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**Combustion Related Formation of Secondary Nano Particle Formation in the Atmosphere**

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Secondary nanoparticles formed in the atmosphere are of considerable current interest since they not only cause adverse health effects but also have a potentially important influence on climate. After condensational and coagulational growth secondary particles may become cloud condensation nuclei and efficient scatterers of sunlight. Important sources of secondary particle precursors are stationary combustion sources as well as traffic (cars, aircraft, ships). New and interesting measurements of aerosol precursor gases have been made along with model simulations. Interesting results have been obtained which contribute to improve our understanding of secondary aerosol particle formation. The measurements include ground-based and aircraft-based atmospheric measurements as well as laboratory-investigations. The ground-based measurements addressed relatively unpolluted atmospheric air masses as well as highly polluted air masses. The aircraft-based atmospheric measurements which were made in close collaboration with DLR covered altitudes between 100 m and 13000 m and took place in polluted regions (Europe) as well as remote and relatively unpolluted regions (Brazil, Australia).

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[back to index](#)