

2022 International Solvay Chair in Chemistry



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Closing Lecture

The obsessive problem of ozone air pollution

Damage to human health and vegetation from high ozone concentrations in surface air has been a world-wide focus of air pollution research ever since its discovery in Los Angeles in the 1950s. Ozone is produced in polluted air by photochemical oxidation of volatile organic compounds (VOCs) in the presence of nitrogen oxides (NO_x). Controlling ozone pollution has been an exceedingly difficult problem because of the range of VOC and NO_x emission sources, the complex nonlinear nature of the chemical mechanisms producing ozone, and the importance of atmospheric transport of ozone and its precursors on scales ranging from urban to global. Ozone concentrations are presently exceedingly high and increasing in East Asia despite new efforts to control emissions, and they remain high in Europe and North America despite decades of such efforts. In this talk I will present the chemistry behind ozone formation including new developments in our understanding, examine the causes of rising ozone in East Asia, and discuss the chemical pathways driving the intercontinental transport of ozone pollution.

FRIDAY 7 OCTOBER 2022 AT 4:00 PM

!Auditoire Roger Lallemand!
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