EPA Wildland Fire Research Publications
2010 - Present

This is a list of journal articles published from 2010 to the present that provides results of wildland fire-related studies conducted by scientists in the U.S. Environmental Protection Agency.

To learn more about the research, visit:

www.epa.gov/air-research/wildland-fire-research-protect-health-and-environment.

Modeling and Emissions Research

Landis, M.S.; Kamal, A.S.; Edgerton, E.S.; Wentworth, G.; Sullivan, A.P.; Dillner, A.M. (2018). *The impact of the 2016 Fort McMurray Horse River Wildfire on Ambient Air Pollution Levels in the Athabasca Oil Sands Region, Alberta, Canada.* Sci Total Environ. (In Press). https://www.sciencedirect.com/science/article/pii/S0048969717326955

Zhou, L., Baker, K.R., Napelenok, S.L., Pouliot, G., Elleman, R., O'Neill, S.M., Urbanski, S.P., Wong, D.C., 2018. *Modeling crop residue burning experiments to evaluate smoke emissions and plume transport.* Science of The Total Environment 627, 523-533.

Xie, M, Holder, A.L. and Hays, M.D. (2017). *Light absorbing organic carbon from prescribed and laboratory biomass burning and gasoline vehicle emissions.* Scientific Reports | 7:7318 | DOI:10.1038/s41598-017-06981-8. https://www.nature.com/articles/s41598-017-06981-8

De Simone, F.; Artaxo, P.; Bencardino, M.; Cinnirella, S.; Carbone, F.; D'Amore, F.; Dommergue, A.; Feng, X.B.; Gencarelli, C.N.; Hedgecock, I.M.; Landis, M.S.; Sprovieri, F.; Suzuki, N.; Wangberg, I.; Pirrone, N. (2017). *Particulate-phase mercury emissions from biomass burning and impact on resulting deposition: a modelling assessment.* Atmos. Chem. Phys. 17, 1881-1899. https://www.atmos-chem-phys.net/17/1881/2017/acp-17-1881-2017.pdf

Zhou, X.; Aurell, J.; Mitchell, W.; Tabor, D.; Gullett, B. (2017). *A small, lightweight multipollutant sensor system for ground-mobile and aerial emission sampling from open area sources.* Atmos. Environ., 154, 31-41. https://www.sciencedirect.com/science/article/pii/S1352231017300298

Aurell, J.; Mitchell, W.; Chirayath, V.; Jonsson, J.; Tabor, D.; Gullett, B. (2017). *Field determination of multipollutant, open area combustion source emission factors with a hexacopter unmanned aerial vehicle.* Atmos. Environ., 166, 433-440. https://www.sciencedirect.com/science/article/pii/S1352231017304958

Aurell, J.; Gullett, B.; Tabor, D.; Yonker, N. (2017). *Emissions from prescribed burning of timber slash piles in Oregon, Atmospheric Environment*, Volume 150, February 2017, 395–406. http://www.sciencedirect.com/science/article/pii/S1352231016309074

Strand, T.; Gullett, B.K; Urbanski, S.; Potter, B.; O'Neill, S.; Aurell, J.; Holder, A.; Larkin, N.; Moore, M.; Rorig, M. (2016). *Grassland and forest understory biomass emissions from prescribed fires in southeastern United States – RxCADRE 2012*, Intl. J. Wildland Fire, 25, 102–113. http://www.publish.csiro.au/wf/WF14166

Kimbrough, S., Hays, M.D., Preston, B. et al. (2016) Episodic impacts from California Wildfires Identified during Las Vegas Urban Air Quality Monitoring, *Environ. Sci. & Technol*. 50 (1), pp 18-24. https://pubs.acs.org/doi/abs/10.1021/acs.est.5b05038

George, I. J., Black, R., Walker, J., Hays, M.D., Preston, B., Tabor, D., and Gullett, B., (2016) *Emissions of volatile compounds and particulate matter from small-scale peat fires.* Atmos. Environ.132, 163-170.
Wong D.C.; Cai C.; Pleim, J.E.; Mathur, R.; Murphy, M.S. (2016). *Validation of the WRF-CMAQ twoway model with aircraft data and high resolution MODIS data in the CA 2008 wildfire case.* In Air Pollution Modeling and its Application XXIV, 531-535, Eds. Steyn, D.G.; Chaumerliac, N., Springer Proceedings in Complexity Series, Springer International Publishing, Switzerland. https://link.springer.com/chapter/10.1007/978-3-319-24478-5_85

Holder, A.L.; Hagler, G.S.W.; Aurell, J.; Hays, M.D.; Gullett, B.K. *(*2016). *Particulate matter and black carbon optical properties and emission factors from prescribed fires in the southeastern United States*. Journal of Geophysical Research: Atmospheres, 121, 3465-3483. http://onlinelibrary.wiley.com/doi/10.1002/2015JD024321/full

Pouliot, G., Rao, V., McCarty, J.L., Soja, A., 2016. Development of the Crop Residue and Rangeland Burning in the 2014 National Emissions Inventory Using Information from Multiple Sources. Journal of the Air & Waste Management Association.

Baker, K., Woody, M., Tonnesen, G., Hutzell, W., Pye, H., Beaver, M., Pouliot, G., Pierce, T., 2016. Contribution of regional-scale fire events to ozone and PM 2.5 air quality estimated by photochemical modeling approaches. Atmospheric Environment 140, 539-554.

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Kim, Y.H., Daniels, M., Boykin, E., Krantz, Q. T., McGee, J., Hays, M.D. et al. (2014) *Characterization and pulmonary toxicity of peat wildfire particulate matter, and the predictive utility of precision cut lung slices.* Part. & Fibre. Toxicol. 11:29 doi:10.1186/1743-8977-11-29. https://particleandfibretoxicology.biomedcentral.com/articles/10.1186/1743-8977-11-29

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