

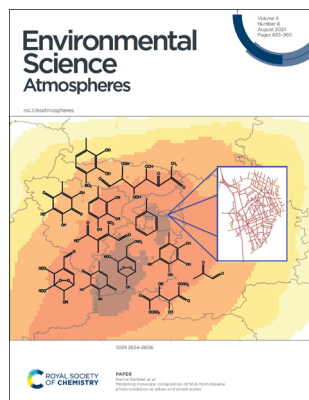
# Environmental Science: Atmospheres

rsc.li/esatmospheres

The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

## IN THIS ISSUE

ISSN 2634-3606 CODEN ESANC9 4(8) 833–960 (2024)



### Cover

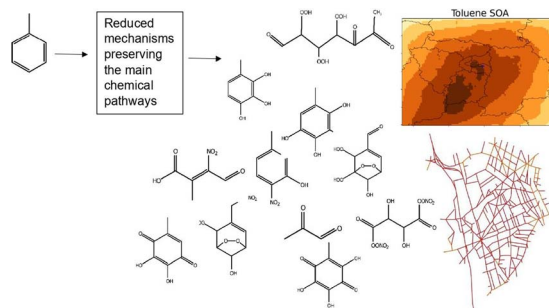
See Karine Sartelet et al., pp. 839–847. Image reproduced by permission of Karine Sartelet from *Environ. Sci.: Atmos.*, 2024, 4, 839.

## PAPERS

839

### Modelling molecular composition of SOA from toluene photo-oxidation at urban and street scales

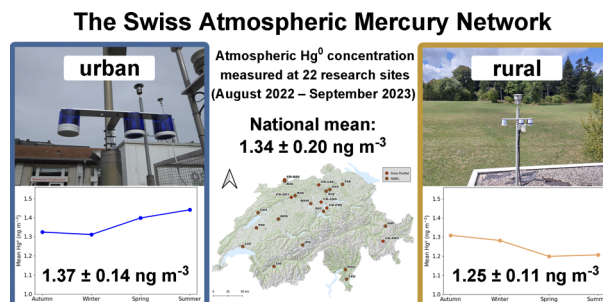
Karine Sartelet,\* Zhizhao Wang, Victor Lannuque, Siddharth Iyer, Florian Couvidat and Thibaud Sarica



848

### Spatial and seasonal dynamics of gaseous elemental mercury concentrations over Switzerland observed by a passive air sampler network

Stefan Osterwalder,\* Ron Schibler, Christoph Hüglin, Beat Schwarzenbach, Geoff Stuppé, Katrina MacSween, Kevin Bishop, Christine Alewell and Nina Buchmann



# Advance your career in science

with professional recognition that showcases  
your **experience, expertise and dedication**

## Stand out from the crowd

Prove your commitment  
to attaining excellence in  
your field

## Gain the recognition you deserve

Achieve a professional  
qualification that inspires  
confidence and trust

## Unlock your career potential

Apply for our professional  
registers (RSci, RSciTech)  
or chartered status  
(CChem, CSci, CEnv)

## Apply now

[rsc.li/professional-development](https://rsc.li/professional-development)



861

## New airborne research facility observes sensitivity of cumulus cloud microphysical properties to aerosol regime over the great barrier reef

Diana C. Hernandez-Jaramillo,\* Chris Medcraft, Ramon Campos Braga, Peter Butcherine, Adrian Doss, Brendan Kelaher, Daniel Rosenfeld and Daniel P. Harrison



872

## Characterization of mercury in atmospheric particulate matter in the state of Rio de Janeiro, Brazil

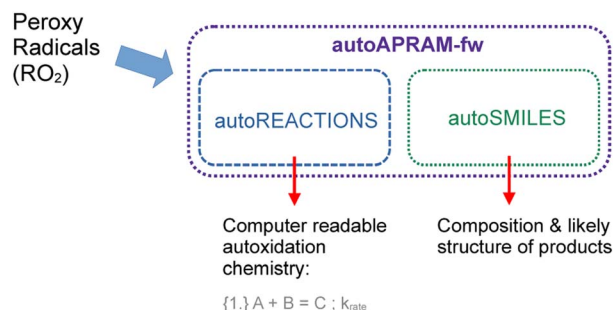
Luis Fernando Mendonça da Silva, Caio Silva Assis Felix, Madson Moreira Nascimento, Jailson Bittencourt de Andrade, Maria Cristina Canela, Cibele Maria Stivanin de Almeida, Carla Semiramis Silveira, Renato da Silva Carreira and Adriana Gioda\*



879

## Towards automated inclusion of autoxidation chemistry in models: from precursors to atmospheric implications

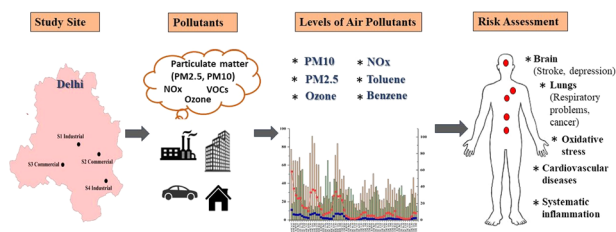
Lukas Pichelstorfer,\* Pontus Roldin, Matti Rissanen, Noora Hyttinen, Olga Garmash, Carlton Xavier, Putian Zhou, Petri Clusius, Benjamin Foreback, Thomas Golin Almeida, Chenjuan Deng, Metin Baykara, Theo Kurten and Michael Boy

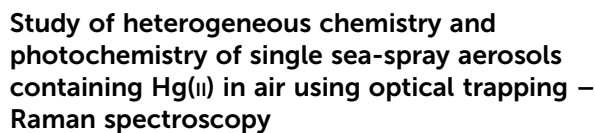


897

## Variability in air quality, ozone formation potential by VOCs, and associated air pollution attributable health risks for Delhi's inhabitants

Saurabh Sharma, Anjum Singhal, Veluswamy Venkatramanan, Pawan Verma and Mayank Pandey\*





Yukai Ai, Chuji Wang,\* Yong-Le Pan and Gorden Videen

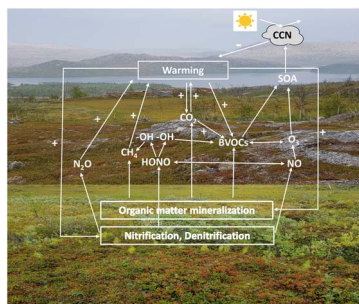
925



# Multi-day photochemical evolution of organic aerosol from biomass burning emissions

Abraham Dearden, Yicong He, Ali Akherati, Christopher Y. Lim, Matthew M. Coggon, Abigail R. Koss, Joost de Gouw, Carsten Warneke, Lindsay D. Yee, John H. Seinfeld, Christopher D. Cappa, Jesse H. Kroll, Jeffrey R. Pierce and Shantanu H. Jathar\*

942



# Carbon and nitrogen-based gas fluxes in subarctic ecosystems under climate warming and increased cloudiness

Flobert A. Ndah,\* Marja Maljanen, Riikka Rinnan, Hemraj Bhattarai, Cleo L. Davie-Martin, Santtu Mikkonen, Anders Michelsen and Minna Kivimäenpää