

ATS/CIRA Colloquium

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Visiting ATS from the Weizmann Institute of Science

**Relationships between molecular composition
change and organic aerosol optical properties**

Hosted by A.R. Ravishankara

Friday, Feb. 15, 2019

ATS room 101

Discussion will begin at 11:15 a.m.

Refreshments will be served at 10:45 a.m. in the weather lab

The wavelength-dependence of the complex refractive indices (RI) in the visible spectral range of secondary organic aerosols (SOA) and of biomass burning aerosol, and the evolution of the RI with atmospheric aging are largely unknown. In this study, we apply a novel white light-broadband cavity enhanced spectroscopy to measure the changes in the RI (365–650 nm) of biogenic and anthropogenic SOA produced and aged in an oxidation flow reactor, simulating daytime aging under different NO_x concentrations. In addition, we use novel new wood tar proxies to study the effect of atmospheric aging on the optical properties of biomass burning aerosols. Correlating the observed optical properties with aerosol mass spectrometer measurements allows to correlate changes in the chemical composition of the aerosols and their optical properties.

Link to colloquia page: <https://www.atmos.colostate.edu/colloquia/>