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(4) 427-502 (2024)

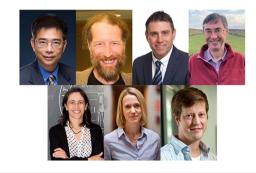


Cover See Kevin M. A. Parker and Michael R. Mainelli, pp. 435-454. Image reproduced by permission of Kevin M. A. Parker from Environ. Sci.: Atmos., 2024, 4, 435. Methane picture by polesnoy via Alamy; Iso-octane picture by petrovv via iStock; Coal structure ball by Jynto via Wikicommons, reproduced via Creative CommonsCC BY SA licence.

EDITORIAL

2023 Outstanding Papers published in the Environmental Science journals of the Royal Society of Chemistry

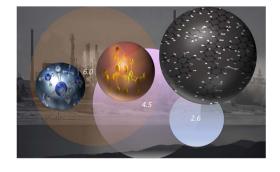
Zongwei Cai, Neil Donahue, Graham Gagnon, Kevin C. Jones, Célia Manaia, Elsie Sunderland and Peter J. Vikesland



PAPERS

What happens if we 'burn all the carbon'? carbon reserves, carbon budgets, and policy options for governments

Kevin M. A. Parker* and Michael R. Mainelli







At the heart of open access for the global chemistry community

Editor-in-chief

Russell J Cox

Leibniz Universität Hannover, Germany

We stand for:



Breadth We publish work in all areas of chemistry and reach a global readership



Quality Research to advance the chemical sciences undergoes rigorous peer review for a trusted, society-run journal



Affordability Low APCs, discounts and waivers make publishing open access achievable and sustainable



Community Led by active researchers, we publish quality work from scientists at every career stage, and all countries

Submit your work now

rsc.li/rsc-advances

@RSC_Adv

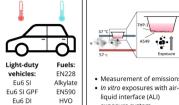
Article Online

PAPERS

455

Effects of fuel composition and vehicle operating temperature on in vitro toxicity of exhaust emissions

Henri Hakkarainen,* Anssi Järvinen, Teemu Lepistö, Niina Kuittinen, Lassi Markkula, Tuukka Ihantola, Mo Yang, Maria-Viola Martikainen, Santtu Mikkonen, Hilkka Timonen, Minna Aurela, Luis Barreira, Mika Ihalainen, Sanna Saarikoski, Topi Rönkkö, Päivi Aakko-Saksa and Pasi Jalava



CNG



emission toxicity

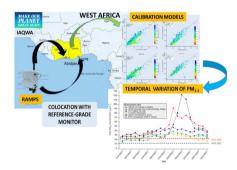
exposure system

 Potential of aromatic free fuels to decrease emissions

468

Temporal variability and regional influences of PM_{2.5} in the West African cities of Abidjan (Côte d'Ivoire) and Accra (Ghana)

Julien Bahino,* Michael Giordano, Matthias Beekmann, Véronique Yoboué, Arsène Ochou, Corinne Galy-Lacaux, Cathy Liousse, Allison Hughes, James Nimo, Farouk Lemmouchi, Juan Cuesta, A. Kofi Amegah and R. Subramanian



488

Performance of machine learning for ozone modeling in Southern California during the COVID-19 shutdown

Khanh Do, Arash Kashfi Yeganeh, Ziqi Gao and Cesunica E. Ivey*

