



Volume 92

August 2014

ISSN 1352-2310

ATMOSPHERIC ENVIRONMENT

Air Pollution: Air Quality • Emissions • Transport and Transformations • Atmospheric Composition • Deposition and Fate • Pollution and Climate Change • Environmental Policy • Special Themes



ATMOSPHERIC ENVIRONMENT

<http://www.elsevier.com/locate/atmosenv>

Volume 92

2014

CONTENTS

Review

- D. Domańska and M. Wojtylak 19 Explorative forecasting of air pollution

Regular papers

- F. Alliot, E. Moreau-Guigon, C. Bourges, A. Desportes, M.-J. Teil, M. Blanchard and M. Chevreuil 1 A multi-residue method for characterization of endocrine disruptors in gaseous and particulate phases of ambient air
- R. Betha, Z. Zhang and R. Balasubramanian 9 Influence of trans-boundary biomass burning impacted air masses on submicron particle number concentrations and size distributions
- J. Peters, J. Van den Bossche, M. Reggente, M. Van Poppel, B. De Baets and J. Theunis 31 Cyclist exposure to UFP and BC on urban routes in Antwerp, Belgium
- J. Zhang, H. Xue, Z. Deng, N. Ma, C. Zhao and Q. Zhang 44 A comparison of the parameterization schemes of fog visibility using the in-situ measurements in the North China Plain
- P. Romagnoli, C. Balducci, M. Perilli, M. Gherardi, A. Gordiani, C. Gariazzo, M.P. Gatto and A. Cecinato 51 Indoor PAHs at schools, homes and offices in Rome, Italy
- S. Tiwari, A.K. Srivastava, D.M. Chate, P.D. Safai, D.S. Bisht, M.K. Srivastava and G. Beig 60 Impacts of the high loadings of primary and secondary aerosols on light extinction at Delhi during wintertime
- L.E. Escobedo, W.M. Champion, N. Li and L.D. Montoya 69 Indoor air quality in Latino homes in Boulder, Colorado
- Y. Lin, K. Huang, G. Zhuang, J.S. Fu, Q. Wang, T. Liu, C. Deng and Q. Fu 76 A multi-year evolution of aerosol chemistry impacting visibility and haze formation over an Eastern Asia megacity, Shanghai
- Y. Wang, Y. Peng, D. Wang and C. Zhang 87 Wet deposition fluxes of total mercury and methylmercury in core urban areas, Chongqing, China
- S.J. Fuller, F.P.H. Wragg, J. Nutter and M. Kalberer 97 Comparison of on-line and off-line methods to quantify reactive oxygen species (ROS) in atmospheric aerosols
- S.K. Singh and R. Rani 104 A least-squares inversion technique for identification of a point release: Application to Fusion Field Trials 2007

Continued on inside back cover

Abstracted/indexed in: *Acid Precipitation Digest, Air Pollution Titles, Analytical Abstracts, Applied Science & Technology Abstracts, Applied Science and Technology Index, Aqualine Abstracts, BIOSIS, Cambridge Scientific Abstracts, Chemical Abstracts, Current Contents / Physics / Chemistry & Earth Science, Current Contents/Agriculture, Biology & Environmental Sciences, EMBASE, Elsevier BIOBASE Environmental Periodicals Bibliography, FLUIDEX, GEOBASE, Geographical Abstracts: Physical Geography, Geological Abstracts, INSPEC, Meteorological and, Geostrophysical Abstracts, PASCAL/CNRS, Research Alert, SCISEARCH, Science Citation Index, Scopus, Theoretical Chemical Engineering Abstracts* Also covered in the abstract and citation database Scopus. Full text available on ScienceDirect®.



Printed by Henry Ling Ltd, The Dorset Press, Dorchester, UK



ISSN 1352-2310
92 (2014) 1–596

- K.-C. Choi, J.-J. Lee, C.H. Bae, C.-H. Kim, S. Kim, L.-S. Chang, S.-J. Ban, S.-J. Lee, J. Kim and J.-H. Woo 118 Assessment of transboundary ozone contribution toward South Korea using multiple source–receptor modeling techniques
- J. Hofman, W. Lefebvre, S. Janssen, R. Nackaerts, S. Nuyts, L. Mattheyses and R. Samson 130 Increasing the spatial resolution of air quality assessments in urban areas: A comparison of biomagnetic monitoring and urban scale modelling
- H. Timonen, D.A. Jaffe, N. Wigder, J. Hee, H. Gao, L. Pitzman and R.A. Cary 146 Sources of carbonaceous aerosol in the free troposphere
- I. Salma, T. Borsós, Z. Németh, T. Weidinger, P. Aalto and M. Kulmala 154 Comparative study of ultrafine atmospheric aerosol within a city
- G. Zhang, X. Bi, J. He, D. Chen, L.Y. Chan, G. Xie, X. Wang, G. Sheng, J. Fu and Z. Zhou 162 Variation of secondary coatings associated with elemental carbon by single particle analysis
- S. Itahashi, I. Uno, H. Hayami and S.-i. Fujita 171 Modeling investigation of controlling factors in the increasing ratio of nitrate to non-seasalt sulfate in precipitation over Japan
- J. Chen, J. Lu, J.C. Avise, J.A. DaMassa, M.J. Kleeman and A.P. Kaduwela 182 Seasonal modeling of PM_{2.5} in California’s San Joaquin Valley
- K.B. Ensor, B.K. Ray and S.J. Charlton 191 Point source influence on observed extreme pollution levels in a monitoring network
- M. Evans and V. Roshchanka 199 Russian policy on methane emissions in the oil and gas sector: A case study in opportunities and challenges in reducing short-lived forcings
- D.B. Schwede and G.G. Lear 207 A novel hybrid approach for estimating total deposition in the United States
- M.A. Bari, M. MacNeill, W.B. Kindzierski, L. Wallace, M.-È. Héroux and A.J. Wheeler 221 Predictors of coarse particulate matter and associated endotoxin concentrations in residential environments
- N.T.Q. Hung, S.-B. Lee, N.T. Hang, J. Kongpran, N.T. Kim Oanh, S.-G. Shim and G.-N. Bae 231 Characterization of black carbon at roadside sites and along vehicle roadways in the Bangkok Metropolitan Region
- L. Huang, E.C. McDonald-Buller, G. McGaughey, Y. Kimura and D.T. Allen 240 Annual variability in leaf area index and isoprene and monoterpene emissions during drought years in Texas
- Y. Gao, C. Zhao, X. Liu, M. Zhang and L.R. Leung 250 WRF-Chem simulations of aerosols and anthropogenic aerosol radiative forcing in East Asia
- M. Bentayeb, M. Stempfelet, V. Wagner, M. Zins, S. Bonenfant, C. Songeur, O. Sanchez, A. Rosso, G. Brulfert, I. Rios, E. Chaxel, J. Virga, A. Armengaud, P. Rossello, E. Rivière, M. Bernard, F. Vasbien and R. Deprost 267 Retrospective modeling outdoor air pollution at a fine spatial scale in France, 1989–2008
- L. Dong and H. Liang 280 Spatial analysis on China’s regional air pollutants and CO₂ emissions: emission pattern and regional disparity
- L. Chai, R. Kröbel, H.H. Janzen, K.A. Beauchemin, S.M. McGinn, S. Bittman, A. Atia, I. Edeogu, D. MacDonald and R. Dong 292 A regional mass balance model based on total ammoniacal nitrogen for estimating ammonia emissions from beef cattle in Alberta Canada
- G. Liu, J. Li, H. Xu, D. Wu, Y. Liu and H. Yang 303 Isotopic compositions of elemental carbon in smoke and ash derived from crop straw combustion

Continued on BM II



J. Lee, J. Kim and Y.G. Lee	309	Simultaneous retrieval of aerosol properties and clear-sky direct radiative effect over the global ocean from MODIS
K. Yahya, Y. Zhang and J.M. Vukovich	318	Real-time air quality forecasting over the southeastern United States using WRF/Chem-MADRID: Multiple-year assessment and sensitivity studies
G. Prabhakar, A. Sorooshian, E. Toffol, A.F. Arellano and E.A. Betterton	339	Spatiotemporal distribution of airborne particulate metals and metalloids in a populated arid region
G. Lacressonnière, V.-H. Peuch, R. Vautard, J. Arteta, M. Déqué, M. Joly, B. Josse, V. Marécal and D. Saint-Martin	348	European air quality in the 2030s and 2050s: Impacts of global and regional emission trends and of climate change
J.D. Felix and E.M. Elliott	359	Isotopic composition of passively collected nitrogen dioxide emissions: Vehicle, soil and livestock source signatures
Y. Tang, H. Sun, J. Sun, Y. Zhang and R. Wang	367	Theoretical study on mechanisms and pathways of the CF ₃ O ₂ + ClO reaction
M. Odabasi, T. Elbir, Y. Dumanoglu and S.C. Sofuoglu	376	Halogenated volatile organic compounds in chlorine-bleach-containing household products and implications for their use
P.G. Satsangi, S. Yadav, A.S. Pipal and N. Kumbhar	384	Characteristics of trace metals in fine (PM _{2.5}) and inhalable (PM ₁₀) particles and its health risk assessment along with <i>in-silico</i> approach in indoor environment of India
M.-D. Cheng	398	Geolocating Russian sources for Arctic black carbon
S. Schramm, V. Carré, J.-L. Scheffler and F. Aubriet	411	Active and passive smoking – New insights on the molecular composition of different cigarette smoke aerosols by LDI–FTICRMS
F. Wang, S. Wang, L. Zhang, H. Yang, Q. Wu and J. Hao	421	Mercury enrichment and its effects on atmospheric emissions in cement plants of China
C.M. Flynn, K.E. Pickering, J.H. Crawford, L. Lamsal, N. Krotkov, J. Herman, A. Weinheimer, G. Chen, X. Liu, J. Szykman, S.-C. Tsay, C. Loughner, J. Hains, P. Lee, R.R. Dickerson, J.W. Stehr and L. Brent	429	Relationship between column-density and surface mixing ratio: Statistical analysis of O ₃ and NO ₂ data from the July 2011 Maryland DISCOVER-AQ mission
J. Li, Y. Song, Y. Mao, Z. Mao, Y. Wu, M. Li, X. Huang, Q. He and M. Hu	442	Chemical characteristics and source apportionment of PM _{2.5} during the harvest season in eastern China's agricultural regions
S.K. Guttikunda and P. Jawahar	449	Atmospheric emissions and pollution from the coal-fired thermal power plants in India
T. Moreno, N. Pérez, C. Reche, V. Martins, E. de Miguel, M. Capdevila, S. Centelles, M.C. Minguillón, F. Amato, A. Alastuey, X. Querol and W. Gibbons	461	Subway platform air quality: Assessing the influences of tunnel ventilation, train piston effect and station design
Z. Bai, G. Yang, H. Chen, Q. Zhu, D. Chen, Y. Li, X. Wang, Z. Wu, G. Zhou and C. Peng	469	Nitrous oxide fluxes from three forest types of the tropical mountain rainforests on Hainan Island, China
X. Zhu, C. Song, Y. Guo, X. Sun, X. Zhang and Y. Miao	478	Methane emissions from temperate herbaceous peatland in the Sanjiang Plain of Northeast China
F. Wang, T. Lin, Y. Li, T. Ji, C. Ma and Z. Guo	484	Sources of polycyclic aromatic hydrocarbons in PM _{2.5} over the East China Sea, a downwind domain of East Asian continental outflow
P.D. Safai, M.P. Raju, P.S.P. Rao and G. Pandithurai	493	Characterization of carbonaceous aerosols over the urban tropical location and a new approach to evaluate their climatic importance
M. Yousefi, M. Khoramivafa and F. Mondani	501	Integrated evaluation of energy use, greenhouse gas emissions and global warming potential for sugar beet (<i>Beta vulgaris</i>) agroecosystems in Iran
T. Higashi, Y. Kambayashi, N. Ohkura, M. Fujimura, S. Nakai, Y. Honda, K. Saijoh, K. Hayakawa, F. Kobayashi, Y. Michigami, A.E. Orlando, Y. Hitomi and H. Nakamura	506	Effects of Asian dust on daily cough occurrence in patients with chronic cough: A panel study

Z. Du, K. He, Y. Cheng, F. Duan, Y. Ma, J. Liu, X. Zhang, M. Zheng and R. Weber	514	A yearlong study of water-soluble organic carbon in Beijing I: Sources and its primary vs. secondary nature
M. Achad, M.L. López, S. Ceppi, G.G. Palancar, G. Tirao and B.M. Toselli	522	Assessment of fine and sub-micrometer aerosols at an urban environment of Argentina
A. Datta and T.K. Adhya	533	Effects of organic nitrification inhibitors on methane and nitrous oxide emission from tropical rice paddy
D. Ji, L. Li, Y. Wang, J. Zhang, M. Cheng, Y. Sun, Z. Liu, L. Wang, G. Tang, B. Hu, N. Chao, T. Wen and H. Miao	546	The heaviest particulate air-pollution episodes occurred in northern China in January, 2013: Insights gained from observation
G.S. Sandhu, H.C. Frey, S. Bartelt-Hunt and E. Jones	557	In-use measurement of the activity, fuel use, and emissions of front-loader refuse trucks
H. Ling, K. Schäfer, J. Xin, M. Qin, P. Suppan and Y. Wang	566	Small-scale spatial variations of gaseous air pollutants – A comparison of path-integrated and <i>in situ</i> measurement methods
Short communication		
A.S. Barneze, A.M. Mazzetto, C.F. Zani, T. Misselbrook and C.C. Cerri	394	Nitrous oxide emissions from soil due to urine deposition by grazing cattle in Brazil
Technical notes		
R.D. Saylor, G.M. Wolfe, T.P. Meyers and B.B. Hicks	141	A corrected formulation of the Multilayer Model (MLM) for inferring gaseous dry deposition to vegetated surfaces
C.D. Saldiva de André, P. Afonso de André, F.M. Rocha, P.H.N. Saldiva, R. Carvalho de Oliveira and J.M. Singer	178	Reliability of reflectance measures in passive filters
Agriculture and Air Quality		
S.B. Shah, J.L. Grimes, E.O. Oviedo-Rondón and P.W. Westerman	576	Acidifier application rate impacts on ammonia emissions from US roaster chicken houses
L. Hamaoui-Laguef, F. Meleux, M. Beekmann, B. Bessagnet, S. Générumont, P. Cellier and L. Létinois	584	Improving ammonia emissions in air quality modelling for France