Urban Environmental Pollution Conference

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Delegate Handbook

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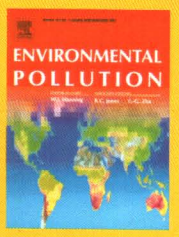

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[P1.63]

Active moss biomonitoring of trace element distribution in Belgrade canyon streets

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Active biomonitoring of airborne trace elements was performed through the exposure of *Sphagnum girgensohnii* moss bags in 5 canyon streets in Belgrade. The selected canyon streets are situated in heavy traffic area, and there are large multi-level public garages in four of them (KN, M, DJ, OV), while the fifth street (KM) is a pedestrian zone. In the streets the moss bags were hung at heights of about 7, 14 and 21 m for 10 weeks during the summer of 2011. After the exposure period, the concentrations of Na, Mg, Al, K, Ca, V, Ni, Cr, Mn, Fe, Co, Cu, Zn, Sr, Cd, Ba and Pb in the moss were determined by ICP-OES. The most enriched elements in the exposed moss were Pb, Cu, V, Cr, Zn**,** and Ni in comparison to the initial moss elemental content. Some of the determined elements (Na, K, Mn) were depleted in exposed moss or stayed at the same level (Mg). In all canyon streets, the vertical distribution patterns of the moss elements concentration (Al, Ba, Ca, Cr, Cu, Ni, Pb, Sr, V**,** and Zn) showed statistically significant decrease from the first to the third heights of bags exposure. However, in two canyon streets (OV and KM), the highest elemental concentration was determined in the moss exposed at the second height. This discrepancy could be explained by different direction of the primary air vortex in these streets, where the exposure sites were either placed on the leeward side or in the main air flow in the second positioned height. Thus, residents in some canyon streets may be exposed to higher air pollution than pedestrians. The results confirmed that the use of *S. girgensohnii* moss bags is a simple, sensitive and inexpensive way to monitor the small-scale inner-city spatial distribution of ambient trace element content.

Keywords: biomonitoring of trace elements, Sphagnum girgensohnii moss bags, urban area, canyon streets

[P1.61]	**Characterization of street dust and dusts absorbed on leaves collected in a metro-city: With special reference to size, mineralogy and elemental distribution.** S-S. Ram*[1,5], P. Chaudhuri[2], S. Chanda[3], S.C. Santra[4], R.V. Kumar[5], A. Chakraborty[1], *[1]UGC-DAE CSR, Kolkata Centre, India, [2]University of Calcutta, India, [3]Centre for Study of Man and Environment, India, [4]University Of Kalyani, India, [5]University of Cambridge, UK*
[P1.62]	**Urban green policy and perspectives** P. Lagas*, J. Diederiks, *PBL National Environmental Assessment Agency, The Netherlands*
[P1.63]	**Active moss biomonitoring of trace element distribution in Belgrade canyon streets** M. Anicic*[1], G. Vukovic[2], I. Razumenic[2], Z.I. Goryainova[3], M.V. Frontasyeva[3], M. Tomasevic[1], *[1]Institute of Physics, University of Belgrade, Serbia, [2]The Faculty of Chemistry, University of Belgrade, Serbia, [3]Joint Institute for Nuclear Research, Russia*
[P1.64]	**Propagation of light pollution in urban environment** M. Aubé[1], *[1]Cégep de Sherbrooke, Canada, [2]Université de Sherbrooke, Canada, [3]Centre de Recherche en Astrophysique du Quebec, Canada*
[P1.65]	**A new approach to decompose SF_6, a potent greenhouse gas, by electron-beam irradiation technology** J.Y. Ryu*, C.Y. Choi, J.B. Kim, Y.M. Yoon, *Korea Atomic Energy Research Institute (KAERI), Republic of Korea*
[P1.66]	**Abatement of a toxic NF_3 gas by electron-beam irradiation technology** C.Y. Choi, J.Y. Ryu*, I.H. Jeong, M.J. Lee, J.B. Kim, Y.M. Yoon, *Korea Atomic Energy Research Institute (KAERI), Republic of Korea*
[P1.67]	**Development and application of two sensitive methods for determination of PAH in urban areas** S. Elcoroaristizabal*[1], J.A. García[1], N. Durana[1], L. Lucio[1], J.L. Ilardia[1], J. Iza[2], *[1]School of Engineering, University of the Basque Country, Spain, [2]Faculty of Pharmacy, University of the Basque Country, Spain*
[P1.68]	**Micro-chemical and mineralogical phase analysis of urban dust in Vienna, Austria** S. Pfleiderer*, H. Neinavaie, *Geological Survey of Austria, Austria*
[P1.69]	**Chemical composition of total particulate matter from indoor school environments** N. Canha*[1], M. Almeida-Silva[1], S.M. Almeida[1], M.C. Freitas[1], H.T. Wolterbeek[1], *[1]Instituto Tecnológico e Nuclear, Portugal, [2]Delft University of Technology, The Netherlands*
[P1.70]	**Urban environmental pollution and health problems in Onitsha Nigeria** A.C.C. Ezeabasili*, O.L. Anike, *Nnewi North Local Government, Nigeria*
[P1.71]	**Impact of air pollution concentrations by ship emission regulation in the Seto Inland Sea, Japan** A. Kondo*, S. Kokawa, Y. Inoue, *Osaka University, Japan*
[P1.72]	**Atmospheric emissions of lead from anthropogenic sources in China** H.Z. Tian*[1], K. Cheng[1], D. Zhao[1], L. Lu[1], Y. Wang[1,2], W.X. Jia[1], *[1]Beijing Normal University, China, [2]Chinese Academy of Sciences, China*
[P1.73]	**Air quality assessment of Seta Hill in Shiga Prefecture, Japan near a metropolitan area** Y. Ichikawa*, D. Matsushima, T. Kinoshita, M. Inuma, *Ryukoku University, Japan*
[P1.74]	**Urban air quality is strongly influenced by weather type and the North Atlantic oscillation during the winter in Gothenburg, Sweden** M. Grundström*[1], L. Tang[1], M. Hallquist[2], H. Pleijel[1], *[1]Department of Biological and Environmental Sciences, University of Gothenburg, Sweden, [2]Department of Chemistry and Molecular Biology, University of Gothenburg, Sweden*
[P1.75]	**Spatial analysis and mapping of the effect of the socioeconomic deprivation on the association between ambient air NO2 and infant mortality in the Lille metropolitan area, France.** C.M.P. PADILLA*[1,2], S.D. Deguen[1,2], D.Z.N. Zmirou-Navier[1,2], V.M.V. Vieira[4], *[1]EHESP School of Public Health–Rennes, France, [2]INSERM U1085-IRSET – Research Institute of environmental and Occupational Health. Rennes, France, [3]Lorraine University Medical School–Vandoeuvre-les-Nancy, France, [4]Boston University School of Public Health, USA*
[P1.76]	**Health risk prediction induced by polycyclic aromatic hydrocarbons present in respirable urban airbone in Rio de Janeiro (Brazil)** I. Felzenszwalb*[1], C.R. Rainho[1], A.M.A. Velho[1], S.M. Corrêa[1], J.L. Mazzei[1], C.A.F. Aiub[2], *[1]Universidade do Estado do Rio de Janeiro, Brazil, [2]Universidade Federal do Estado do Rio de Janeiro, Brazil*
[P1.77]	**Environmental impact analysis of urban energy systems** N. Papaioannou*, N. Shah, *Imperial College London, UK*
[P1.78]	**Ecosystem services: Removal of particulate matter by trees in an urban park of Rome, Italy** F. Manes*[1], E. Salvatori[1], V. Silli[1,2], G. Incerti[1], C. Ricotta[1], S. Mereu[1], *[1]Sapienza University of Rome, Italy, [2]University of L'Aquila, Italy*
[P1.79]	**Is it possible to quantify the health effects of green space interventions?** D. Schram-Bijkerk, D.A. Houweling, H. Kruize*, *National Institute for Public Health and the Environment, The Netherlands*

PROGRAMME

Sunday 17th June 2012	
18.00 – 20.00	Registration
19.00 – 20.00	Reception
Monday 18th June 2012	
07.30 – 08.30	Registration
08.30 – 08.50	Opening Remarks
08.50 – 10.25	Oral Session 1: Urban Human Health
10.25 – 10.55	Refreshment Break
10.55 – 13.05	Oral Session 2: Vegetation and Urban Environment
13.05 – 14.00	Lunch
14.00 – 16.00	Oral Session 3: Urban Air Environment
16.00 – 18.00	Refreshment Break and Poster Session 1
19.00	Conference Dinner
Tuesday 19th June 2012	
08.30 – 10.20	Oral Session 4: Urban Human Health
10.20 – 10.50	Refreshment Break
10.50 – 13.00	Oral Session 5: Urban Human Health
13.00 – 13.50	Lunch
13.50 – 16.30	Oral Session 6: Urban Air Environment
16.30 – 18.30	Refreshment Break and Poster Session 2
Wednesday 20th June 2012	
08.30 – 10.20	Oral Session 7: Vegetation and Air Quality
10.20 – 10.50	Refreshment Break
10.50 – 12.50	Oral Session 8: Urban Environmental Management
12.50 – 14.00	Lunch
14.00 – 15.30	Oral Session 9: Urban Environment
15.30 – 16.00	Refreshment Break
16.00 – 16.40	Oral Session 9: Urban Environment continued
16.40	Closing Remarks