

# Rick D. Saylor, Ph.D.

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## Featured Publications

Hicks, Bruce B.; Pendergrass, William R.; Baker, Barry D.; Saylor, Rick D.; O'Dell, Debra L.; Eash, Neal S.; McQueen, Jeffrey T. (2018). **On the Relevance of  $\ln(z_0/z_0T) = kB^{-1}$** , *Boundary-Layer Meteorol* (2018) 167:285–301, <https://doi.org/10.1007/s10546-017-0322-6>

Lee, P., J. McQueen, I. Stajner, J. Huang, L. Pan, D. Tong, H. Kim, Y. Tang, S. Kondragunta, M. Ruminski, S. Lu, E. Rogers, R. Saylor, P. Shafran, H. Huang, J. Gorline, S. Upadhayay, and R. Artz, 2017: **NAQFC Developmental Forecast Guidance for Fine Particulate Matter (PM<sub>2.5</sub>)**. *Wea. Forecasting*, 32, 343–360, <https://doi.org/10.1175/WAF-D-15-0163.1>

Hicks, B., Saylor, R., and Baker, B. (2016) **Dry deposition of particles to canopies – A look back and the road forward**, *J. Geophys. Res. Atmos.*, 121,, doi:10.1002/2015JD024742.

Saylor, R., and Hicks, B. (2016) **Time for a new approach to modeling surface-atmosphere exchanges in air quality models?**, *Atmos. Environ.*, 129, 229-233.

Saylor, R., Myles, L., Sibble, D., Caldwell, J., Xing, J. (2015) **Recent trends in gas-phase ammonia and PM<sub>2.5</sub> ammonium in the Southeast United States**, *J. Air & Waste Manage. Assoc.*, 65, 347-357.

Saylor, R. D., Wolfe, G. M., Meyers, T. P., Hicks, B. B. (2014) **On a corrected formulation of the multilayer model (MLM) for inferring dry deposition to vegetated surfaces**, *Atmos. Environ.* 92, 141-145.

Saylor, R. D (2013) **The Atmospheric Chemistry and Canopy Exchange Simulation System (ACCESS): Model description and application to a temperate deciduous forest canopy**, *Atmos. Chem. Phys.*, 13, 693-715.

Saylor, R. D., A. F. Stein (2012) **Identifying the causes of differences in ozone production from the CB05 and CBMIV mechanisms**, *Geoscientific Model Development*, 5, 257-268.

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Pan, L., Kim, H., Lee, P., Saylor, R., Tang, Y., Tong, D., Baker, B., Kondragunta, S., Xu, C., Ruminski, M. G., Chen, W., McQueen, J., and Stajner, I. (2017) **Evaluating a fire smoke simulation algorithm in the National Air Quality Forecast Capability (NAQFC) by using multiple observation data sets during the Southeast Nexus (SENEX) field campaign**, *Geoscientific Model Devopment Discussions*, <https://doi.org/10.5194/gmd-2017-207>.

Lee, P., McQueen, J., Stajner, I., Huang, J., Pan, L, Tong, D., Kim, H., Tang, Y., Kondragunta, S., Ruminski, M., Lu, S., Rogers, E., Saylor, R., Shafran, P., Huang, H., Gorline, J., Upadhayay, S., Artz, R. (2017) **NAQFC developmental forecast guidance for fine particulate matter (PM<sub>2.5</sub>)**, *Weather and Forecasting.*, 32, 343-360.

Tong, D. Q., Lei, H., Pan, Li., Chai, T., Kim, H., Lee, P., Saylor, R., Wang, M., Kondragunta, S. (2014) **Assimilation of satellite oceanic and atmospheric products to improve emission**

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Stein, A. F., R. D. Saylor (2012) **Sensitivities of sulfate aerosol formation and oxidation pathways on the chemical mechanism employed in simulations**, *Atmos. Chem. Phys.*, 12, 8567-8574.

Tong, D. Q., P. Lee, R. D. Saylor (2012) **New Directions: The need to develop process-based emissions models**, *Atmos. Environ.*, 47, 560-561.

Saylor, R. D., E. S. Edgerton, B. E. Hartsell, J. J. Jansen, and D. A. Hansen (2010) **Continuous ammonia measurements from the Southeastern Aerosol Research and Characterization (SEARCH) study**, *Atmos. Environ.*, 44, 4994-5004.

Edgerton, E. S., G. S. Casuccio, R. D. Saylor, T. L. Lersch, B. E. Hartsell, and J. J. Jansen (2008) **Measurements of OC and EC in coarse particulate matter in the southeastern United States**, *J. Air & Waste Manage. Assoc.*, 59, 78-90.

Edgerton, E. S., R. D. Saylor, B. E. Hartsell, J. J. Jansen, and D. A. Hansen (2007) **Ammonia and ammonium measurements from the southeastern United States**, *Atmos. Environ.*, 41, 3339-3351.

Saylor, R. D., E. S. Edgerton, and B. E. Hartsell (2006) **Linear regression techniques for use in the EC tracer method of secondary organic aerosol estimation**, *Atmos. Environ.*, 40, 7546-7556.

Edgerton, E. S., B. E. Hartsell, R. D. Saylor, J. J. Jansen, D. A. Hansen, and G. M. Hidy (2006) **The Southeastern Aerosol Research and Characterization Study: Part III. Continuous measurements of PM<sub>2.5</sub> mass and composition**, *J. Air & Waste Manage. Assoc.*, 56, 1325-1341.

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Saylor R. D., R. C. Easter, and E. G. Chapman (1999) **Simulation of the tropospheric distribution of carbon monoxide during the 1984 MAPS experiment**, *Atmos. Environ.*, 33, 4675-4694.

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