



2018 Publications - Core Research Faculty

Journal Articles

J. T. Bates, R. J. Weber, V. Verma, T. Fang, C. Ivey, C. Liu, S. E. Sarnat, H. H. Chang, J. A. Mulholland, and A. Russell, "Source impact modeling of spatiotemporal trends in PM_{2.5} oxidative potential across the eastern United States," *Atmospheric Environment*, vol. 193, pp. 158–167, 2018.

J. T. Bates, R. J. Weber, V. Verma, T. Fang, C. Ivey, C. Liu, S. E. Sarnat, H. H. Chang, J. A. Mulholland, and A. Russell, "Source impact modeling of spatiotemporal trends in PM_{2.5} oxidative potential across the eastern United States," *Atmospheric Environment*, vol. 193, pp. 158–167, 2018.

S. Bhagia, J. F. S. Ferreira, N. Kothari, A. Nunez, X. Liu, N. D. S. Dias, D. L. Suarez, R. Kumar, and C. E. Wyman, "Sugar yield and composition of tubers from Jerusalem Artichoke (*Helianthus tuberosus*) irrigated with saline waters," *Biotechnology and Bioengineering*, vol. 115, no. 6, pp. 1475–1484, 2018.

S. Bhagia, R. Dhir, R. Kumar, and C. E. Wyman, "Deactivation of Cellulase at the Air-Liquid Interface Is the Main Cause of Incomplete Cellulose Conversion at Low Enzyme Loadings," *Scientific Reports*, vol. 8, no. 1, 2018.

K. Boriboonsomsin, T. Durbin, G. Scora, K. Johnson, D. Sandez, A. Vu, Y. Jiang, A. Burnette, S. Yoon, J. Collins, Z. Dai, C. Fulper, S. Kishan, M. Sabisch, and D. Jackson, "Real-world exhaust temperature profiles of on-road heavy-duty diesel vehicles equipped with selective catalytic reduction," *Science of The Total Environment*, vol. 634, pp. 909–921, 2018.

T. Cao, R. L. Russell, T. D. Durbin, D. R. Cocker, A. Burnette, J. Calavita, H. Maldonado, and K. C. Johnson, "Characterization of the emissions impacts of hybrid excavators with a portable emissions measurement system (PEMS)-based methodology," *Science of The Total Environment*, vol. 635, pp. 112–119, 2018.

T. Cao, R. L. Russell, T. D. Durbin, D. R. Cocker, A. Burnette, J. Calavita, H. Maldonado, and K. C. Johnson, "Characterization of the emissions impacts of hybrid excavators with a portable emissions measurement system (PEMS)-based methodology," *Science of The Total Environment*, vol. 635, pp. 112–119, 2018.

C.-L. Chen, L. Li, P. Tang, and D. R. Cocker, "SOA formation from photooxidation of naphthalene and methylnaphthalenes with m-xylene and surrogate mixtures," *Atmospheric Environment*, vol. 180, pp. 256–264, 2018.

H. Chen, S. Chee, M. J. Lawler, K. C. Barsanti, B. M. Wong, and J. N. Smith, "Size resolved chemical composition of nanoparticles from reactions of sulfuric acid with ammonia and dimethylamine," *Aerosol Science and Technology*, vol. 52, no. 10, pp. 1120–1133, Jun. 2018.

P. Coffman, N. McCaffrey, J. Gardner, S. Bhagia, R. Kumar, C. E. Wyman, and D. Tanjore, "In Situ Rheological Method to Evaluate Feedstock Physical Properties Throughout Enzymatic Deconstruction," *Frontiers in Energy Research*, vol. 6, Feb. 2018.

- N. Gysel, P. Dixit, D. A. Schmitz, G. Engling, A. K. Cho, D. R. Cocker, and G. Karavalakis, "Chemical speciation, including polycyclic aromatic hydrocarbons (PAHs), and toxicity of particles emitted from meat cooking operations," *Science of The Total Environment*, vol. 633, pp. 1429–1436, 2018.
- N. Gysel, W. A. Welch, C.-L. Chen, P. Dixit, D. R. Cocker, and G. Karavalakis, "Particulate matter emissions and gaseous air toxic pollutants from commercial meat cooking operations," *Journal of Environmental Sciences*, vol. 65, pp. 162–170, 2018.
- L. E. Hatch, A. Rivas-Ubach, C.N. Jen, M. Lipton, A.H. Goldstein, and K.C. Barsanti, "Measurements of I/SVOCs in biomass-burning smoke using solid-phase extraction disks and two-dimensional gas chromatography," *Atmospheric Chemistry and Physics*, vol. 18, no. 24, pp. 17801–17817, 2018.
- C. N. Jen, Y. Liang, L. E. Hatch, N. M. Kreisberg, C. Stamatis, K. Kristensen, J. J. Battles, S. L. Stephens, R. A. York, K. C. Barsanti, and A. H. Goldstein, "High Hydroquinone Emissions from Burning Manzanita," *Environmental Science & Technology Letters*, vol. 5, no. 6, pp. 309–314, Nov. 2018.
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- Y. Jiang, J. Yang, S. Gagné, T. W. Chan, K. Thomson, E. Fofie, R. A. Cary, D. Rutherford, B. Comer, J. Swanson, Y. Lin, P. V. Rooy, A. Asa-Awuku, H. Jung, K. Barsanti, G. Karavalakis, D. Cocker, T. D. Durbin, J. W. Miller, and K. C. Johnson, "Sources of variance in BC mass measurements from a small marine engine: Influence of the instruments, fuels and loads," *Atmospheric Environment*, vol. 182, pp. 128–137, 2018.
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- H. Jung and C. Li, "Emissions from Plug-in Hybrid Electric Vehicle (PHEV) During Real World Driving Under Various Weather Conditions," *National Center for Sustainable Transportation*.
- H. Jung, R. Silva, and M. Han, "Scaling Trends of Electric Vehicle Performance: Driving Range, Fuel Economy, Peak Power Output, and Temperature Effect," *World Electric Vehicle Journal*, vol. 9, no. 4, p. 46, 2018.
- S. Jung, H. L. Trajano, C. G. Yoo, M. B. Foston, F. Hu, A. K. Tolbert, C. E. Wyman, and A. J. Ragauskas, "Topochemical Understanding of Lignin Distribution During Hydrothermal Flowthrough Pretreatment," *ChemistrySelect*, vol. 3, no. 32, pp. 9348–9352, 2018.
- F. Kabir, N.P. Yu, W. Yao, L. Wu, and J. Jiang, "Impact of aerosol on reservoir inflows: A case study for big creek hydroelectric system in California," *Hydrological Processes*, vol. 32, pp. 3365-3390, 2018.

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- X. Meng, A. Parikh, B. Seemala, R. Kumar, Y. Pu, P. Christopher, C. E. Wyman, C. M. Cai, and A. J. Ragauskas, "Chemical Transformations of Poplar Lignin during Cosolvent Enhanced Lignocellulosic Fractionation Process," *ACS Sustainable Chemistry & Engineering*, vol. 6, no. 7, pp. 8711–8718, 2018.
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F. Ye, G. Wu, K. Boriboonsomsin, M. J. Barth, S. Rajab, and S. Bai, "Development and Evaluation of Lane Hazard Prediction Application for Connected and Automated Vehicles (CAVs)," 2018 21st International Conference on Intelligent Transportation Systems (ITSC), 2018.

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J. Luo, K. Boriboonsomsin, and M. Barth, "Consideration of Exposure to Traffic-Related Air Pollution in Bicycle Route Planning," Transportation Research Board 97th Annual Meeting Transportation Research Board, 2018.

N. Williams, G. Wu, and P. Closas, "Impact of positioning uncertainty on eco-approach and departure of connected and automated vehicles," *IEEE/ION Position, Location and Navigation Symposium (PLANS)*, pp. 1081-1087, 2018.

N. Williams, G. Wu, K. Boriboonsomsin, M. Barth, S. Rajab, and S. Bai, "Anticipatory Lane Change Warning using Vehicle-to-Vehicle Communications," (pp. 117-122). IEEE, 2018.

P. Hao, K. Boriboonsomsin, C. Wang, G. Wu, and M.J. Barth, "Connected Eco-Approach and Departure (EAD) System for Diesel Trucks," Transportation Research Board 97th Annual Meeting Transportation Research Board, 2018.

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M. Barth and K. Johnson, "2018 HORIBA & UCR/CE-CERT PARTNERSHIP MEETING," Japan at the Horiba Head Quarters, Kyoto Japan, September 24-25, 2018.

K. Boriboonsomsin, T. Durbin, G. Scora, K. Johnson, D. Sandez, A. Vu, Y. Jiang, A. Burnette, A. Santos, S. Lemieux, H. Maldonado, S. Collier, J. Collins, and S. Yoon, "Real-world activity of heavy-duty tractors hauling container chassis, flatbed trailer, and tank trailer," 28th CRC Real World Emissions Workshop, Garden Grove, California, March 2018.

K. Boriboonsomsin, T. Durbin, G. Scora, K. Johnson, D. Sandez, A. Vu, Y. Jiang, A. Burnette, A. Santos, S. Lemieux, H. Maldonado, S. Collier, J. Collins, and S. Yoon, "Real-world activity of heavy-duty tractors hauling container chassis, flatbed trailer, and tank trailer," 8th International PEMS Conference and Workshop, Riverside, CA, March 2018.

K. Boriboonsomsin, T. Durbin, G. Scora, K. Johnson, D. Sandez, A. Vu, Y. Jiang, A. Burnette, S. Yoon, J. Collins, Z. Dai, C. Fulper, S. Kishan, M. Sabisch, and D. Jackson, "Real-world exhaust temperature profiles of on-road heavy-duty diesel vehicles equipped with selective catalytic reduction," 28th CRC Real World Emissions Workshop, Garden Grove, California, March 2018.

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K. Johnson, "NTK/NGK & UCR/CE-CERT Past work and Future Collaborations" September 26, 2018, Japan at NGK-Sparkplugs Sensor Division Head Quarters.

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G. Karavalakis, T. Durbin, R. Russell, and K. Johnson, "The effect of biodiesel and hydrogenated vegetable oil (HVO) blends on light-duty cars and trucks," 2018 SAE World Congress Experience, 18PFL-0541, 2018.

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