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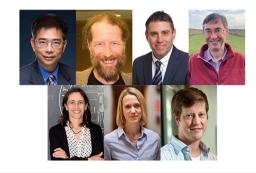


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#### **EDITORIAL**

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

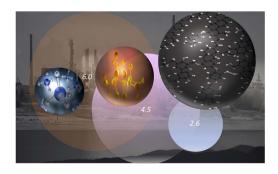
Zongwei Cai, Neil Donahue, Graham Gagnon, Kevin C. Jones, Célia Manaia, Elsie Sunderland and Peter J. Vikesland



#### **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







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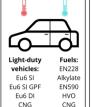
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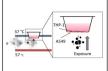
#### **PAPERS**

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#### 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



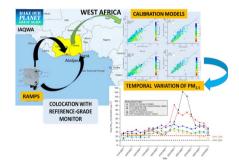


- . In vitro exposures with airliquid interface (ALI) exposure system
- Increase in emissions due to the fuel aromatic content and cold operating temperature
- PM filters efficiently decreased emission toxicity
- Potential of aromatic free fuels to decrease emissions

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#### Temporal variability and regional influences of PM<sub>2.5</sub> 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



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

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