

# Environmental Science: Advances

rsc.li/esadvances

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 2754-7000 CODEN ESANEB 3(10) 1331–1466 (2024)



**Cover**  
See Alex T. Ford *et al.*,  
pp. 1385–1391. Image by  
Andrey Starostin via  
Shutterstock.



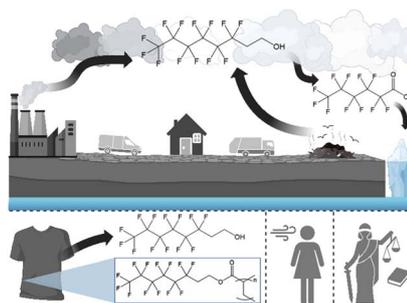
**Inside cover**  
See Ivan A. Titaley,  
pp. 1337–1357. Image  
reproduced by permission of  
Ivan A. Titaley from *Environ.  
Sci.: Adv.*, 2024, 3, 1337.

## PERSPECTIVE

1337

### Chemical transformation, exposure assessment, and policy implications of fluorotelomer alcohol partitioning from consumer products to the indoor and outdoor environment—from production to end-of-life

Ivan A. Titaley\*



## TUTORIAL REVIEW

1358

### Life cycle assessment methods for investigating novel food packaging systems

Ina Bremenkamp and Maria J. Sousa Gallagher\*



# 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)

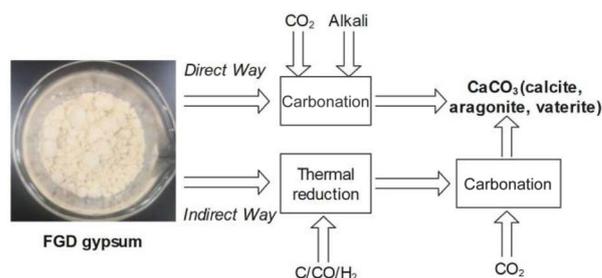


## CRITICAL REVIEW

1372

**A brief review on flue gas desulfurization gypsum recovery toward calcium carbonate preparation**

Wei Xu,\* Chunhong Liu, Kaimin Du, Qiangsheng Gao, Zheming Liu and Weijian Wang



## COMMUNICATION

1385

**Why there is no evidence that pyridine killed the English crabs**

Alex T. Ford,\* Mark F. Fitzsimons and Crispin Halsall

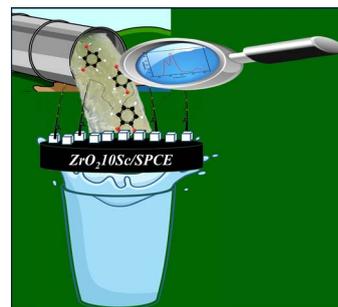


## PAPERS

1392

**Scandia-doped zirconia for the electrochemical detection of hazardous dihydroxybenzene (DHB) isomers in water**

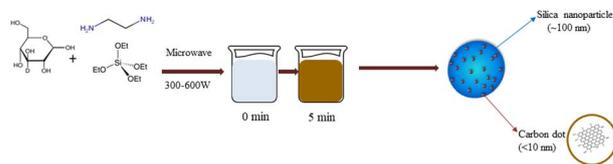
Angelo Ferlazzo,\* Antonino Gulino and Giovanni Neri\*



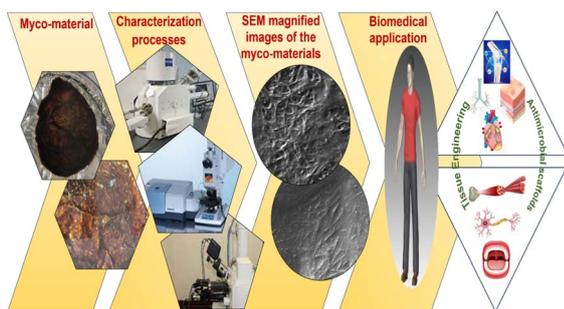
1400

**Fluorescent carbon dot embedded silica nanocomposites as tracers for hydrogeological investigations: a sustainable approach**

Venu Sreekala Smitha,\* Parola Athulya, Kazhuthoottil Kochu Jayasooryan and Thoppil Ramakrishnan Resmi



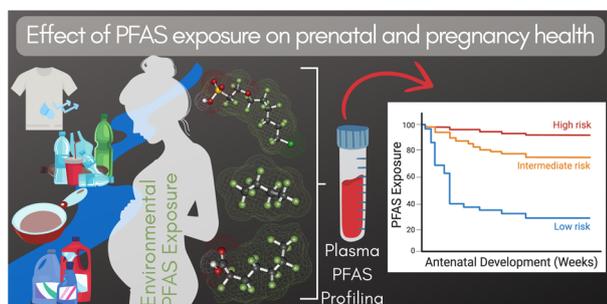
1413



### Investigating *Thermomyces lanuginosus* and *Purpureocillium lilacinum* to produce advanced myco-materials through selective fungal decellularization

Nikita Verma, Satya Eswari Jujjavarapu\* and Chinmaya Mahapatra

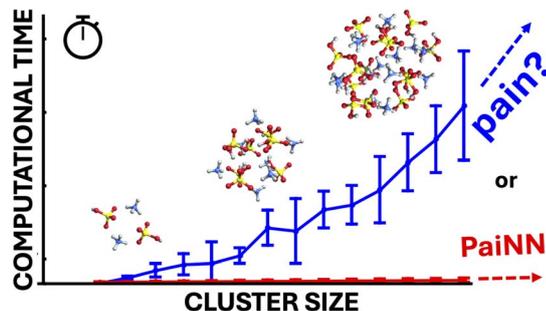
1426



### Pregnancy complications and birth outcomes following low-level exposure to per- and polyfluoroalkyl substances in the vitamin D antenatal asthma reduction trial

Sofina Begum, Nicole Prince, Lidia Mínguez-Alarcón, Yulu Chen, Djøra I. Soeteman, Vrushali Fangal, Mengna Huang, Craig Wheelock, Kevin Mendez, Augusto A. Litonjua, Scott T. Weiss, Jessica Lasky-Su and Rachel S. Kelly\*

1438



### Accurate modeling of the potential energy surface of atmospheric molecular clusters boosted by neural networks

Jakub Kubečka,\* Daniel Ayoubi, Zeyuan Tang, Yosef Knattrup, Morten Engsvang, Haide Wu and Jonas Elm

1452



### The financial market wants to believe in European sustainability. Time trends and persistence analysis of green vs. brown bond yields

Manuel Monge\*

