

Selected recent publications with group members as authors

2019:

- Siddharth Iyer, Matti P. Rissanen and Theo Kurtén. Reaction between Peroxy and Alkoxy Radicals Can Form Stable Adducts. *J. Phys. Chem. Letters* (2019), 10, 2051-2057.
- Federico Bianchi, Theo Kurtén et al. Highly-oxygenated organic molecules (HOM) from gas-phase autoxidation involving organic peroxy radicals: A key contributor to atmospheric aerosol. *Chem. Rev.* (2019), 119, 3472-3509.
- Evgeni Zapadinski et al. Modelling on Fragmentation of Clusters Inside a Mass Spectrometer. *J. Phys. Chem. A* (2019), 123, 611-624.
- Younes Valadbeigi and Theo Kurtén. Clustering of H₂SO₄ with BX₃ (X=H, F, Cl, Br, CN, OH) compounds creates strong acids and superacids. *Comput. There. Chem.* (2019), 1153, 34-43.

2018:

- Siddharth Iyer et al. Computational Investigation of RO₂ + HO₂ and RO₂ + RO₂ Reactions of Monoterpene Derived First-Generation Peroxy Radicals Leading to Radical Recycling. *J. Phys. Chem. A* (2018), 122, 9542-9552.
- Theo Kurtén et al. Estimating the saturation vapor pressures of isoprene oxidation products C₅H₁₂O₆ and C₅H₁₀O₆ using COSMO-RS. *Atmos. Chem. Phys.* (2018), 18, 17589-17600.
- Noora Hyttinen et al. Computational Comparison of Different Reagent Ions in the Chemical Ionization of Oxidized Multifunctional Compounds. *J. Phys. Chem. A* (2018), 122, 269-279.
- Viivi Hirvonen et al. Closed-Shell Organic Compounds Might Form Dimers at the Surface of Molecular Clusters. *J. Phys. Chem. A* (2018), 122, 1771-1780.
- Ulrich Krieger et al. A reference data set for validating vapor pressure measurement techniques: homologous series of polyethylene glycols. *Atmos. Measurement Tech.* (2018), 11, 49-63.
- Liu Ling et al. Clustering mechanism of oxocarboxylic acids involving hydration reaction: Implications for the atmospheric models. *J. Chem. Phys.* (2018), 148, 214303.
- Ben H. Lee et al. Flight deployment of a high-resolution time-of-flight chemical ionization mass spectrometer: observations of reactive halogen and nitrogen oxide species. *J. Geophys. Res.* (2018), 123, 7670-7686.
- Hao Li et al. Self-Catalytic reaction of SO₃ and NH₃ to Produce Sulfamic Acid and Its Implication to Atmospheric Particle Formation. *J. Am. Chem. Soc.* (2018), 140, 11020-11028.

2017:

- Torsten Berndt et al. Direct probing of Criegee intermediates from gas-phase ozonolysis using chemical ionization mass spectrometry. *J. Am. Chem. Soc.* (2017), 139, 13387-13392.
- Siddharth Iyer et al. Computational and Experimental Investigation of the Detection of HO₂ Radical and the Products of Its Reaction with Cyclohexene Ozonolysis Derived RO₂ Radicals by an Iodide-Based Chemical Ionization Mass Spectrometer. *J. Phys. Chem. A* (2017), 121, 6778-6789.
- Greg Drozd et al. Unimolecular Decay of the Dimethyl Substituted Criegee Intermediate in Alkene Ozonolysis: Decay Timescales and the Importance of Tunneling. *J. Phys. Chem. A* (2017), 121, 6306-6045.
- Martta Toivola et al. Can COSMOTherm Predict a Salting in Effect? *J. Phys. Chem. A* (2017), 121, 6288-6295.
- Theo Kurtén et al. Alkoxy Radical Bond Scissions Explain the Anomalously Low Secondary Organic Aerosol and Organonitrate Yields from alpha-Pinene + NO₃. *J. Phys. Chem. Lett.* (2017), 8, 2826-2834.
- Jonas Elm et al. What Is Required for Highly Oxidized Molecules To Form Clusters with Sulfuric Acid? *J. Phys. Chem. A* (2017), 121, 4578-4587.
- Jonas Elm et al. Formation of atmospheric molecular clusters consisting of sulfuric acid and C₈H₁₂O₆ tricarboxylic acid. *Phys. Chem. Chem. Phys.* (2017), 19, 4877-4886.
- Noora Hyttinen et al. Computational Comparison of Acetate and Nitrate Chemical Ionization of Highly Oxidized Cyclohexene Ozonolysis Intermediates and Products. *J. Phys. Chem. A* (2017), 121, 2172-2179.

2016:

- Torsten Berndt et al. Hydroxyl radical-induced formation of highly oxidized organic compounds. *Nature Communications* (2016), 7, 13677
- Kristian Holten Möller et al. Cost-Effective Implementation of Multiconformer Transition State Theory for Peroxy Radical Hydrogen Shift Reactions. *J. Phys. Chem. A* (2016), 120, 10072-10087.
- Noora Hyttinen et al. Unimolecular HO₂ Loss from Peroxy Radicals Formed in Autoxidation Is Unlikely under Atmospheric Conditions. *J. Phys. Chem. A* (2016), 120, 3588-3595.
- Theo Kurtén et al. Alpha-Pinene Autoxidation Products May Not Have Extremely Low Saturation Vapor Pressures Despite High O: C Ratios. *J. Phys. Chem. A* (2016), 120, 2569-2582.
- Jonas Elm et al. The Effect of Water and Bases on the Clustering of a Cyclohexene Autoxidation Product C₆H₈O₇ with Sulfuric Acid. *J. Phys. Chem. A* (2016), 120, 2240-2249.
- Nanna Myllys et al. Coupled Cluster Evaluation of the Stability of Atmospheric Acid-Base Clusters with up to 10 Molecules. *J. Phys. Chem. A* (2016), 120, 621-630.
- Siddharth Iyer et al. Modeling the Detection of Organic and Inorganic Compounds Using Iodide-Based Chemical Ionization. *J. Phys. Chem. A* (2016), 120, 576-587.
- Felipe Lopez-Hilfiker et al. Constraining the sensitivity of iodide adduct chemical ionization mass spectrometry to multifunctional organic molecules using the collision limit and thermodynamic stability of iodide ion adducts. *Atmospheric Measurement Techniques* (2016), 9, 1505-1512.

2015:

- Theo Kurtén et al. Computational Study of Hydrogen Shifts and Ring-Opening Mechanisms in α -Pinene Ozonolysis Products. *J. Phys. Chem. A* (2015), 119, 11366-11375
- Noora Hyttinen et al. Modeling the Charging of Highly Oxidized Cyclohexene Ozonolysis Products Using Nitrate-Based Chemical Ionization. *J. Phys. Chem. A* (2015), 119, 6339-6345.
- Matti Rissanen et al. Effects of Chemical Complexity on the Autoxidation Mechanisms of Endocyclic Alkene Ozonolysis Products: From Methylcyclohexenes toward Understanding α -Pinene. *J. Phys. Chem. A* (2015), 119, 4633-4650.

- Erik Praske et al. Atmospheric Fate of Methyl Vinyl Ketone: Peroxy Radical Reactions with NO and HO₂. *J. Phys. Chem. A* (2015), 119, 4562-4572.
- Theo Kurtén et al. Computational Study of the Effect of Glyoxal–Sulfate Clustering on the Henry's Law Coefficient of Glyoxal. *J. Phys. Chem. A* (2015), 119, 4509-4514.
- Bertrand Schweitzer-Chaput et al. Acid-Mediated Formation of Radicals or Baeyer-Villiger Oxidation from Criegee Adducts. *Angewandte Chemie-International Edition* (2015), 54, 11848-11852.

For a full list of publications, see Theo Kurtén's Researcher ID page: <http://www.researcherid.com/rid/G-2120-2012>