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Comparison of secondary organic aerosol formation in the dark, with UV and visible light

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Photochemical aging experiments were performed for emissions of diesel vehicles, mopeds, and wood burners, and alpha-pinene at the smogchamber at the Paul Scherrer Institute in Switzerland. We will discuss the evolving of the particle aging in these systems in terms of oxygen to carbon ratio and other elemental composition analyses. Especially interesting are the observed increase of oxygenation in the dark without ozone and without NO3 as well as the substantial oxygenation using only visible light including important light-induced chemical changes withoug involving the gasphase.