

# IQSE AMO QO Seminar Series

Tuesday, February 15th, 11:30 am ZOOM &  
IQSE seminar room (MPHY 578)

Pizza will be served for IQSE members at 11:00 am. The talk will start around 11:30 am

## Dr. Renyi Zhang

*University Distinguished Professor, Holder of Harold J. Haynes Endowed  
Chair, Department of Atmospheric Sciences, College of Geosciences;  
Department of Chemistry, College of Science, Texas A&M University*

## Airborne particulate matter: From human health, weather, to climate

**EVENT DETAILS:** Fine particulate matter (PM) or aerosols (a.k.a. microscopic particles suspended in air) exert profound impacts on the Earth system. Exposure to fine PM is unequivocally linked to adverse human health effects, ranging from aggravated allergies, development of serious chronic diseases, to premature death. Globally, an annual premature mortality of over 7 million is caused by PM-related diseases. In addition, fine aerosols interact directly and indirectly with the Earth's radiation budget, influencing weather and climate. Currently, the aerosol-radiation and aerosol-cloud interactions represent the greatest uncertainty in projection of future climate relevant to anthropogenic activities. An understanding of the PM formation mechanism is critical in the development of efficient mitigation policies to minimize its local, regional, to global impacts. This talk will discuss the various aspects relevant to PM formation, including the fundamental chemistry and detection methodologies. Future research needs relevant to atmospheric measurements of fine PM, including potential application of atomic and molecular optics (AMO), will be discussed.

**ZOOM information:**

<https://tamu.zoom.us/j/98156251523?pwd=QVdSdGxtL1UyY0g1L083SU5QR0QrUT09>

Meeting ID: 981 5625 1523

Passcode: 297578

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