



Volume 87

April 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

- H.-L. Chiang, P.-H. Huang, Y.-M. Lai and T.-Y. Lee 1 Comparison of the regulated air pollutant emission characteristics of real-world driving cycle and ECE cycle for motorcycles
- A. Sosnowska, M. Barycki, K. Jagiello, M. Haranczyk, A. Gajewicz, T. Kawai, N. Suzuki and T. Puzyn 10 Predicting enthalpy of vaporization for Persistent Organic Pollutants with Quantitative Structure–Property Relationship (QSPR) incorporating the influence of temperature on volatility
- J. Wang, X. Liu, X. Yang, M. Lei, S. Ruan, K. Nie, Y. Miao and J. Liu 19 Development and evaluation of a new digital photography visiometer system for automated visibility observation
- C.D. Hatch, A.L. Greenaway, M.J. Christie and J. Baltrusaitis 26 Water adsorption constrained Frenkel–Halsey–Hill adsorption activation theory: Montmorillonite and illite
- S. Philip, R.V. Martin, J.R. Pierce, J.L. Jimenez, Q. Zhang, M.R. Canagaratna, D.V. Spracklen, C.R. Nowlan, L.N. Lamsal, M.J. Cooper and N.A. Krotkov 34 Spatially and seasonally resolved estimate of the ratio of organic mass to organic carbon
- H. Cho and K. Lee 41 A new assessment method of outdoor tobacco smoke (OTS) exposure
- Z.M. Qian, G.-H. Dong, W.-H. Ren, M. Simckes, J. Wang, A. Zelicoff and E. Trevathan 47 Effect of pet ownership on respiratory responses to air pollution in Chinese children: The Seven Northeastern Cities (SNEC) study
- Y. Xu, Y. Liang, J.R. Urquidi and J.A. Siegel 53 Phthalates and polybrominated diphenyl ethers in retail stores
- T. Torvela, J. Tissari, O. Sippula, T. Kaivosoja, J. Leskinen, A. Virén, A. Lähde and J. Jokiniemi 65 Effect of wood combustion conditions on the morphology of freshly emitted fine particles
- L.E. Venegas, N.A. Mazzeo and M.C. Dezzutti 77 A simple model for calculating air pollution within street canyons
- G.W. Fuller, A.H. Tremper, T.D. Baker, K.E. Yttri and D. Butterfield 87 Contribution of wood burning to PM<sub>10</sub> in London
- J.D. Burley, A. Bytnerowicz, J.D. Ray, S. Schilling and E.B. Allen 95 Surface ozone in Joshua Tree National Park
- L. Tositti, E. Brattich, G. Cinelli and D. Baldacci 108 12 years of <sup>7</sup>Be and <sup>210</sup>Pb in Mt. Cimone, and their correlation with meteorological parameters

*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®.



- 
- |   |     |   |
|---|-----|---|
| S.D. Sanap, D.C. Ayantika, G. Pandithurai and K. Niranjana  | 123 | Assessment of the aerosol distribution over Indian subcontinent in CMIP5 models   |
| K. Murata and D. Zhang  | 138 | Transport of bacterial cells toward the Pacific in Northern Hemisphere westerly winds   |
| X. Wang, W. Tao, Y. Xu, J. Feng and F. Wang   | 146 | Indoor phthalate concentration and exposure in residential and office buildings in Xi'an, China   |
| P.A. Kassomenos, S. Vardoulakis, A. Chaloulakou, A.K. Paschalidou, G. Grivas, R. Borge and J. Lumberras   | 153 | Study of PM <sub>10</sub> and PM <sub>2.5</sub> levels in three European cities: Analysis of intra and inter urban variations                       |
| Y. Fujii, W. Iriana, M. Oda, A. Puriwigati, S. Tohno, P. Lestari, A. Mizohata and H.S. Huboyo   | 164 | Characteristics of carbonaceous aerosols emitted from peatland fire in Riau, Sumatra, Indonesia   |
| C. Fountoukis, T. Butler, M.G. Lawrence, H.A.C. Denier van der Gon, A.J.H. Visschedijk, P. Charalampidis, C. Pilinis and S.N. Pandis  | 175 | Impacts of controlling biomass burning emissions on wintertime carbonaceous aerosol in Europe   |
| J.A. McGrath, M.A. Byrne, M.R. Ashmore, A.C. Terry and C. Dimitroulopoulou  | 183 | A simulation study of the changes in PM <sub>2.5</sub> concentrations due to interzonal airflow variations caused by internal door opening patterns |
| F. Yan, E. Winijkul, T.C. Bond and D.G. Streets   | 189 | Global emission projections of particulate matter (PM): II. Uncertainty analyses of on-road vehicle exhaust emissions                               |
| A.P. Rutter, Q.G.J. Malloy, Y.J. Leong, C.V. Gutierrez, M. Calzada, E. Scheuer, J.E. Dibb and R.J. Griffin  | 200 | The reduction of HNO <sub>3</sub> by volatile organic compounds emitted by motor vehicles   |
| S.S. Cindoruk and Y. Tasdemir   | 207 | The investigation of atmospheric deposition distribution of organochlorine pesticides (OCPs) in Turkey  |
| C. Carbone, S. Decesari, M. Paglione, L. Giulianelli, M. Rinaldi, A. Marinoni, P. Cristofanelli, A. Didiodato, P. Bonasoni, S. Fuzzi and M.C. Facchini  | 218 | 3-year chemical composition of free tropospheric PM <sub>1</sub> at the Mt. Cimone GAW global station – South Europe – 2165 m a.s.l.                |
| C.-M. Nzotungicimpaye, B.J. Abiodun and D.G. Steyn  | 228 | Tropospheric ozone and its regional transport over Cape Town  |
| A. Jedynska, G. Hoek, M. Eeftens, J. Cyrys, M. Keuken, C. Ampe, R. Beelen, G. Cesaroni, F. Forastiere, M. Cirach, K. de Hoogh, A. De Nazelle, C. Madsen, C. Declercq, K.T. Eriksen, K. Katsouyanni, H.M. Akhlaghi, T. Lanki, K. Meliefste, M. Nieuwenhuijsen, M. Oldenwening, A. Pennanen, O. Raaschou-Nielsen, B. Brunekreef and I.M. Kooter | 239 | Spatial variations of PAH, hopanes/steranes and EC/OC concentrations within and between European study areas  |
| S.W. Gichuki and R.P. Mason   | 249 | Wet and dry deposition of mercury in Bermuda  |

*Continued on BM II*



**Short communication**

- K. Chang, R. Baril, M. Hull, N.T.M. Pepe, I.B. Nwachuku and L.A. Doezema 170 Microseepage of C<sub>2</sub>–C<sub>5</sub> alkanes over the Baldwin Hills in Los Angeles

**New Directions**

- T.A.J. Kuhlbusch, P. Quincey, G.W. Fuller, F. Kelly, I. Mudway, M. Viana, X. Querol, A. Alastuey, K. Katsouyanni, E. Weijers, A. Borowiak, R. Gehrig, C. Hueglin, P. Bruckmann, O. Favez, J. Sciare, B. Hoffmann, K. EspenYttri, K. Torseth, U. Sager, C. Asbach and U. Quass 258 New Directions: The future of European urban air quality monitoring
- C.S. Malley, C.F. Braban and M.R. Heal 261 New Directions: Chemical climatology and assessment of atmospheric composition impacts