

## Michael Lewandowski, Research Physical Chemist, in EPA's National Exposure Research Laboratory

Exposure Methods and Measurements Division

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**Area of Expertise:** Michael's current research efforts are focused on secondary organic aerosol (SOA) formation, SOA composition, and the contribution of individual SOA precursors to ambient particulate matter concentrations. These studies consist of laboratory experiments conducted in the NERL indoor smog chamber system as well as the collection of field samples. Detailed analyses of chamber-generated SOA samples produced from a variety of parent hydrocarbons (including monoterpenes, sesquiterpenes, aromatics, alkanes, PAHs, and isoprene) have been used to develop methods for estimating SOA contributions to ambient particulate matter, and to test and improve modeling tools used to support EPA regulations.

### Select Publications:

Shalamzari, M., R. Vermeylen, F. Blockhuys, Tad Kleindienst, M. Lewandowski, R. Szmigielski, K. Rudzinski, G. Spolnik, W. Danikiewicz, W. Maenhaut, AND M. Claeys.

Characterization of polar organosulfates in secondary organic aerosol from the unsaturated aldehydes 2-E-pentenal, 2-E-hexenal, and 3-Z-hexenal. *Atmospheric Chemistry and Physics*. Copernicus Publications, Katlenburg-Lindau, Germany, 16:7135-7148, (2016).

Jaoui, M., M. Lewandowski, K. Docherty, E. Corse, B. Lonneman, J. Offenber, AND Tad Kleindienst. Photooxidation of farnesene mixtures in the presence of NOx: Analysis of reaction products and their implication to ambient PM2.5. *ATMOSPHERIC ENVIRONMENT*. Elsevier Science Ltd, New York, NY, 130:190-201, (2016).

Lewandowski, M., M. Jaoui, J. Offenber, J. Krug, AND Tad Kleindienst. Atmospheric oxidation of isoprene and 1,3-Butadiene: influence of aerosol acidity and Relative humidity on secondary organic aerosol. *Atmospheric Chemistry and Physics Discussions*. Copernicus Gesellschaft mbH, Gottingen, Germany, 15:3773-3783, (2015).

View more research publications by [Michael Lewandowski](#).

### Education:

- Ph.D., Chemical Engineering, North Carolina State University, 2002
- M.A., Chemical Engineering, North Carolina State University, 1999
- B.S., Chemical Engineering, Rensselaer Polytechnic Institute, 1996

**Professional Experience:**

- Research Physical Scientist, USEPA, ORD, NERL-HEASD, Process Modeling Research Branch, 2002-present