



## **Biogenic emissions and secondary organic aerosol: current understanding and knowledge gaps**

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Up to 80% of fine particulate matter is composed of organic compounds, the majority of which are of secondary and biogenic origin. It is therefore important to understand the atmospheric chemistry processes by which biogenic volatile organic compounds (BVOC) are oxidized and transferred to the particle phase. This involves an understanding of (i) which BVOC are emitted and likely to form condensable vapors upon oxidation, (ii) which oxidation processes and oxidants are of importance in the troposphere, and (iii) the physical and chemical processes involved in gas to particle transfer. The presentation gives an overview of recent developments in the understanding of secondary organic aerosol (SOA) formation from different BVOC classes and discusses the importance of conducting simulation experiments with complex mixtures to realistically represent atmospheric chemistry processes. Climate feedbacks and knowledge gaps in our understanding of biogenic SOA will be reviewed.