

# ES SEMINAR SERIES

12:30-1:30 pm

11/10/2021

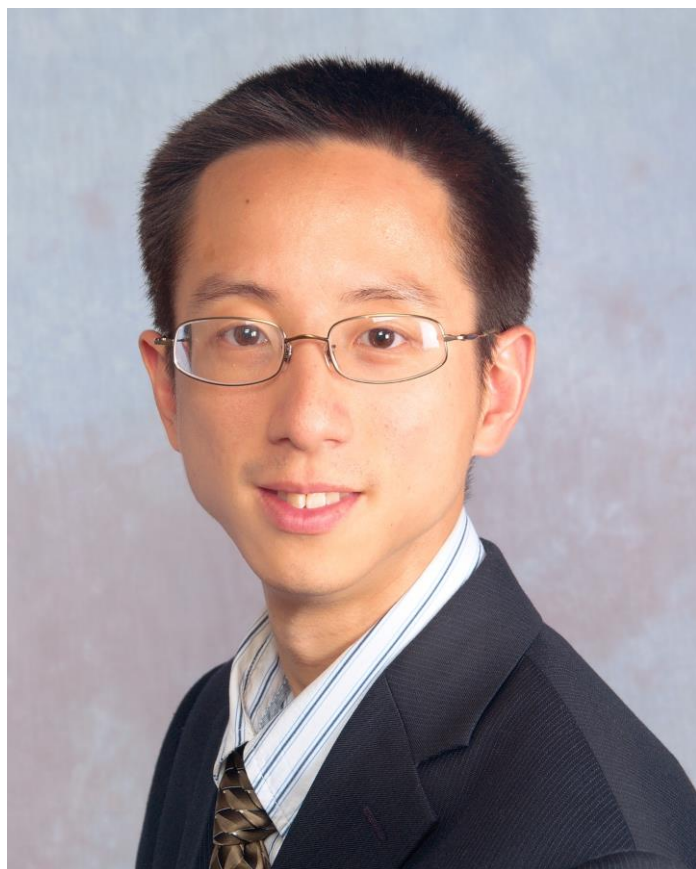
[Zoom](#)

## Arthur Chan

*Sources and impacts of urban aerosol:  
role of radical reactions*



**Abstract:** Organic compounds, both gaseous and particulate, are important air pollutants in urban areas. To accurately predict their emissions and health impacts, the kinetics and mechanisms of underlying mechanisms need to be understood. In this presentation, I will talk about the radical reactions in heated cooking oil and how they lead to emissions of aldehydes from food cooking. These aldehydes are highly reactive in the atmosphere and can lead to formation of particulate matter. I will also discuss our studies around radicals that form when particulate matter is inhaled. We show that particulate matter from wood burning form different types of reactive radical species, which are important for its toxicity.



**Bio:** *Arthur Chan* received his PhD in chemical engineering at California Institute of Technology in 2010 and did his postdoctoral work at UC Berkeley. In 2013, he joined University of Toronto where he leads a research group studying air pollution chemistry. Through laboratory and field studies, his group studies the mechanisms of organic aerosol formation and health impacts. He is a Tier 2 Canada Research Chair in Atmospheric Chemistry and Health.