

3.008 Nitrate radical initiated atmospheric particulate matter formation in forests: Anthropogenically-triggered biogenic aerosol production .

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Abstract:

Vegetation supplies the majority of global non-methane volatile organic compounds (VOCs) emissions to the troposphere, which upon oxidation can yield secondary organic aerosol (SOA), a major component of fine particulate matter. This oxidation chemistry produces highly variable mass yields in the case of the anthropogenically controlled nitrate (NO_3) radical oxidant for different BVOC precursors, raising questions about underlying structural mechanisms. This talk will provide an overview of the complex NO_x -driven anthropogenic/biogenic interactions in aerosol formation, and will then describe recent studies that provide insight into mechanisms for NO_3 -initiated SOA formation.