



Volume 91

July 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



## CONTENTS

### Regular papers

- M. Winther, J.H. Christensen, M.S. Plejdrup, E.S. Ravn, Ó.F. Eriksson and H.O. Kristensen 1 Emission inventories for ships in the arctic based on satellite sampled AIS data
- M. Nonnemacher, H. Jakobs, A. Viehmann, I. Vanberg, C. Kessler, S. Moebus, S. Möhlenkamp, R. Erbel, B. Hoffmann, M. Memmesheimer and on behalf of the Heinz Nixdorf Recall Study Investigative Group 15 Spatio-temporal modelling of residential exposure to particulate matter and gaseous pollutants for the Heinz Nixdorf Recall Cohort
- H. Lin, Y. Zhang, T. Liu, J. Xiao, Y. Xu, X. Xu, Z. Qian, S. Tong, Y. Luo, W. Zeng and W. Ma 24 Mortality reduction following the air pollution control measures during the 2010 Asian Games
- C. Lai, Y. Liu, J. Ma, Q. Ma and H. He 32 Degradation kinetics of levoglucosan initiated by hydroxyl radical under different environmental conditions
- J. Li, W. Yang, Z. Wang, H. Chen, B. Hu, J. Li, Y. Sun and Y. Huang 40 A modeling study of source–receptor relationships in atmospheric particulate matter over Northeast Asia
- N. Utry, T. Ajtai, Á. Filep, M. Pintér, Z. Török, Z. Bozóki and G. Szabó 52 Correlations between absorption Angström exponent (AAE) of wintertime ambient urban aerosol and its physical and chemical properties
- L. Li, C. Huang, H.Y. Huang, Y.J. Wang, R.S. Yan, G.F. Zhang, M. Zhou, S.R. Lou, S.K. Tao, H.L. Wang, L.P. Qiao, C.H. Chen, D.G. Streets and J.S. Fu 60 An integrated process rate analysis of a regional fine particulate matter episode over Yangtze River Delta in 2010
- E. Debry and V. Mallet 71 Ensemble forecasting with machine learning algorithms for ozone, nitrogen dioxide and PM<sub>10</sub> on the Prev' Air platform
- Q. Liu, Y. Liu, J. Yin, M. Zhang and T. Zhang 85 Chemical characteristics and source apportionment of PM<sub>10</sub> during Asian dust storm and non-dust storm days in Beijing
- A. Khodayari, S.C. Olsen and D.J. Wuebbles 95 Evaluation of aviation NO<sub>x</sub>-induced radiative forcings for 2005 and 2050
- P.R. Dalmasso, R.A. Taccone, J.D. Nieto, P.M. Cometto, C.J. Cobos and S.I. Lane 104 Reactivity of hydrohaloethers with OH radicals and chlorine atoms: Correlation with molecular properties
- Y. Li, J. Deng, C. Mu, Z. Xing and K. Du 110 Vertical distribution of CO<sub>2</sub> in the atmospheric boundary layer: Characteristics and impact of meteorological variables

*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®.





- X. Chen, D. Day, B. Schichtel, W. Malm, A.K. Matzoll, J. Mojica, C.E. McDade, E.D. Hardison, D.L. Hardison, S. Walters, M. Van De Water and J.L. Collett Jr. 118 Seasonal ambient ammonia and ammonium concentrations in a pilot IMPROVE NH<sub>x</sub> monitoring network in the western United States
- K.H. Lee, M.S. Wong, K. Kim and S.S. Park 127 Analytical approach to estimating aerosol extinction and visibility from satellite observations
- J.W. Mietelski, R. Kierepko, K. Brudecki, P. Janowski, K. Kleszcz and E. Tomankiewicz 137 Long-range transport of gaseous <sup>131</sup>I and other radionuclides from Fukushima accident to Southern Poland
- R.O. Saunders, J.D.W. Kahl and J.K. Ghorai 146 Improved estimation of PM<sub>2.5</sub> using Lagrangian satellite-measured aerosol optical depth
- S. Ifang, M. Gallus, S. Liedtke, R. Kurtenbach, P. Wiesen and J. Kleffmann 154 Standardization methods for testing photo-catalytic air remediation materials: Problems and solution
- T. Moreno, I. Rivas, L. Bouso, M. Viana, T. Jones, M. Álvarez-Pedrerol, A. Alastuey, J. Sunyer and X. Querol 162 Variations in school playground and classroom atmospheric particulate chemistry
- New Directions**
- R.M. Harrison, B. Brunekreef, M. Keuken, H. Denier van der Gon and X. Querol 172 New Directions: Cleaning the air: Will the European Commission's clean air policy package of December 2013 deliver?
- J.L. Hoare 175 New Directions: Questions surrounding suspended particle mass used as a surrogate for air quality and for regulatory control of ambient urban air pollution
- Corrigenda**
- J.-M. Yoo, Y.-R. Lee, D. Kim, M.-J. Jeong, W.R. Stockwell, P.K. Kundu, S.-M. Oh, D.-B. Shin and S.-J. Lee 178 Corrigendum to "New indices for wet scavenging of air pollutants (O<sub>3</sub>, CO, NO<sub>2</sub>, SO<sub>2</sub>, and PM<sub>10</sub>) by summertime rain" [Atmos. Environ. 82 (2014) 226–237]
- W. Wang, L. Jing, J. Zhan, B. Wang, D.P. Zhang, H.W. Zhang, D.Q. Wang, Y. Yang, J. Zhao, Y.F. Sun, X.H. Bi, X.T. Wang and J.L. Feng 179 Corrigendum to "Nitrated polycyclic aromatic hydrocarbon pollution during the Shanghai World Expo 2010" [Atmos. Environ. 89 (2014) 242–248]