

**Steven D. Kohl (Steve.Kohl@dri.edu)**

**Research Scientist Rank 4**

Division of Atmospheric Sciences  
Desert Research Institute  
Nevada System of Higher Education  
(<https://www.dri.edu/directory/steve-kohl/>)

**Education**

M.S.	Environmental Analytical Chemistry	University of Nevada, Las Vegas	1996
B.S.	Chemistry	University of Nevada, Las Vegas	1995
Electronics Technician Training	Chanute Technical Training Center	U.S. Air Force	1985

**Background**

Mr. Kohl has over 30 years of experience in the field of atmospheric science. His responsibilities include: assisting in proposal development; preparing budget estimates; prioritizing projects for daily analysis; performing chemical analysis and data validation of aerosol samples; integrating field and laboratory data; conducting data validation; and preparing various reports. He manages DRI's Environmental Analysis Facility (EAF) analytical laboratories for sample preparation, archiving, and storage; gravimetric analysis by microbalance; light transmission analysis by transmissometer; elemental analysis by x-ray fluorescence and inductively coupled plasma-mass spectroscopy; wet chemistry analysis of anions, cations, carbohydrates, and organic acids by ion chromatography; carbon analysis by single and multiwavelength thermal/optical carbon analyzers; and organic carbon speciation by thermo-desorption gas chromatography/mass spectrometry. He supervises laboratory staff and mentors undergraduate and graduate students for analytical instrument calibration/operation, method development, and quality control/quality assurance.

Mr.Kohl calibrates and maintains field sampling equipment; provides training on the operation of various types of aerosol sampling systems; facilitates instrument trouble-shooting; coordinates sample shipping and receiving; and manages field studies. Mr. Kohl has conducted numerous sampling campaigns including ambient sampling and source emission tests for industrial stacks and heavy haulers. He conducts comprehensive system and performance field audits for meteorology, gaseous, and aerosol instruments. He is proficient in data integration, error propagation, blank subtraction, and descriptive data analysis.

Before joining DRI, Mr. Kohl developed fluorescence-based immunochemical assays for use in fiber optic biosensors of environmental monitoring applications for the U.S. Environmental Protection Agency. While serving in the U.S. Air Force, he was responsible for the installation, maintenance, modification, and flight inspection of commercial and Air Force meteorological and navigational systems.

**Professional Experience**

2023-present	Rank 4 Research Scientist, Division of Atmospheric Sciences, Desert Research Institute, Reno, NV.
2006 to 2023	Rank 3 Associate Research Scientist, Division of Atmospheric Sciences, Desert Research Institute, Reno, NV.

Steven D. Kohl

2006 to 2017      Instructor for Chemistry, Truckee Meadows Community College, Reno NV.  
2000 to 2006      Rank 2 Assistant Research Scientist, Division of Atmospheric Sciences, Desert Research Institute, Reno, NV.  
1996 to 2000      Staff Analytical Chemist, Division of Atmospheric Sciences, Desert Research Institute, Reno, NV.  
1995 to 1996      Research Chemist, U.S. Environmental Protection Agency, Las Vegas, NV.  
1993 to 1995      Field Technician, Division of Hydrologic Science, Desert Research Institute, Las Vegas, NV.  
1984 to 1993      Electronics Technician, U.S. Air Force.

### Honors and Awards

- Best Thesis Award. College of Science and Mathematics, University of Nevada, Las Vegas, 1996.
- Norwalk-Notre Dame Prize in Chemistry. University of Nevada, Las Vegas, 1994.

### Peer-reviewed Journal Articles and Book Chapters

Chow, J.C., Watson, J.G., DuBois, D.W., Green, M.C., Lowenthal, D.H., Kohl, S.D., Egami, R.T., Gillies, J.A., Rogers, C.F., Frazier, C.A., Cates, W., (1998). Middle- and neighborhood-scale variations of PM10 source contributions in Las Vegas, Nevada, Vostal, J.J. (Ed.) Proceedings, Health Effects of Particulate Matter in Ambient Air, Air and Waste Management Association, Pittsburgh, PA, pp. 443-460.

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Chow, J.C., Lowenthal, D.H., Watson, J.G., Kohl, S.D., Hinsvark, B.A., Hackett, E.I., McCormack, J.K., (2000). Light absorption by black sand dust. *Applied Optics*, 39, 4232-4236. [https://www.researchgate.net/publication/5502427\\_Light\\_Absorption\\_by\\_Black\\_Sand\\_Dust](https://www.researchgate.net/publication/5502427_Light_Absorption_by_Black_Sand_Dust)

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Chow, J.C., Watson, J.G., Chen, L.-W.A., Chang, M.-C.O., Robinson, N.F., Trimble, D.L., Kohl, S.D., (2007). The IMPROVE\_A temperature protocol for thermal/optical carbon analysis: Maintaining consistency with a long-term database. *Journal of the Air & Waste Management Association*, 57, 1014-1023. 10.3155/1047-3289.57.9.1014. <http://www.tandfonline.com/doi/pdf/10.3155/1047-3289.57.9.1014>

Chow, J.C., Wang, X.L., Kohl, S.D., Gronstal, S.B., Watson, J.G., (2010). Heavy-duty diesel emissions in the Athabasca Oil Sands Region, Tropp, R.J., Legge, A.H. (Eds.), Proceedings, 103rd Annual Meeting of the Air & Waste Management Association, Air & Waste Management Association, Pittsburgh, PA, pp. 1-5.

Chow, J.C., Watson, J.G., Robles, J., Wang, X.L., Chen, L.-W.A., Trimble, D.L., Kohl, S.D., Tropp, R.J., Fung, K.K., (2011). Quality assurance and quality control for thermal/optical analysis of aerosol samples for organic and elemental carbon. *Analytical and Bioanalytical Chemistry*, 401, 3141-3152. DOI 10.1007/s00216-011-5103-3. [https://www.researchgate.net/publication/51178259\\_Quality\\_assurance\\_and\\_quality\\_control\\_for\\_thermaloptical\\_analysis\\_of\\_aerosol\\_samples\\_for\\_organic\\_and\\_elemental\\_carbon](https://www.researchgate.net/publication/51178259_Quality_assurance_and_quality_control_for_thermaloptical_analysis_of_aerosol_samples_for_organic_and_elemental_carbon)

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Chow, J.C., Yang, X.F., Wang, X.L., Kohl, S.D., Watson, J.G., (2015). Characterization of ambient PM10 bioaerosols in a California agricultural town. *Aerosol and Air Quality Research*, 15, 1433-1447. <http://www.aaqr.org/article/detail/AAQR-14-12-OA-0313>

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- Engelbrecht, J.P., Kavouras, I.G., Shafer, D.S., Campbell, D., Campbell, S., McCurdy, G., Kohl, S.D., Nikolich, G., Sheetz, L., Gertler, A.W., (2015). Chemical variability of PM<sub>10</sub> and PM<sub>2.5</sub> in Southwestern Rural Nevada, USA. *Water Air and Soil Pollution*, 226, 10.1007/s11270-015-2481-8.
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- Pant, P., Shukla, A., Kohl, S.D., Chow, J.C., Watson, J.G., Harrison, R.M., (2015). Characterization of ambient PM<sub>2.5</sub> at a pollution hotspot in New Delhi, India and inference of sources. *Atmospheric Environment*, 109, 178-189. <https://www.sciencedirect.com/science/article/pii/S1352231015002034>
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- Wang, X.L., Kohl, S.D., Chow, J.C., Watson, J.G., Gronstal, S., (2010). On-board emission measurement from the world's largest heavy haulers, Chow, J.C., Watson, J.G., Cao, J.J. (Eds.), Proceedings, Leapfrogging Opportunities for Air Quality Improvement, Air & Waste Management Association, Pittsburgh, PA, pp. 476-476. <http://www.dri.edu/conference-proceedings>
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- Wang, X.L., Chow, J.C., Kohl, S.D., Yatavelli, R.L.N., Percy, K.E., Legge, A.H., Watson, J.G., (2015). Wind erosion potential for fugitive dust sources in the Athabasca Oil Sands Region. *Aeolian Research*, 18, 121-134. <https://www.sciencedirect.com/science/article/abs/pii/S1875963715000658>
- Wang, X.L., Chow, J.C., Kohl, S.D., Percy, K.E., Legge, A.H., Watson, J.G., (2016). Real-world emission factors for Caterpillar 797B heavy haulers during mining operations. *Particuology*, 28, 22-30. 10.1016/j.partic.2015.07.001. <http://www.sciencedirect.com/science/article/pii/S1674200115001583>

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- Wang, X.L., Gillies, J.A., Kohl, S.D., Furtak-Cole, E., Tupper, K.A., Cardiel, D.A., (2023). Quantifying the source attribution of PM<sub>10</sub> measured downwind of the Oceano Dunes State Vehicular Recreation Area. *Atmosphere*, 14, 10.3390/atmos14040718. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85156227546&doi=10.3390%2fatmos14040718&partnerID=40&md5=a5fdf7fbda9c748c586538cc5e8b14b4>
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- Watson, J.G., Chow, J.C., Chen, L.-W.A., Kohl, S.D., Casuccio, G.S., Lersch, T.L., Langston, R., (2012). Elemental and morphological analyses of filter tape deposits from a beta attenuation monitor. *Atmospheric Research*, 106, 181-189. 10.1016/j.atmosres.2011.12.004.
- Watson, J.G., Chow, J.C., Wang, X.L., Kohl, S.D., Chen, L.-W.A., Etyemezian, V.R., (2012). Overview of real-world emission characterization methods, Percy, K.E. (Ed.) *Alberta Oil Sands: Energy, Industry, and the Environment*, Elsevier Press, Amsterdam, The Netherlands, pp. 145-170. [https://www.researchgate.net/publication/235341867\\_Overview\\_of\\_Real-World\\_Emission\\_Characterization\\_Methods](https://www.researchgate.net/publication/235341867_Overview_of_Real-World_Emission_Characterization_Methods)
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- Watson, J.G., Chow, J.C., Kohl, S.D., Yatavelli, R.L.N., Wang, X.L., (2014). Windblown fugitive dust characterization in the oil sands region. *WBEA@Work*, November, 7-13. <http://www.wbea.org/library/wbeawork-newsletter>
- Watson, J.G., Tropp, R.J., Kohl, S.D., Wang, X.L., Chow, J.C., (2017). Filter processing and gravimetric analysis for suspended particulate matter samples. *Aerosol Science and Engineering*, 1, 193-205.
- Xu, H.M., Cao, J.J., Ho, K.F., Ding, H., Han, Y.M., Wang, G.H., Chow, J.C., Watson, J.G., Kohl, S.D., Qiang, J., Li, W.T., (2012). Lead concentrations in fine particulate matter after the phasing out of leaded gasoline in Xi'an, China. *Atmospheric Environment*, 46, 217-224. doi: 10.1016/j.atmosenv.2011.09.078. [https://www.researchgate.net/publication/235341871\\_Lead\\_concentrations\\_in\\_fine\\_particulate\\_matter\\_after\\_the\\_phasing\\_out\\_of\\_leaded\\_gasoline\\_in\\_Xi'an\\_China](https://www.researchgate.net/publication/235341871_Lead_concentrations_in_fine_particulate_matter_after_the_phasing_out_of_leaded_gasoline_in_Xi'an_China)
- Yatkin, S., Trzepla, K., Hyslop, N.P., White, W.H., Butler, O., Ancelet, T., Davy, P., Gerboles, M., Kohl, S.D., McWilliams, A., Saucedo, L., Van der Haar, M., Jonkers, A., (2020). Comparison of a priori and interlaboratory-measurement-consensus approaches for value assignment of multi-element reference materials on PTFE filters. *Microchemical Journal*, 158, 10.1016/j.microc.2020.105225.
- Yatkin, S., Trzepla, K., Hyslop, N.P., White, W.H., Butler, O., Ancelet, T., Davy, P., Gerboles, M., Kohl, S.D., McWilliams, A., Saucedo, L., Van Der Haar, M., Jonkers, A., (2020). Comparison of a priori and interlaboratory-measurement-consensus approaches for value assignment of multi-element reference materials on PTFE filters. *Microchemical Journal*, 158, 105225. <https://www.sciencedirect.com/science/article/pii/S0026265X20313199>
- ### Major Technical Reports
- Chang, M.-C.O., Chow, J.C., Kohl, S.D., Voepel, H., Watson, J.G., (2005). Sampling and analysis for the Lake Tahoe atmospheric deposition study. Desert Research Institute, Reno, NV.
- Chow, J.C., Watson, J.G., Crow, D., Kohl, S.D., Kuhns, H.D., Etyemezian, V.R., Engelbrecht, J.P., (2002). Source profiles for the Big Bend Regional Aerosol Visibility and Observational (BRAVO) Source Characterization Study. Desert Research Institute, Reno, NV.
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- Chow, J.C., Watson, J.G., Cropper, P.M., Wang, X.L., Kohl, S.D., (2016). Fine particulate matter (PM<sub>2.5</sub>) sample chemical analysis: January 1, 2015 – December 31, 2015 Desert Research Institute, Reno, Nevada, USA. [https://www.epd.gov.hk/epd/sites/default/files/epd/english/environmentinhk/air/studyreports/files/final\\_report\\_mvmtm\\_pms\\_2015.pdf](https://www.epd.gov.hk/epd/sites/default/files/epd/english/environmentinhk/air/studyreports/files/final_report_mvmtm_pms_2015.pdf)
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- Watson, J.G., Chow, J.C., Kohl, S.D., Gronstal, S., Claassen, M., Wang, X.L., (2020). Program plan for identifying sources of excessive elemental concentrations in stormwater runoff at the LADWP Haynes and Harbor generating stations. Desert Research Institute for the Electric Power Research Institute, Reno, NV.
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- Watson, J.G., Chow, J.C., Kohl, S.D., Gronstal, S., Claassen, M., Wang, X.L., (2022). Identifying sources of excessive elemental concentrations in stormwater runoff at the LADWP Haynes and Harbor generating stations. Desert Research Institute for the Electric Power Research Institute, Reno, NV.

### **Invited Presentations)**

- Kohl, S.D., Chow J.C., Watson, J.G., Wang, X. (2015). Energy Dispersive XRF Analysis of Ambient and Industrial Source Air Filters. Invited Speaker, 64<sup>th</sup> Annual Denver X-Ray Conference, Denver, CO, August 5, 2015.
- Kohl, S.D., Watson, J.G., Chow, J.C. (2013). Quantitative XRF Analysis of Ambient and Source Air Filters. Invited Speaker, Presented at the 2013 Denver X-ray Conference, Denver, CO, 7 August 2013.
- Kohl, S.D., Chow, J.C., Watson, J.G. (2009). Chemical Analysis for PM<sub>2.5</sub>, Invited Lecture, Atmospheric Environmental Science Program, Hong Kong University of Science and Technology, Clearwater Bay, Hong Kong, Special Administrative Region, People's Republic of China, 17 May 2009.

### **Selected Presentations)**

- Chow, J.C., Wang, X., Claassen, M., Watson, J.G., Myers, P., Hubbard, K., Kohl, S. (2021). Update of IMPROVE Carbon Analysis. IMPROVE Technical Steering Committee Meeting: Reno, NV [virtual]. November 8, 2021.
- Watson, J.G., Chow, J.C., Kohl, S.D., Gronstal, S., Claassen, M., Wang, X., (2021). Identifying Sources of Excessive Elemental Concentrations in Stormwater Runoff at the LADWP Haynes and Harbor Generating Stations Interim Progress Report. Electrical Power Research Institute: Reno, NV, Feb 12, 2021.
- Watson, J.G., Chow, J.C., Kohl, S.D., Gronstal, S., Claassen, M., Wang, X., (2021). Identifying Sources of Excessive Elemental Concentrations in Stormwater Runoff at the LADWP Haynes and Harbor Generating Stations Progress Report. Electrical Power Research Institute: Reno, NV, Feb 25, 2021.
- Watson, J.G., Chow, J.C., Kohl, S.D., Gronstal, S., Claassen, M., Wang, X., (2021). Identifying Sources of Excessive Elemental Concentrations in Stormwater Runoff at the LADWP Haynes and Harbor Generating Stations Progress Report. Electrical Power Research Institute: Reno, NV, May 7, 2021.
- Watson, J.G., Chow, J.C., Kohl, S.D., Gronstal, S., Claassen, M., Wang, X., (2021). Identifying Sources of Excessive Elemental Concentrations in Stormwater Runoff at the LADWP Haynes and Harbor Generating Stations Progress Report. Electrical Power Research Institute: Reno, NV, October 22, 2021.
- Watson, J.G., Chow, J.C., Kohl, S.D., Gronstal, S., Wang, X., Claassen, M. (2020). Identifying Sources of Excessive Elemental Concentrations in Stormwater Runoff at the LADWP Haynes and Harbor Generating Stations. Electric Power Research Institute: Reno, NV [virtual]. October 23, 2020.
- Chow, J.C., Green, M.C., Watson, J.G., Wang, X., Kohl, S.D. (2019). Visibility Impairment by PM<sub>2.5</sub> Chemical Constituents in Hong Kong (2001-2018). Hong Kong Environmental Protection District, Hong Kong, China. Presented on May 24, 2019.

- Watson, J.G., Chow, J.C., Wang, X., Kohl, S.D. (2019). Fugitive Dust Characterization, Emission Potential, and Control Methods. Desert Research Institute, Reno, NV. June 3, 2019.
- Watson, J.G., Chow, J.C., Wang, X., Kohl, S.D. (2019). Fugitive Dust Characterization, Emission Potential, and Control Methods. DRI Presentation, Reno, NV. Presented on June 3, 2019.
- Wang, X.L., Kohl, S.D., Chow, J.C., Watson, J.G. (2018). Emission and Chemical Characterization of Fugitive Dust in the Athabasca Oil Sands Region. Desert Research Institute, Reno, Nevada. Presented on February 1, 2018.
- Wang, X.L., Watson, J.G., Chow, J.C., Kohl, S.D., Percy, K.E., Legge, A.H., (2017). Emission and Chemical Characterization of Fugitive Dust in the Athabasca Oil Sands Region. AAAR 36<sup>th</sup> Annual Conference-Kanomax Workshop, Raleigh, North Carolina. Presented on October 16, 2017.
- Chow, J.C., Watson, J.G., Cropper, P.M., Wang, X.L., Kohl, S., Trimble, D. (2016). More Complete Analysis of IMPROVE Samples for Visibility and Source Apportionment Studies. Presented at the A&WMA International Specialty Conference, Atmospheric Optics: Aerosols, Visibility, and the Radiative Balance, Jackson Hole, Wyoming, 27 - 30 September 2016.
- Chow, J.C., Watson, J.G., Wang, X.L., Trimble, D.L., Kohl, S.D., Gronstal, S.B. (2016). Update of IMPROVE Carbon Analysis. Presented at the 2016 IMPROVE Steering Committee Meeting, Santa Fe, New Mexico, 1 - 2 November 2016.
- Watson, J.G., Chow, J.C., Wang, X., Kohl, S.D., (2016). Perspective on Real World Stack, Dust and Vehicle Emissions [invited talk], WBEA Science Integration Workshop, State of Knowledge/Understanding and the Path Forward: Calgary, Alberta, Canada, January 27, 2016-January 28, 2016
- Chow, J.C., Watson, J.G., Wang, X., Kohl, S.D. (2015). Method to Quantify Suspendable Dust Reservoirs, Threshold Velocities, Chemical Profiles, and Emission Rates. Presented at Academia Sinica, Nankang, Taiwan, 5 May 2015.
- Chow, J.C., Watson, J.G., Wang, X., Trimble, D.L., Kohl, S.D. (2015). Update of IMPROVE Carbon Analysis. Presented at the 2015 IMPROVE Steering Committee Meeting, Grand Canyon, AZ, 3 November 2015.
- Wang, X., Chow, J.C., Kohl, S.D., Yatavelli, L.N.R., Percy, K.E., Legge, A.H., Watson, J.G. (2015). Windblown Dust Characterization in the Canadian Oil Sands Region. 34<sup>th</sup> AAAR Annual Conference, Minneapolis, MN, October 12, 2015.
- Watson, J.G.; Chow, J.C.; Wang, X.; Kohl, S.D. (2015). Windblown Dust Suspension Potential for Different Surfaces. Presented at the Institute of Environmental Engineering, National Sun Yat-sen University, Kaohsiung, Taiwan, 4 May 2015.
- Watson, J.G., Chow, J.C., Wang, X., Trimble, D.L., Kohl, S.D. (2015). Temperature Calibration of Thermal/Optical Carbon Analyzer. Presented at the 2015 IMPROVE Steering Committee Meeting, Grand Canyon, AZ, 3 November 2015.
- Watson, J.G., Chow, J.C., Tropp, R.J., Wang, X.L., Kohl, S.D. (2014). Standards and Traceability for Multipollutant Air Quality Measurements. Presented at the Workshop on PM<sub>2.5</sub> Measurements for Air Quality Management, Hong Kong, China, 17 January 2014.
- Wang, X.L., Chow, J.C., Watson, J.G., Kohl, S.D., Legge, A.H., Percy, K.E. (2013). Characterization of Real-World Emissions from Heavy Haulers in Canadian Oil Sands Mining. Presented at the 23rd Coordinating Research Council Real World Emissions Workshop, San Diego, CA.
- Watson, J.G., Chow, J.C., Tropp, R.J., Wang, X.L., Kohl, S.D. (2013). Air Quality Measurement Standardization and Traceability. Presented at East China University of Science and Technology, Shanghai, China, 27 September 2013.
- Watson, J.G., Chow, J.C., Tropp, R.J., Wang, X.L., Kohl, S.D. (2013). Air Quality Measurement Standardization and Traceability. Presented at The 11th China Aerosol Conference and 10th Cross-Strait Aerosol Conference, Wuhan, China, 17 May 2013.
- Watson, J.G., Chow, J.C., Tropp, R.J., Wang, X.L., Kohl, S.D., Chen, L.-W.A. (2013). Standards and Traceability for Multipollutant Air Quality Measurements. Presented at the Workshop on PM<sub>2.5</sub> and Multi-pollutant/Multi-effect Air Quality Management, National Cheng Kung University, Tainan, Taiwan, 16 April 2013.
- Watson, J.G., Chow, J.C., Tropp, R.J., Wang, X.L., Kohl, S.D. (2013). Standards and Traceability for Air Quality Measurements. Presented at the 8th International Conference on Advances in Meteorology one-day workshop on Chemical Meteorology: Challenges and Opportunities in Gases & Aerosols, Delhi, India, 20 February 2013.
- Wang, X., Watson, J.G., Chow, J.C., Kohl, S.D. (2012). Characterization of Stationary Source Emissions in the Athabasca Oil Sands Region. Presented at the WBEA TEEM Investigators/Members Workshop, Calgary, Alberta, Canada, 28 November 2012.
- Wang, X., Watson, J.G., Chow, J.C., Kohl, S.D. (2012). Real-World Emissions from Heavy Haulers in the Oil Sands. Presented at the WBEA TEEM Investigators/Members Workshop, Calgary, Alberta, Canada, 28 November 2012.



- Wang, X., Kohl, S.D., Gronstal, S., Sodeman, D.A., Chow, J.C., Watson, J.G. (2012). Real World Emission Characterization in the Canadian Oil Sands Region. Presented at Science Talks, Desert Research Institute, Reno, NV, 20 November 2012.
- Wang, X., Kohl, S.D., Chow, J.C., Watson, J.G. (2012). Real-world Emission Characterization in the Canadian Oil Sands Region. In *AAAR 31th Annual Conference*, Proceedings of the AAAR 31th Annual Conference, Minneapolis, MN, 8 October 2012.
- Wang, X., Kohl, S.D., Gronstal, S., Chow, J.C., Watson, J.G. (2012). Environmental Challenges and Emission Characterization in Canadian Oil Sands Region. University of Nevada-Reno Chemical and Materials Engineering Department Seminar, Reno, NV, 2 March 2012.
- Chow, J.C., Watson, J.G., Wang, X., Kohl, S.D., Gronstal, S. (2011). On-board Emission Monitoring System to Characterize Mine Heavy Hauler Emissions, presented at International Symposium—Alberta Oil Sands: Energy, Industry and the Environment, Fort McMurray, Alberta, Canada, 23 May 2011.
- Watson, J.G. Chow, J.C., Wang, X., Kohl, S.D., Sodeman, D.A. (2011). Characterization of Stationary Source Emissions in the Athabasca Oil Sands Region, presented at International Symposium—Alberta Oil Sands: Energy, Industry and the Environment, Fort McMurray, Alberta, Canada, 23 May 2011.
- Chow, J.C., Watson, J.G., Wang, X., Kohl, S.D., Gronstal, S. (2010). Heavy-Duty Diesel Emissions in the Athabasca Oil Sands Region. Presented at Air & Waste Management Association's 103<sup>rd</sup> Annual Conference & Exhibition, Calgary, AB, Canada, 24 June 2010.
- Chow, J.C., Watson, J.G., Wang, X., Kohl, S.D., Gronstal, S. (2010). Real-World Emission Measurement for Mining Trucks. Presented at Wood Buffalo Environmental Association, Ft. McMurray, AB, Canada, 6 October 2010.
- Watson, J.G., Baldwin, T., Lundgren, D., Chow, J.C., Wang, X., Kohl, S.D., Gronstal, S. (2010). New Dilution Methods to Quantify Point Source Emission Rates. Presented at The 8<sup>th</sup> International Symposium on Advanced Environmental Monitoring, Sapporo, Japan, 1 July 2010.
- Watson, J.G., Chow, J.C., Wang, X., Kohl, S.D., Sodeman, D.A. (2010). Real-world Stack Emission Measurement by a Dilution Sampling System. Presented at Wood Buffalo Environmental Association, Ft. McMurray, Alberta Canada, 6 October 2010.
- Watson, J.G., Chow, J.C., Kohl, S.D. (2009). Real World Source Characterization in the AOSR: Accomplishments and Plans. Presented at The Western Canada Sulphur and Nitrogen Deposition Workshop, Banff, Alberta, Canada, 29 April 2009.
- Watson, J.G., Chow, J.C., Chen, L.-W.A., DuBois, D., Kohl, S.D., Trimble, D.L. (2007). PM<sub>2.5</sub> Source Apportionment Study. Kick-off Conference Call for the Minnesota Pollution Control Agency, Reno, NV, 14 May 2007.
- Tropp, R.J., Kohl, S.D., Chow, J.C., Watson, J.G., Flanagan, J.B., Jayanty, R.K.M. (2006). Comparison of PM<sub>2.5</sub> Chemical Speciation Results for Texas Sites. Presented at the 7th International Aerosol Conference, IAC-2006, St. Paul, Minnesota, 12 September 2006.
- Tropp, R., Chow, J.C., Watson, J.G., Kohl, S., Countess, R., Michel, E. (2005). PM<sub>2.5</sub> Chemical Speciation Results for Texas. Presented at the A&WMA's Symposium on Air Quality Measurement Methods and Technology 2005, San Francisco, CA, 21 April 2005.
- Tropp, R.J., Kohl, S.D., Dickerson, A., Cristani, B.C., Chow, J.C., Countess, R.J., Countess, S.J., Flanagan, J.B., Michel, E.L. (2004). Quality Assessment of EPA PM<sub>2.5</sub> Chemical Speciation Results for Texas. Presented at the US EPA and AWMA Symposium on Air Quality Measurement Methods and Technology - 2004, Research Triangle Park, NC, 20–22 April 2004.
- Tropp, R., Engelbrecht, J., Kohl, S., Dickerson, A., Chow, J.C., Watson, J.G., DuBois, D., Countess, R., Countess, S., Michel, E. (2004). Assessment of PM<sub>2.5</sub> Chemical Speciation Results for Texas. Presented at the 97th Annual Meeting of the Air & Waste Management Association, "Sustainable Development: Gearing up for the Challenge!" Indianapolis, IN, 24 June 2004.
- Tropp, R., Engelbrecht, J., Kohl, S., Dickerson, A., Chow, J.C., Watson, J.G., Countess, R.J., Countess, S.J., Michel, E.L. (2004). PM<sub>2.5</sub> Chemical Speciation Results for Texas—Implications for Regional Studies. Presented at the 13th World Clean Air and Environmental Protection Congress and Exhibition, London, UK, 22–27 August 2004.
- Mueller, P.K., Doddridge, B., Chen, A., Kohl, S., Chow, J.C., Quinn, J., Butler, W. (2001). Seasonal and Episodic Characteristics of PM<sub>2.5</sub>. Presented at the 222nd National Meeting of the American Chemical Society, Chicago, IL, 29 August 2001.
- Bonne, G., Mueller, P.K., Chen, L.W., Doddridge, B.G., Butler, W.A., Zawadzki, P.A., Chow, J.C., Tropp, R., Kohl, S. (2000). Composition of the Atmospheric Aerosol at the Point of Observation. Presented at the Particulate Matter and Stationary Sources Symposium, San Francisco, CA, 26 March 2000. American Chemical Society, Washington, DC.

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Tropp, R.J., Chow, J.C., Kohl, S.D., Price, J.H. (2000).  $PM_{2.5}$  Chemical Speciation Results in Texas. Presented at the “PM2000: Particulate Matter and Health—The Scientific Basis for Regulatory Decision Making” conference of the Air & Waste Management Association, Charleston, SC, 24–28 January 2000.

Chow, J.C., Watson, J.G., DuBois, D., Green, M., Lowenthal, D., Kohl, S., Egami, R., Gillies, J., Rogers, C.F., Frazier, C. (1997). Middle- and Neighborhood-Scale Variations of  $PM_{10}$  Source Contributions in Las Vegas, Nevada. Presented at the A&WMA International Symposium on Health Effects of Particulate Matter in Ambient Air, Prague, Czech Republic, 23–25 April 1997.