

Letter of Commitment

to host 5th MC Meeting

Symposium B - EMRS-2014

from Dr. Sylvain Schoeffter

EMRS Administrative Director



Sylvain SCHOEFFTER

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EUROPEAN
MATERIALS RESEARCH SOCIETY
(non-profit organisation)
Founding Member of the
INTERNATIONAL UNION OF MATERIALS
RESEARCH SOCIETIES
(IUMRS)



Member of
INTERNATIONAL COUNCIL
FOR SCIENCE
(ICSU)

Dr. Michele Penza (Chair)

COST Action TD1105 Eu Net Air
ENEA

Italian National Agency for New Technologies, Energy and Sustainable
Economic Development

Brindisi Research Centre

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I-72100 Brindisi, Italy

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**Letter of invitation to host a COST Action TD1105 meeting in the
frame of E-MRS Spring Meeting on 30 May 2014**

Dear Michele,

I am delighted to be able to offer Lille Grand Palais as the venue for a
COST Action TD1105 meeting to be held on 30, May 2014. The intention is
that this meeting will be formally hosted by E-MRS in the frame of the
2014 Spring Meeting scheduled for May 26-30.

This invitation is based on the assumption that all costs will be covered by
the COST Action TD1105, with no costs falling to E-MRS.

Best wishes,



European Materials Research Society
23, rue du Loess - B.P. 20
67037 STRASBOURG Cedex 2 (France)

Sylvain Schoeffter
E-MRS Administrative Director

15. Summary of MC decisions 4th MC Meeting, 20 Dec. 2013, Cambridge, UK

DESCRIPTION OF DECISIONS DISCUSSED BY ACTION TD1105 MC	APPROVED
MC3D01. 15 STSMs : 9 STSMs (5 days) and 6 STSMs (30 days), <i>or equivalently</i> .	YES
MC3D02. WG1-4 Meeting , European Environment Agency, Copenhagen, 3-4 Oct 2013	YES
MC3D03. WG1-WG4 Meeting , Cambridge, UK, 18 - 19 Dec. 2013 (joined to 4 th MCM)	YES
MC3D04. 2nd Action Workshop on <i>New Sensing Technologies for Indoor and Outdoor Air Quality Control</i> , 25 - 26 March 2014 (to be confirmed), Brindisi, Italy	YES/NO
MC3D05. 2nd Training School , 09 - 11 April 2014 (tbc), Saarbrucken, Germany	YES/NO
MC3D06. ISOCS Short Course Winter 2014 , 9 -14 February 2014, Les Houches, France	YES/NO
MC3D07. EMRS-2014 Symposium , 26 - 30 May 2014, Lille, France - 1st Action TD1105 International Conference as planned in MoU (joined to 5 th MCM)	YES/NO
MC3D08. R&I NEEDS DRAFT on <i>Air Quality Monitoring: Models, Methods, Standards and Technologies</i> , June 2014 (To be defined). Release 1.	YES/NO
MC3D09. NEWSLETTER: Issue 3 (Nov-Dec. 2013); Issue 4 (April-May 2014) LEAFLET/BROCHURE : UPDATED Issues	YES/NO
MC3D10. 4th MC Meeting : 20 Dec. 2013, Cambridge, UK, organized at Queens' College	YES
MC3D11. 5th MC Meeting : 30 May 2014 (tbc), Lille, France, EMRS-2014 Spring Meeting	YES/NO
MC3D12. DISSEMINATION & OUTREACH ACTIVITIES: Aveiro Joint-Exercise	YES/NO
MC2D13. APPROVAL OF MINUTES OF 3rd MCM in Barcelona and Yearly Financial Report Year 1 (1July 2012 - 30 June 2013)	YES/NO

16. Closing

4th MC Meeting, 20 December 2013, Cambridge, UK, hosted by Queens' College,
University of Cambridge

WELCOME from Chair addressing the 4th MC Meeting, Cambridge

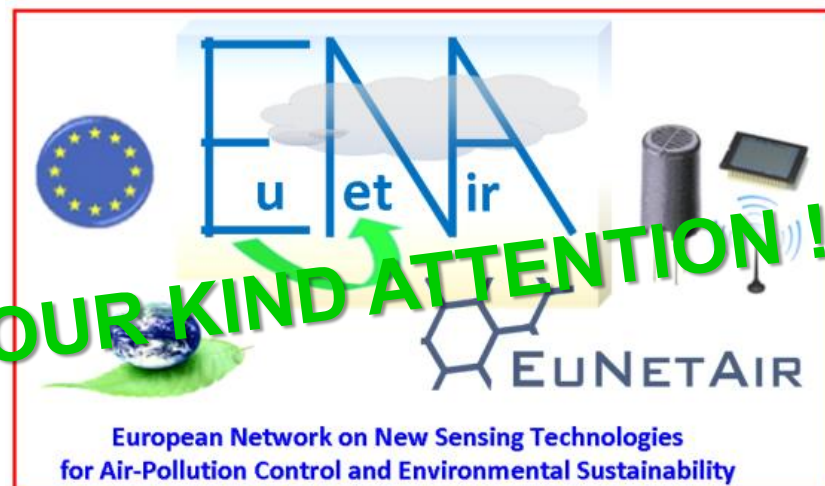
SEE YOU IN LILLE, 26-30 May 2014

**5th ACTION MC Meeting (30 May 2014) &
Symposium B (26-29 May 2014) at EMRS-2014,
Spring Meeting 2014, LILLE, FRANCE**

LILLE, 26-30 MAY 2014

COST Action TD1105 EuNetAir at Queens' College in Cambridge

18 - 20 December 2013



THANK YOU VERY MUCH FOR YOUR KIND ATTENTION!



University of Cambridge
Center for Atmospheric Science
Department of Chemistry
Cambridge, United Kingdom



Queens' College
Silver Street, Cambridge, CB3 9ET
United Kingdom

