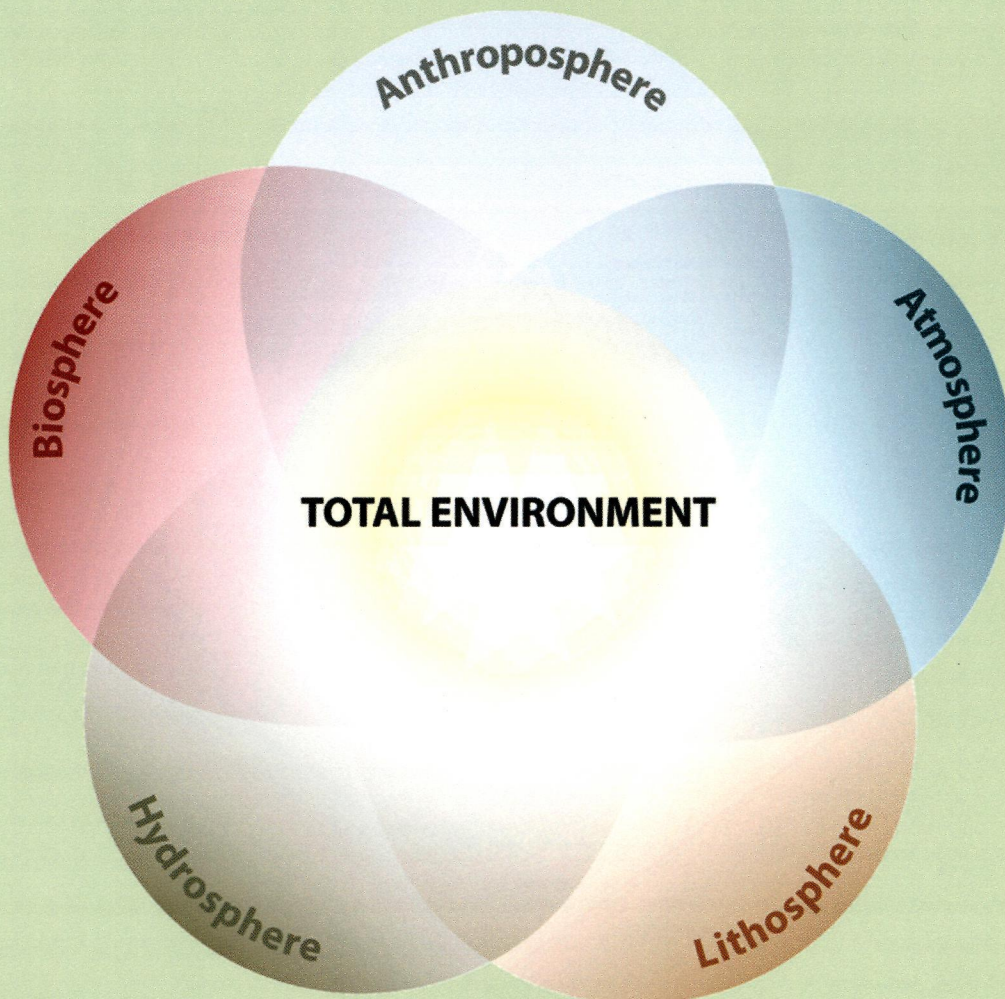


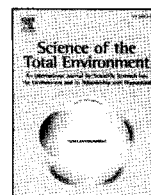
Volume 448 • 15 March 2013 • ISSN 0048-9697
Published in 28 issues each year

Special Issue
Atmospheric Mercury, Air Pollution, and Associated
Effects on Health: A Festschrift to Professor Jerry Keeler

Science of the Total Environment

An International Journal for Scientific Research into
the Environment and its Relationship with Humankind





Contents

Special Issue: Atmospheric Mercury, Air Pollution, and Associated Effects on Health: A Festschrift to Professor Jerry Keeler

Guest Editors: J. Tim Dvonch

Dedication of this special issue to Professor Jerry Keeler	
J.T. Dvonch, M.S. Gustin and J. Bennett (United States)	1
Source apportionment of ambient fine particulate matter in Dearborn, Michigan, using hourly resolved PM chemical composition data	
J.P. Pancras, M.S. Landis, G.A. Norris, R. Vedantham and J.T. Dvonch (USA)	2
Source apportionment of fine particles in Kuwait City	
M.A. Alolayan, K.W. Brown, J.S. Evans, W.S. Bouhamra and P. Koutrakis (Kuwait, USA, Cyprus)	14
Improved apportionment of ambient PM constituents to sources in Tampa, FL, with Pseudo-Deterministic Receptor Model-II	
G.M. Beachley and J.M. Ondov (USA)	26
The Near-Road Exposures and Effects of Urban Air Pollutants Study (NEXUS): Study design and methods	
A. Vette, J. Burke, G. Norris, M. Landis, S. Batterman, M. Breen, V. Isakov, T. Lewis, M.I. Gilmour, A. Kamal, D. Hammond, R. Vedantham, S. Bereznicki, N. Tian, C. Croghan and Community Action Against Asthma Steering Committee (USA)	38
Air pollution and respiratory symptoms among children with asthma: Vulnerability by corticosteroid use and residence area	
T.C. Lewis, T.G. Robins, G.B. Mentz, X. Zhang, B. Mukherjee, X. Lin, G.J. Keeler, J.T. Dvonch, F.Y. Yip, M.S. O'Neill, E.A. Parker, B.A. Israel, P.T. Max, A. Reyes and Community Action Against Asthma (CAAA) Steering Committee (United States)	48
Associations between urban air pollution and pediatric asthma control in El Paso, Texas	
J.E. Zora, S.E. Sarnat, A.U. Raysoni, B.A. Johnson, W.-W. Li, R. Greenwald, F. Holguin, T.H. Stock and J.A. Sarnat (USA)	56
Reduced metabolic insulin sensitivity following sub-acute exposures to low levels of ambient fine particulate matter air pollution	
R.D. Brook, X. Xu, R.L. Bard, J.T. Dvonch, M. Morishita, N. Kaciroti, Q. Sun, J. Harkema and S. Rajagopalan (United States)	66
Air-Pollution and Cardiometabolic Diseases (AIRCMD): A prospective study investigating the impact of air pollution exposure and propensity for type II diabetes	
Z. Sun, B. Mukherjee, R.D. Brook, G.A. Gatts, F. Yang, Q. Sun, J.R. Brook, Z. Fan and S. Rajagopalan (USA, China, Canada)	72
Air pollution, inflammation and preterm birth in Mexico City: Study design and methods	
M.S. O'Neill, A. Osornio-Vargas, M.A. Buxton, B.N. Sánchez, L. Rojas-Bracho, M. Castillo-Castrejon, I.B. Mordhukovich, D.G. Brown and F. Vadillo-Ortega (USA, Mexico)	79
Atmospheric transport of speciated mercury across southern Lake Michigan: Influence from emission sources in the Chicago/Gary urban area	
L.E. Gratz, G.J. Keeler, F.J. Marsik, J.A. Barres and J.T. Dvonch (USA)	84
Variation in concentrations of three mercury (Hg) forms at a rural and a suburban site in New York State	
H.-D. Choi, J. Huang, S. Mondal and T.M. Holsen (USA)	96
Investigation of mercury wet deposition physicochemistry in the Ohio River Valley through automated sequential sampling	
E.M. White, M.S. Landis, G.J. Keeler and J.A. Barres (United States)	107
Assessing the emission sources of atmospheric mercury in wet deposition across Illinois	
L.E. Gratz, G.J. Keeler, M. Morishita, J.A. Barres and J.T. Dvonch (USA)	120
Apportioning global and non-global components of mercury deposition through ²¹⁰ Pb indexing	
C.H. Lamborg, D.R. Engstrom, W.F. Fitzgerald and P.H. Balcom (USA)	132
Coupling meteorology, metal concentrations, and Pb isotopes for source attribution in archived precipitation samples	
J.R. Graney and M.S. Landis (USA)	141
The cycling and sea-air exchange of mercury in the waters of the Eastern Mediterranean during the 2010 MED-OCEANOR cruise campaign	
L. Fantozzi, G. Manca, I. Ammoscato, N. Pirrone and F. Sprovieri (Italy)	151
Mercury stable isotopes in sediments and largemouth bass from Florida lakes, USA	
L.S. Sherman and J.D. Blum (USA)	163

Importance of hypolimnetic cycling in aging of “new” mercury in a northern temperate lake S.P. Chadwick, C.L. Babiarz, J.P. Hurley and D.E. Armstrong (USA)	176
The expanding scope of air pollution monitoring can facilitate sustainable development A. Knox, N. Mykhaylova, G.J. Evans, C.J. Lee, B. Karney and J.R. Brook (Canada)	189
The role of the atmosphere in the provision of ecosystem services E.J. Cooter, A. Rea, R. Bruins, D. Schwede and R. Dennis (USA)	197