

Curriculum Vitae

Feng Peng

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EDUCATION

Ph.D., Environmental Chemistry, December 2002

State University of New York College of Environmental Science and Forestry, Syracuse (SUNY-ESF), NY.

Dissertation: The Study of Suspended Particulates in New York City Drinking Water Reservoir by Scanning Electron Microscopy Interfaced with X-ray Microanalysis and Image Analysis

Advisor: Dr. David L. Johnson

M.S., Environmental Chemistry, 1990

B.S., Environmental Chemistry, 1987

Nanjing University, Nanjing, China

RESEARCH INTERESTS

- aquatic chemistry
- detailed characterization of aquatic particles through individual particle analysis
- origins and dynamics of, and regulating conditions for turbidity and clarity of aquatic systems
- water quality monitoring
- inherent optical properties of particles through single particle optics
- optical variability of water systems and optical closure
- optical processes and optically active constituents underlying remote sensing of water color
- ground truthing for remote sensing algorithm development

SELECTED PUBLICATIONS

Peng, F. and S.W. Effler (2013). Spectral absorption properties of mineral particles in western Lake Erie: Insights from individual particle analysis. *Limnology & Oceanography* **58**: 1775–1789.

Effler, S.W., F. Peng, D.M. O’Donnell, C.M. Strait (2013). The backscattering coefficient and its components in the Great Lakes: A review and synthesis. *Journal of Great Lakes Research* **39**, doi: 10.1016/j.jglr.2013.02.002 (in press).

Peng, F. and S.W. Effler (2013). Light scattering and Secchi depth in an oligotrophic lake: Insights from an individual particle analysis technique. *Inland Waters* **3**: 25–38.

Peng, F. and S.W. Effler (2012). Mass-specific scattering coefficient for natural minerogenic particle populations: particle size distribution effect and closure analyses. *Applied Optics* **51**: 2236–2249.

Effler, S.W. and F. Peng (2012). Light-scattering components and Secchi depth implications in Onondaga Lake, New York, USA. *Fundamental and Applied Limnology* **179**: 251–265.

Gelda, R.K., S.W. Effler, and F. Peng. (2012) Modeling turbidity and the effects of alum application for a water supply reservoir. *Journal of Environmental Engineering* **138**: 38–47.

Peng, F. and S.W. Effler (2011). Characterizations of the light-scattering attributes of mineral particles in Lake Ontario and the effects of whiting. *Journal of Great Lakes Research* **37**: 672–682.

Peng, F. and S.W. Effler (2010). Characterizations of individual suspended mineral particles in western Lake Erie: Implications for light scattering and water clarity. *Journal of Great Lakes Research* **36**: 686–698.

- Effler, S.W., M.G. Perkins, F. Peng, C. Strait, A.D. Weidemann and M.T. Auer (2010). Light-absorbing components in Lake Superior. *Journal of Great Lakes Research* **36**: 656–665.
- Peng, F., S.W. Effler, D.M. O’Donnell, A.D. Weidemann, and M.T. Auer (2009). Characterizations of minerogenic particles in support of modeling light scattering in Lake Superior through a two-component approach. *Limnology & Oceanography* **54**: 1369–1381.
- Peng, F., S.W. Effler, D.C. Pierson, and D.G. Smith (2009). Light-scattering features of turbidity-causing particles in interconnected reservoir basins and a connecting stream. *Water Research* **43**: 2280–2292.
- Gelda, R.K., S.W. Effler, F. Peng, E.M. Owens, and D.C. Pierson (2009). Turbidity model for Ashokan Reservoir, New York: Case study. *Journal of Environmental Engineering* **135**: 885–895.
- Peng, F. and S.W. Effler (2007). Suspended minerogenic particles in a reservoir: Light-scattering features from individual particle analysis. *Limnology & Oceanography* **52**: 204–216.
- Peng, F., S.W. Effler, D.M. O’Donnell, M.G. Perkins, and A.D. Weidemann (2007). Role of minerogenic particles and light scattering in lakes and a river in central New York. *Applied Optics* **46**: 6577–6594.
- Effler, S.W., F. Peng, and R.K. Gelda (2007). Size distribution and light scattering features of minerogenic particles in a stream during runoff events. *Journal of Environmental Engineering* **133**: 931–940.
- Peng, F. and S.W. Effler (2005). Inorganic tripton in the Finger Lakes of New York: importance to optical characteristics. *Hydrobiologia* **543**: 259–277.
- Peng, F., D.L. Johnson, and S.W. Effler (2004). Characterization of inorganic particles in selected reservoirs and tributaries of the New York City water supply. *Journal of American Water Resources Association* **40**: 663–676.
- Peng, F., D.L. Johnson, and S.W. Effler (2002). Suspensoids in New York City’s drinking water reservoirs: turbidity apportionment. *Journal of American Water Resources Association* **38**: 1453–1465.
- Effler, S.W., M.G. Perkins, N. Ohrazda, D.A. Matthews, R. Gelda, F. Peng, D.L. Johnson, and C.L. Stepczuk (2002). Tripton, transparency and light penetration in seven New York reservoirs. *Hydrobiologia* **468**: 213–232.
- Effler, S.W., D.A. Matthews, M.G. Perkins, D.L. Johnson, F. Peng, M.R. Penn, and M.T. Auer (2002). Patterns and impacts of inorganic tripton in Cayuga Lake. *Hydrobiologia*. **482**: 137–150.
- Wang, X., J. Lu, F. Peng, Q. Tu, L. Tian, L. Dai, Z. Li, and Y. Chen (1994). Geochemical characteristics and environmental background values of rare earth elements in river water and sediments from Jinsha River system. *Huanjing Kexue Xuebao (Journal of Environmental Sciences)* **14**: 168–176.
- Tian, L., F. Peng, and X. Wang (1991). The determination of Se environmental background value in natural river water using mixed matrix modifier-STPF [stabilized temperature platform furnace]. *Analytical Science* **7** (Suppl., Proc. Int. Congr. Anal. Sci., 1991, Pt. 2), 1155–1158.

SELECTED PRESENTATIONS

1. Peng, F., and S.W. Effler, “Estimations of (back)scattering coefficients of mineral particles in Lake Ontario in support of optical closure and partitioning of particulate scattering” (oral presentation), *Ocean Sciences Meeting*, Salt Lake City, UT, February, 2012.
2. Peng, F. and S.W. Effler, “Light-scattering components and Secchi depth implications in Onondaga Lake” (oral presentation), *Annual Onondaga Lake Scientific Forum* (13th), Syracuse, NY, November, 2011.
3. Peng, F., S.W. Effler, D.M. O’Donnell, and G. Leshkevich, “Temporal and spatial variations in suspended mineral particles in Lake Ontario: Importance to light scattering and remote sensing” (oral presentation), *International Association of Great Lakes Research 53rd Conference*, University of Toronto, Toronto, Ontario, Canada, May, 2010.
4. Peng, F., S.W. Effler, D.M. O’Donnell, C. Straits, and C.T. Driscoll, “Optical implications of inorganic particles in the three river system according to SAX” (poster), *Annual Onondaga Lake Scientific Forum*, Liverpool, NY, November, 2008.

5. Peng, F. and S.W. Effler, “Contrasting inorganic particle populations by individual particle analysis: Tributaries, Onondaga Lake, and the in-lake waste deposits” (poster), *Annual Onondaga Lake Scientific Forum* (10th), Liverpool, NY, November, 2008.
6. Peng, F., S.W. Effler, D.M. O’Donnell, and G. Leshkevich, “Individual particle analysis of suspended minerogenic particles in western Lake Erie: Implications for water clarity and remote sensing” (oral presentation), *International Association of Great Lakes Research* 51st Conference, Trent University, Peterborough, Ontario, Canada, May, 2008. (also presented at *North America Lake Management Society* 28rd International Symposium, Lake Louise, Alberta, Canada, November, 2008)
7. Effler, S.W., F. Peng, D.M. O’Donnell, M.G. Perkins, C.M. Strait, and G. Leshkevich, “Minerogenic particles and light scattering in Lake Ontario and pursuit of optical closure (oral presentation), *International Association of Great Lakes Research* 51st Conference, Trent University, Peterborough, Ontario, Canada, May, 2008. (also presented at *North America Lake Management Society* 28rd International Symposium, Lake Louise, Alberta, Canada, November, 2008)
8. Peng, F., S.W. Effler, D.M. O’Donnell, A.D. Weidemann, and M.T. Auer, “Modeling light scattering in Lake Superior through a two-component approach” (oral presentation), *Ocean Sciences Meeting*, Orlando, FL, March, 2008.
9. Peng, F., S.W. Effler, A.D. Weidemann, and M.T. Auer, “Suspended minerogenic particles in Lake Superior: analysis and importance to optics” (oral presentation), *International Association of Great Lakes Research* 50th Conference, Pennsylvania State University, University Park, PA, May, 2007.
10. Weidemann, A.D., W. Goode, Z-P. Lee, S.W. Effler, D.M. O’Donnell, F. Peng, and M.G. Perkins, “What are water optical properties and why I care: an emerging technology for lake management”, *Annual Onondaga Lake Scientific Forum* (7th), Liverpool, NY, November, 2005.
11. Peng, F. and S. W. Effler, “Inorganic tripton in Finger Lakes of New York” (poster), *North America Lake Management Society* 23rd International Symposium, Mashantucket, CT, November, 2003.
12. Peng, F. and D.L. Johnson, “A unique approach to investigate the dynamics of suspended sediments” (poster), *American Water Resources Association* Annual Water Resources Conference, Albuquerque, NM, November, 2001.
13. Peng, F. and D.L. Johnson, “Dynamics of suspended solids and turbidity apportionment in the Catskill/Delaware reservoir systems” (oral presentation), *North America Lake Management Society* 20th Anniversary International Symposium, Miami, FL, November, 2000.
14. Peng, F. and D. L. Johnson, “Individual particle analysis for the Catskill and Delaware reservoir systems” (oral presentation), *International Association of Great Lakes Research* 41st Conference, Hamilton, Ontario, Canada, May, 1998.

PROFESSIONAL ACTIVITIES

Membership

Association for the Sciences of Limnology and Oceanography
International Association for Great Lakes Research

Journal Review

Geoscience and Remote Sensing Letters
Limnology and Oceanography
Limnology and Oceanography: Methods
Journal of American Water Resources Association
Journal of Atmospheric and Oceanic Technology
Journal of Great Lakes Research
Lake and Reservoir Management