

# RSC Applied Interfaces

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**Cover**  
See Yoshiyuki Nonoguchi *et al.*,  
pp. 80–85.  
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*RSC Appl. Interfaces*, 2024, 1, 80.



**Inside cover**  
See Rafik Naccache *et al.*,  
pp. 86–97.  
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2024, 1, 86.

## EDITORIAL

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### Introducing *RSC Applied Interfaces*

Federico Rosei

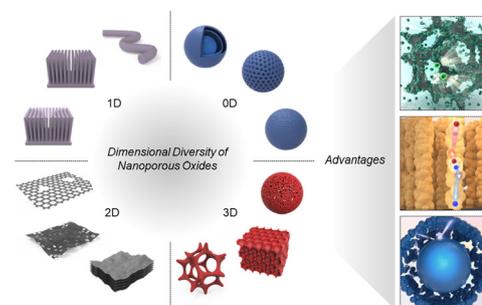


## REVIEWS

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### Nanoporous oxide electrodes for energy conversion and storage devices

Jin Wook Yang, Hee Ryeong Kwon, Jin Ho Seo, Sangwoo Ryu\* and Ho Won Jang\*





# RSC Applied Polymers

GOLD  
OPEN  
ACCESS

## The application of polymers, both natural and synthetic

### Interdisciplinary and open access

[rsc.li/RSCApplPolym](https://rsc.li/RSCApplPolym)

Fundamental questions  
Elemental answers

Registered charity number: 207890

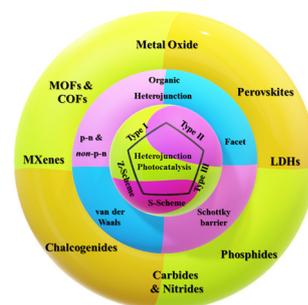


## REVIEWS

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### Recent advances in semiconductor heterojunctions: a detailed review of the fundamentals of photocatalysis, charge transfer mechanism and materials

Aniket Balapure, Jayati Ray Dutta\* and Ramakrishnan Ganesan\*

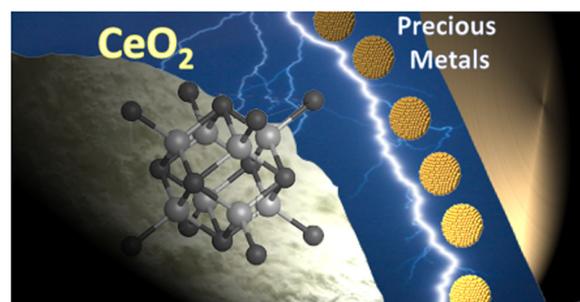


## PERSPECTIVE

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### The role of ceria/precious metal interfaces in catalysis

Michele Melchionna\* and Paolo Fornasiero\*

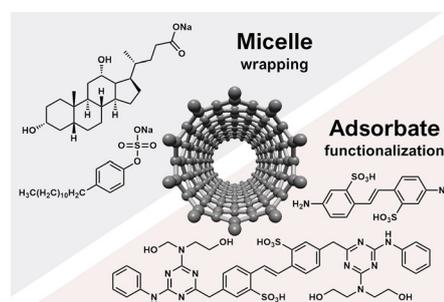


## PAPERS

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### Dye adsorption-assisted colloidal dispersion of single-walled carbon nanotubes in polar solvents

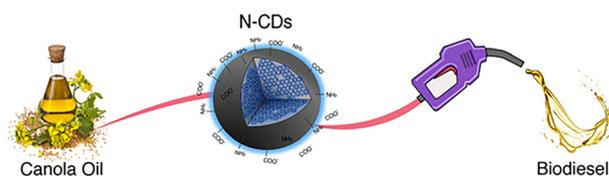
Akiho Horibe, Tomoko Murayama, Tsuyoshi Kawai and Yoshiyuki Nonoguchi\*

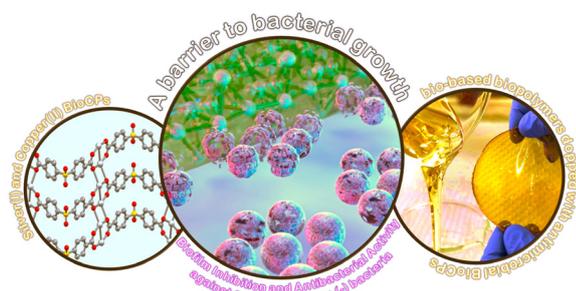


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### Nitrogen-doped carbon dots in transesterification reactions for biodiesel synthesis

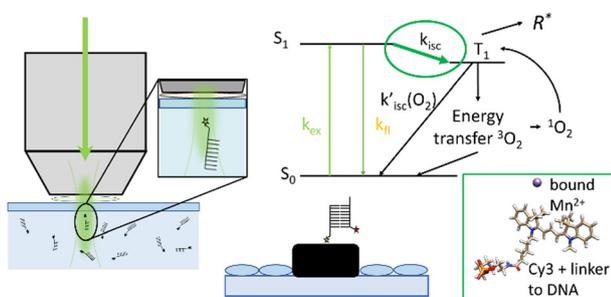
Tayline V. de Medeiros, Alexia Macina, João P. de Mesquita and Rafik Naccache\*





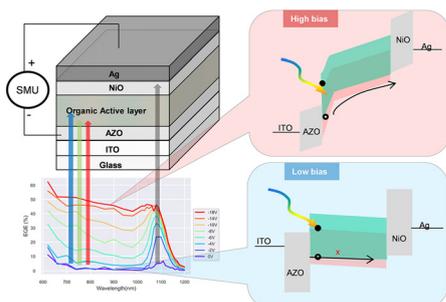
### Sulfonyldibenzoate coordination polymers as bioactive dopants for polysaccharide films with antibacterial and antibiofilm properties

Tiago A. Fernandes, Filipa Macedo, Rafaela G. Cabral, Telma Guiu, Chris H. J. Franco, Paula Jorge, Ana Catarina Sousa, Vânia André, Nuno Cerca\* and Alexander M. Kirillov\*



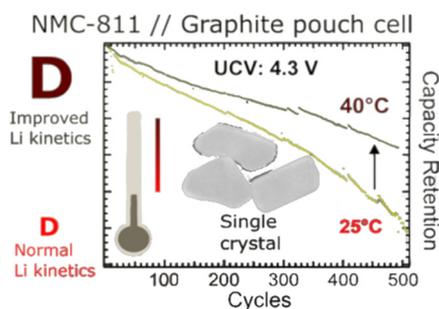
### New buffer systems for photopainting of single biomolecules

Christoph Naderer, Heinrich Krobath, Dmitry Sivun, Georgii Gvindzhiliia, Thomas A. Klar and Jaroslav Jacak\*



### Bias switchable narrowband/broadband NIR organic photodetector fabricated with a scalable technique

Lai-Hung Lai,\* Wei-Hsiang Lin, Chin-Chuan Hsieh and Maria Antonietta Loi



### Understanding improved capacity retention at 4.3 V in modified single crystal Ni-rich NMC//graphite pouch cells at elevated temperature

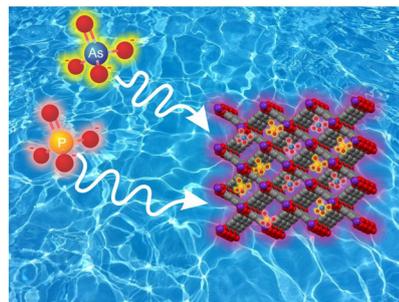
Galo J. Páez Fajardo, Meltiani Belekoukia, Satish Bolloju, Eleni Fiamegkou, Ashok S. Menon, Zachary Ruff, Zonghao Shen, Nickil Shah, Erik Björklund, Mateusz Jan Zuba, Tien-Lin Lee, Pardeep K. Thakur, Robert S. Weatherup, Ainara Aguadero, Melanie J. Loveridge, Clare P. Grey and Louis F. J. Piper\*



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### Al(III)-based MOF for the selective adsorption of phosphate and arsenate from aqueous solutions

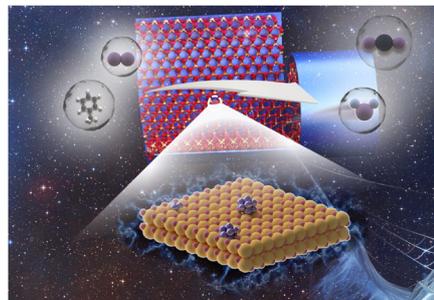
Juan L. Obeso, Herlys Viltres, Catalina V. Flores, Valeria B. López-Cervantes, Camilo Serrano-Fuentes, Amin Reza Rajabzadeh, Seshasai Srinivasan, Ricardo A. Peralta,\* Ilich A. Ibarra\* and Carolina Leyva\*



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### Engineering Pt nanoclusters on CeO<sub>2</sub> surface with abundant point defects by *in situ* confined-domain encapsulation strategy for the catalytic elimination of VOCs

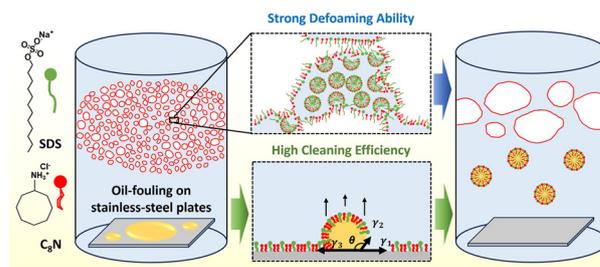
Siyi Ma, Fang Dong, Weiliang Han, Weigao Han and Zhicheng Tang\*



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### Highly efficient oil-fouling and foam removal achieved by surfactant mixed systems

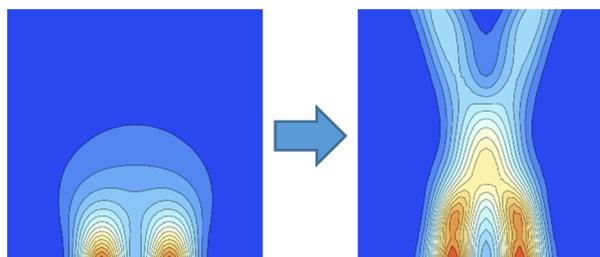
Zeyu Zhao, Tengda Wang, Jiling Yue, Yaxun Fan\* and Yilin Wang\*

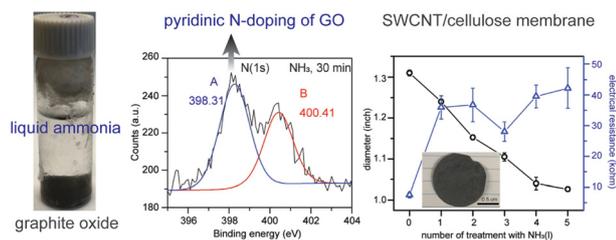


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### Developing 3D computational models to capture the spatial, temporal and thermal behavior as laser beams propagate through photo-thermally responsive gels

Victor V. Yashin, Fariha Mahmood, Kalaichelvi Saravanamuttu and Anna C. Balazs\*





## Interactions between liquid ammonia and graphitic materials

Cheng-Wei Lin, Zhiyin Yang, Ailun Huang, Xueying Chang, Chenxiang Wang, Fan Yang, Chen Wei, Markus Thiel, Yuto Katsuyama, Lihua Jin, David Jassby and Richard B. Kaner\*

