Ann M. Dillner
Publications

34. Reggente, M., Dillner, A. M., Takahama, S., Analysis of functional groups in atmospheric aerosols by infrared spectroscopy: systematic intercomparison of calibration methods for US measurement network samples, Atmos. Meas. Tech., 12, 2287-2312, https://doi.org/10.5194/amt-12-2287-2019, 2019.

33. Takahama, S., Dillner, A.M., Weakley, A.T., Reggente, M., Bürki, C., Lbadaoui-Darvas, M., Debus, B., Kuzmiakova, A., Wexler, A. S., Atmospheric particulate matter characterization by Fourier Transform Infrared spectroscopy: a review of statistical calibration strategies for carbonaceous aerosol quantification in US measurement networks, Atmos. Meas. Tech., 12, 525-567, https://doi.org/10.5194/amt-12-525-2019, 2019.

32. Debus, B., Takahama, S., Weakley, A. T., Seibert, K., Dillner, A. M., Long Term Strategy for Assessing Carbonaceous Particulate Matter Concentrations from Multiple Fourier Transform Infrared (FT-IR) Instruments: Influence of Spectral Dissimilarities on Multivariate Calibration Performance, Applied Spectroscopy, 73, 271-283, https://doi.org/10.1177/0003702818804574, 2019.

31. Weakley, A. T., Takahama, S., Dillner, A.M., Thermal/optical reflectance equivalent organic and elemental carbon determined from federal reference and equivalent method fine particulate matter samples using Fourier transform infrared spectrometry, Aerosol Sci. and Tech., 52, 1048-1058, https://doi.org/10.1080/02786826.2018.1504161, 2018.

30. Weakley, A. T., Takahama, S., Wexler, A. S., Dillner, A.M., Ambient Aerosol Composition by Infrared Spectroscopy and Partial Least Squares in the Chemical Speciation Network: Multilevel Modeling for Elemental Carbon, Aerosol Science and Technology, 52, 642-654, https://doi.org/10.1080/02786826.2018.1439571, 2018.

29. Kamruzzaman, M., Takahama, S., Dillner, A.M., Quantification of amine functional groups and their influence on OM/OC in the IMPROVE network, Atmospheric Environment, 172, 124-132, https://doi.org/10.1016/j.atmosenv.2017.10.053, 2018.

28. Landis, M. S., Edgerton, E. S., White, E. M., Wentworth, G. R., Sullivan, A. P. Dillner, A.M. The Impact of the 2016 Fort McMurray Horse River Wildfire on Ambient Air Pollution Levels in the Athabasca Oil Sands Region, Alberta, Canada. Science of the Total Environment, 618, 1665-1676, https://doi.org/10.1016/j.scitotenv.2017.10.008, 2018.

27. Weakley, A. T , Takahama, S. Dillner, A. M., Ambient aerosol composition by infrared spectroscopy and partial leas-squares in the chemical speciation network: Organic carbon with functional group identification, Aerosol Science and Technology, 50, 1096-1114, https://doi.org/10.1080/02786826.2016.1217389, 2016.

26. Takahama, S., Ruggeri, G., Dillner A.M., Quantification of organic functional groups in atmospheric aerosols by infrared spectroscopy: interpretation of multivariate calibration models through sparse method. Atmos. Meas. Tech., 9, 3429-3454, https://doi.org/10.5194/amt-9-3429-2016, 2016.

25. Kuzmiakova, A., Dillner, A.M., Takahama, S., An automated baseline correction protocol for infrared spectra of atmospheric aerosols collected on polytetrafluoroethylene (Teflon) filters, Atmos. Meas. Tech., 9, 2615-2631, https://doi.org/10.5194/amt-9-2615-2016, 2016.

24. Yu, L., Smith, J., Laskin, A., George, K.M., Anastasio, C., Laskin, J., Dillner, A.M., Zhang, Qi, Molecular transformation of phenolic SOA during photochemical aging in aqueous phase, competition among oligomerization, functionalization and fragmentation, Atmospheric Chemistry and Physics, 16, 4511-4527, https://doi.org/10.5194/acp-16-4511-2016, 2016.

23. Yatkin, S., Amin, H. S., Trzepla, K., Dillner, A. M., Preparation of Lead (Pb) X-ray Fluorescence Reference Materials for the EPA Pb Monitoring Program and the IMPROVE Network Using an Aerosol Deposition Method, Aerosol Science and Technology, 50(4), 309-320, 2016.

22. Reggente, M., Dillner, A. M., Takahama, S., Predicting ambient aerosol thermal-optical reflectance (TOR) measurements from infrared spectra: extending the predictions to different years and different sites. Atmos. Meas. Tech., 9, 441-454, https://doi.org/10.5194/amt-9-441-2016, 2016.

21. Takahama, S., Dillner, A. M., Model selection for partial least squares calibration and implications for analysis of atmospheric organic aerosol samples with mid-infrared spectroscopy. Journal of Chemometrics, 19, 659-668, **https://doi.org/10.1002/cem.2761**, 2015.

20. Dillner, A. M., Takahama, S., Predicting Ambient Aerosol Thermal Optical Reflectance (TOR) Measurements from Infrared Spectra: Elemental Carbon. Atmos. Meas. Tech., 8, 4013-4023, https://doi.org/10.5194/amt-8-4013-2015, 2015

19. Dillner, A. M., Takahama, S., Predicting Ambient Aerosol Thermal Optical Reflectance (TOR) Measurements from Infrared Spectra: Organic Carbon. Atmos. Meas. Tech., 8, 1097-1109, https://doi.org/10.5194/amt-8-1097-2015, 2015.

18. George, K. M., Ruthenburg, T.C., Smith, J., Yu, L., Zhang, Q., Anastasio, C., Dillner, A. M., FT-IR quantification of the carbonyl functional group in aqueous-phase secondary organic aerosol from phenols. Atmospheric Environment 100, 230-237, https://doi.org/10.1016/j.atmosenv.2014.11.011, 2015.

17. Ruthenburg, T.C., Perlin, P. C., Liu, V., McDade, C. E., Dillner, A. M., Determination of Organic Mass and Organic Mass to Organic Carbon Ratios by Infrared Spectroscopy with

Application to Selected Sites in the IMPROVE Network. Atmospheric Environment, 86, 47-57, https://doi.org/10.1016/j.atmosenv.2013.12.034, 2014.

16. Indresand H., White, W.H., Trzepla, K., Dillner, A.M., Preparation of sulfur reference materials that reproduce atmospheric particulate matter sample characteristics for XRF calibration. X-Ray Spectrometry, DOI 10.1002/xrs.2456, 2013.

15. Indresand H., Dillner, A.M., Experimental characterization of sulfur interference in IMPROVE aluminum and silicon XRF data, Atmospheric Environment, 61, 140-147, 10.1016/j.atmosenv.2012.06.079, 2012.

14. Dillner, A. M., Phuah, C. H., Turner, J. R., Effects of Post-Sampling Conditions on Ambient Carbon Aerosol Filter Measurements, *Atmospheric Environment*, 43 (37) 5937–5943, 2009.

13. Phuah, C. H., Peterson, M. R., Richards, M. H., Turner, J. R., Dillner, A.M., A Temperature Calibration Procedure for the Sunset Laboratory Carbon Aerosol Analysis Lab Instrument, *Aerosol Science and Technology*, 43 (10) 1013-1021, 2009.

12. McDade C. E., Dillner, A. M., Indresand, H., Particulate Matter Sample Deposit Geometry and Effective Filter Face Velocities, *Journal of Air and Waste Management*, 59, 1045–1048, 2009.

11. Coury, C. Dillner, A.M., ATR-FTIR Characterization of Organic Functional Groups and Inorganic Ions in Ambient Aerosols at a Rural Site, *Atmospheric Environment*, 43, 940–948, 2009.

10. Vidrio, E. Phuah, C. H., Dillner, A. M., Anastasio, C., Generation of Hydroxyl Radicals from Ambient Fine Particles in a Surrogate Lung Fluid Solution, *Environmental Science & Technology 43* (3), 922–927, 2009.

9. Coury, C, Dillner, A.M., A Method to Quantify Organic Functional Groups and Inorganic Compounds in Ambient Aerosols using Attenuated Total Reflectance FTIR Spectroscopy and Multivariate Chemometric Techniques, *Atmospheric Environment*, 41, 9309-9323, 2008.

8. Coury, C, Dillner, A.M., Trends and Sources of Particulate Matter in the Superstition Wilderness Using Air Trajectory and Aerosol Cluster Analysis, *Atmospheric Environment*, 41, 9309-9323, 2007.

7. Christensen, W.F, Dillner, A.M., Schauer, J.J., Reese, C. S., Clustering Composition Vectors Using Uncertainty Information, *Environmetrics*, 18 (8) 859-869, 2007.

6. Dillner, A. M., Shafer, M. M., Schauer, J.J., A Novel Method Using Polyurethane Foam (PUF) Substrates to Determine Trace Element Concentrations in Size-Segregated

Atmospheric Particulate Matter on Short Time Scales, *Aerosol Science and Technology*, 41, 75-85, 2007.

5. **Dillner, A. M.,** Schauer, J. J., Zhang, Y., Zeng, L., and Cass G. R., Size-resolved Particulate Matter Composition in Beijing during Pollution and Dust Events, *Journal Geophysical Research*, 111, D05203, doi:10.1029/2005JD006400, 2006.

4. **Dillner, A.M.**, Schauer, J.J., Christensen, W.F, Cass, G. R., A Quantitative Method for Clustering Size Distributions of Elements, *Atmospheric Environment*, 39, 1525-1537, 2005.

3. Boreson, J., **Dillner, A. M.**, Peccia, J., Correlating Bioaerosol Load with PM2.5 and PM10cf Concentrations: A Comparison Between Natural Desert and Urban Fringe Aerosols, *Atmospheric Environment*, 38, 6029-6041, 2004.

2. **Dillner, A. M.**, Stein, C., Larson, S. M., Hitzenberger, R., Measuring the Extinction Efficiency of Elemental Carbon in Rural Aerosol, *Aerosol Science and Technology*, 35, 1009-1021, 2001.

1. Hitzenberger, R., Jennings, S. G., Larson, S. M., **Dillner, A**., Cachier, H., Galambos, Z., Rouc, A., Spain, T. G., Intercomparison of Measurement Methods for Black Carbon Aerosols, *Atmospheric Environment*, 33, 2823-33, 1999.