



## AEROSOL AND AIR QUALITY RESEARCH

## CONTENTS

<b>Overview of the Special Issue “Selected Papers from the 2<sup>nd</sup> Atmospheric Chemistry and Physics at Mountain Sites Symposium”</b>	<b>471</b>
<i>A. Gannet Hallar, Elisabeth Andrews, Nicolas Bukowiecki, Daniel A. Jaffe, Neng-Huei Lin</i>	
<b>- Regional Air Pollution -</b>	
<b>Aromatic Hydrocarbons and Halocarbons at a Mountaintop in Southern China</b>	<b>478</b>
<i>Minmin Yang, Yan Wang, Jianmin Chen, Hongli Li, Yuhua Li</i>	
<b>Comparison and Evaluation of Methods to Apportion Ambient PM<sub>2.5</sub> to Residential Wood Heating in Fairbanks, AK</b>	<b>492</b>
<i>Brittany D. Busby, Tony J. Ward, Jay R. Turner, Christopher P. Palmer</i>	
<b>Residential Biomass Burning Emissions over Northwestern Himalayan Region of India: Chemical Characterization and Budget Estimation</b>	<b>504</b>
<i>Mohit Saxena, Sudhir Kumar Sharma, Nidhi Tomar, Humaira Ghayas, Avirup Sen, Rohtash Singh Garhwal, Naresh Chandra Gupta, Tuhin Kumar Mandal</i>	
<b>Biomass Combustion a Dominant Source of Carbonaceous Aerosols in the Ambient Environment of Western Himalayas</b>	<b>519</b>
<i>Ajay Kumar, Arun K. Attri</i>	
<b>Chemical Characterization of PM<sub>1</sub> at a Regional Background Site in the Western Mediterranean</b>	<b>530</b>
<i>Nuria Galindo, Eduardo Yubero, Jose F. Nicolás, Javier Crespo, Rubén Soler</i>	
<b>Increased PM Concentrations during a Combined Wildfire and Saharan Dust Event Observed at High-Altitude Sonnblick Observatory, Austria</b>	<b>542</b>
<i>Gerhard Schauer, Anne Kasper-Giebl, Griša Močnik</i>	
<b>Transported Mineral Dust Deposition Case Study at a Hydrologically Sensitive Mountain Site: Size and Composition Shifts in Ambient Aerosol and Snowpack</b>	<b>555</b>
<i>Jessica L. Axson, Hongru Shen, Amy L. Bondy, Christopher C. Landry, Jason Welz, Jessie M. Creamean, Andrew P. Ault</i>	
<b>Regional Representativeness of CH<sub>4</sub> and N<sub>2</sub>O Mixing Ratio Measurements at High-Altitude Mountain Station Kasprowy Wierch, Southern Poland</b>	<b>568</b>
<i>Jarosław M. Nęcki, Michał Galkowski, Łukasz Chmura, Christoph Gerbig, Mirosław Zimnoch, Damian Zięba, Jakub Bartyzel, Wojciech Wolkowicz, Kazimierz Róžański</i>	
<b>Non-Methane Volatile Organic Compounds in the Background Atmospheres of a Southern European Mountain Site (Mt. Cimone, Italy): Annual and Seasonal Variability</b>	<b>581</b>
<i>Eleonora Lo Vullo, Francesco Furlani, Jgor Arduini, Umberto Giostra, Paolo Cristofanelli, Martin L. Williams, Michela Maione</i>	
<b>On the Transport of Urban Pollution in an Andean Mountain Valley</b>	<b>593</b>
<i>Ana María Cordova, Jorge Arévalo, Julio C. Marín, Darrel Baumgardner, Graciela B. Raga, Diana Pozo, Carlos A. Ochoa, Roberto Rondanelli</i>	
<b>- Interaction between Air and Precipitation Chemistry -</b>	
<b>Long Range Transport and Wet Deposition Fluxes of Major Chemical Species in Snow at Gulmarg in North Western Himalayas (India)</b>	<b>606</b>
<i>Bablu Kumar, Sudha Singh, Gyan Prakash Gupta, Farooq Ahmad Lone, Umesh Chandra Kulshrestha</i>	
<b>Chemical Composition of Fog Water at Four Sites in Taiwan</b>	<b>618</b>
<i>Stefan Simon, Otto Klemm, Tarek El-Madany, Joschka Walk, Katharina Amelung, Po-Hsiung Lin, Shih-Chieh Chang, Neng-Huei Lin, Guenter Engling, Shih-Chieh Hsu, Tsong-Huei Wey, Ya-Nan Wang, Yu-Chi Lee</i>	
<b>Water-Soluble Organic Nitrogen in High Mountain Snow Samples from Central Japan</b>	<b>632</b>
<i>Tomoki Mochizuki, Kimitaka Kawamura, Kazuma Aoki</i>	
<b>The Diversity and Role of Bacterial Ice Nuclei in Rainwater from Mountain Sites in China</b>	<b>640</b>
<i>Zedong Lu, Pengrui Du, Rui Du, Zongmin Liang, Saisai Qin, Ziming Li, Yaling Wang</i>	
<b>Impact of Long-Range Transported African Dust on Cloud Water Chemistry at a Tropical Montane Cloud Forest in Northeastern Puerto Rico</b>	<b>653</b>
<i>Carlos J. Valle-Díaz, Elvis Torres-Delgado, Stephanie M. Colón-Santos, Taehyoung Lee, Jeffrey L. Collett Jr., William H. McDowell, Olga L. Mayol-Bracero</i>	
<b>Dependence of Daily Aerosol Wet Deposition on Precipitation at Appalachian Mountains Site in the United States</b>	<b>665</b>
<i>Constantin Andronache</i>	
<b>History of Aerosol-Cloud Interactions Derived from Observations in Mountaintop Clouds in Puerto Rico</b>	<b>674</b>
<i>Graciela B. Raga, Darrel Baumgardner, Olga L. Mayol-Bracero</i>	

<b>- Classification of and the Exchange between the Free Troposphere and Boundary Layer -</b>	
<b>Particle Climatology in Central East China Retrieved from Measurements in Planetary Boundary Layer and in Free Troposphere at a 1500-m-High Mountaintop Site</b>	<b>689</b>
<i>Xiaojing Shen, Junying Sun, Xiaoye Zhang, Niku Kivekäs, Yangmei Zhang, Tingting Wang, Xiaochun Zhang, Yun Yang, Dezhong Wang, Yong Zhao, Dahe Qin</i>	
<b>Experimental Evidence of the Feeding of the Free Troposphere with Aerosol Particles from the Mixing Layer</b>	<b>702</b>
<i>Evelyn Freney, Sellegri Karine, Asmi Eija, Rose Clemence, Chauvigne Aurelien, Baray Jean-Luc, Colomb Aurelie, Hervo Maxime, Montoux Nadege, Bouvier Laetitia, Picard David</i>	
<b>Carbon Dioxide in the Free Troposphere and Boundary Layer at the Mt. Bachelor Observatory</b>	<b>717</b>
<i>Crystal D. McClure, Daniel A. Jaffe, Honglian Gao</i>	
<b>Boundary Layer Characteristics over a High Altitude Station, Mauna Loa Observatory</b>	<b>729</b>
<i>Nimmi C.P. Sharma, John E. Barnes</i>	
<b>- Aerosol and Trace Gas Climatology -</b>	
<b>Ambient Air Levels of Organochlorine Pesticides at Three High Alpine Monitoring Stations: Trends and Dependencies on Geographical Origin</b>	<b>738</b>
<i>Manfred Kirchner, Gert Jakobi, Wolfgang Körner, Walkiria Levy, Wolfgang Moche, Bernhard Niedermoser, Marcus Schaub, Ludwig Ries, Peter Weiss, Felix Anritter, Norbert Fischer, Bernhard Henkelmann, Karl-Werner Schramm</i>	
<b>Black Carbon Aerosols at Mt. Muztagh Ata, a High-Altitude Location in the Western Tibetan Plateau</b>	<b>752</b>
<i>Chong-Shu Zhu, Jun-Ji Cao, Bai-Qing Xu, Ru-Jin Huang, Ping Wang, Kin-Fai Ho, Zhen-Xing Shen, Sui-Xin Liu, Yong-Ming Han, Xue-Xi Tie, Zhu-Zi Zhao, L.-W. Antony Chen</i>	
<b>A Review of More than 20 Years of Aerosol Observation at the High Altitude Research Station Jungfrauoch, Switzerland (3580 m asl)</b>	<b>764</b>
<i>Nicolas Bukowiecki, Ernest Weingartner, Martin Gysel, Martine Collaud Coen, Paul Zieger, Erik Herrmann, Martin Steinbacher, Heinz W. Gäggeler, Urs Baltensperger</i>	
<b>Atmospheric Aerosol Elements over the Inland Tibetan Plateau: Concentration, Seasonality, and Transport</b>	<b>789</b>
<i>Shichang Kang, Pengfei Chen, Chaoliu Li, Bin Liu, Zhiyuan Cong</i>	
<b>Seasonal and Diurnal Variation of Formaldehyde and its Meteorological Drivers at the GAW Site Zugspitze</b>	<b>801</b>
<i>Michael Leuchner, Homa Ghasemifard, Marvin Lüpke, Ludwig Ries, Christian Schunk, Annette Menzel</i>	
<b>Climatology of New Particle Formation and Corresponding Precursors at Storm Peak Laboratory</b>	<b>816</b>
<i>A. Gannet Hallar, Ross Petersen, Ian B. McCubbin, Doug Lowenthal, Shanhu Lee, Elisabeth Andrews, Fangqun Yu</i>	
<b>Atmospheric Science Research at Whiteface Mountain, NY: Site Description and History</b>	<b>827</b>
<i>James J. Schwab, Douglas Wolfe, Paul Casson, Richard Brandt, Kenneth L. Demerjian, Liat Husain, Vincent A. Dutkiewicz, Kevin L. Civerolo, Oliver V. Rattigan</i>	
<b>Atmospheric Chemistry Measurements at Whiteface Mountain, NY: Cloud Water Chemistry, Precipitation Chemistry, and Particulate Matter</b>	<b>841</b>
<i>James J. Schwab, Paul Casson, Richard Brandt, Liat Husain, Vincent Dutkiewicz, Douglas Wolfe, Kenneth L. Demerjian, Kevin L. Civerolo, Oliver V. Rattigan, H. Dirk Felton, James E. Dukett</i>	
<b>Aerosol Measurements at South Pole: Climatology and Impact of Local Contamination</b>	<b>855</b>
<i>Patrick Sheridan, Elisabeth Andrews, Lauren Schmeisser, Brian Vasel, John Ogren</i>	
<b>Atmospheric Chemistry Measurements at Whiteface Mountain, NY: Ozone and Reactive Trace Gases</b>	<b>873</b>
<i>Richard E. Brandt, James J. Schwab, Paul W. Casson, Utpal K. Roychowdhury, Douglas Wolfe, Kenneth L. Demerjian, Kevin L. Civerolo, Oliver V. Rattigan, H. Dirk Felton</i>	
<b>Towards a Universal “Baseline” Characterisation of Air Masses for High- and Low-Altitude Observing Stations Using Radon-222</b>	<b>885</b>
<i>Scott D. Chambers, Alastair G. Williams, Franz Conen, Alan D. Griffiths, Stefan Reimann, Martin Steinbacher, Paul B. Krummel, L. Paul Steele, Marcel V. van der Schoot, Ian E. Galbally, Suzie B. Molloy, John E. Barnes</i>	
<b>- Model Evaluation -</b>	
<b>Vertical Profiles and Seasonal Variations of Key Parameters Controlling Particle Formation and Growth at Storm Peak Laboratory</b>	<b>900</b>
<i>Fangqun Yu, Gan Luo, A. Gannet Hallar</i>	
<b>Evaluation of Aerosol Chemical Composition Simulations by the WRF-Chem Model at the Puy de Dôme Station (France)</b>	<b>909</b>
<i>Christelle Barbet, Laurent Deguillaume, Nadine Chaumerliac, Maud Leriche, Evelyn Freney, Aurélie Colomb, Karine Sellegri, Luc Patryl, Patrick Armand</i>	