

# RSC Applied Interfaces

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## IN THIS ISSUE

N/A CODEN RAISCD 1(5) 823-1095 (2024)



### Cover

See Ali Koşar, Ali Sadaghiani *et al.*, pp. 896–907.  
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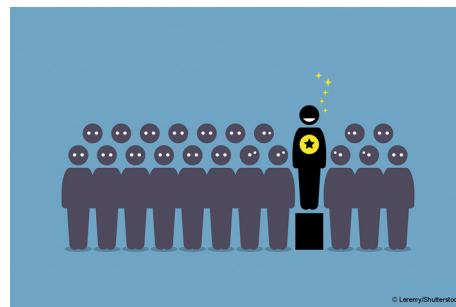
### Inside cover

See Pascal Y. Vuillaume *et al.*, pp. 908–919.  
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## EDITORIAL

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### Outstanding Reviewers for *RSC Applied Interfaces* in 2023

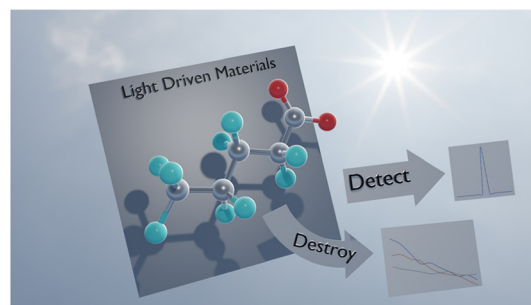


## REVIEWS

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### Light-driven interfaces for PFAS detection and destruction

Frank R. A. Schrama, Scott E. Massimi, Michael R. Dooley, Brian G. Trewyn,\* Shubham Vyas\* and Ryan M. Richards\*





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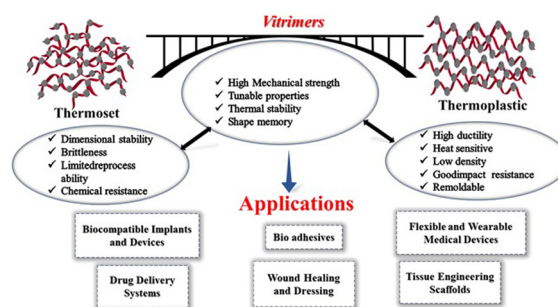


## REVIEWS

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## Synthesis, properties and biomedical perspective on vitrimers – challenges & opportunities

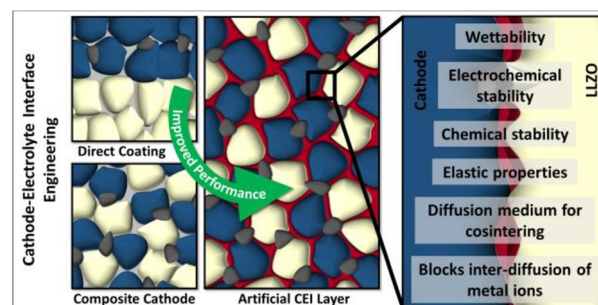
Gagandeep Kaur, Pawan Kumar\* and Christian Sonne



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## In pursuit of all solid state batteries (ASSB): advances at the cathode–electrolyte interface for garnet-based ASSB

Evan Kurian, Jayashree Pitchai, Soundarya Neelanarayanan and K. Ramesha\*



## PAPERS

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## Upcycled graphene nanoplatelets integrated fiber-based Janus membranes for enhanced solar-driven interfacial steam generation

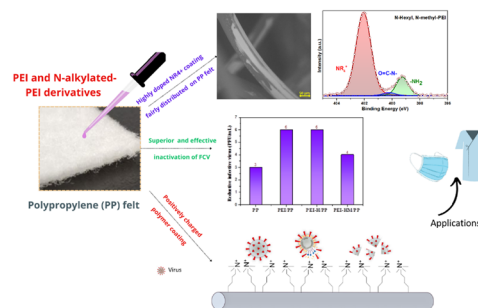
Jalal Karimzadeh Khoei, Mohammad Sajad Sorayani Bafqi, Kuray Dericiler, Omid Doustdar, Burcu Saner Okan, Ali Koşar\* and Ali Sadaghiani\*



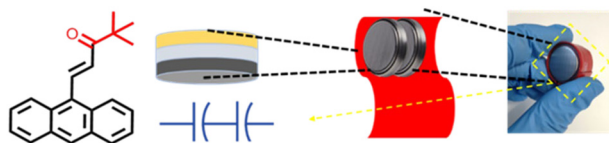
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## Polypropylene fabric coated with branched polyethyleneimine derivatives for high antiviral activity

Lori Leblond, Abdessadk Anagri, Jacques Fiset, Marie-Yolande Borget, Philippe Bébin, Nancy Dumais and Pascal Y. Vuillaume\*



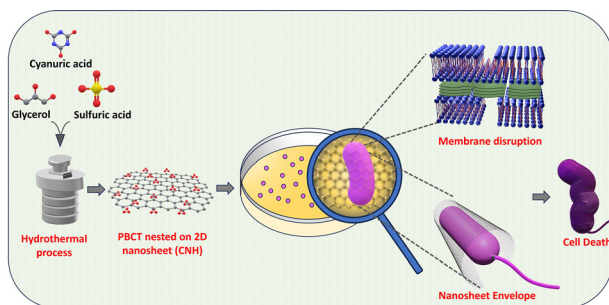
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### High-performance functionalized anthracene organic supercapacitors

Sudipta Biswas, Rajendran Manikandan, Nitzan Shauloff, Shubhra Kanti Bhaumik and Raz Jelinek\*

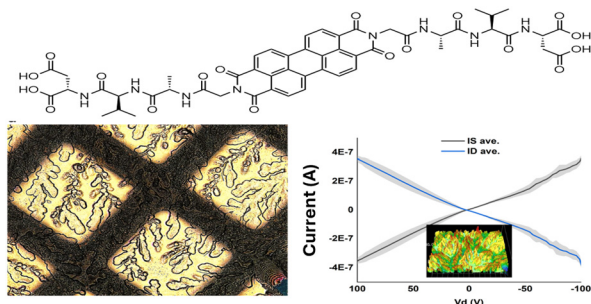
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### Propene-bridged cyanurate tetramers decorated on carbon nanosheets with antibacterial activity: insights from molecular modeling and *in vitro* studies

Omnarayan Agrawal, Hitesh Kumar Sharma, Radhika Chaurasia, Gaganjyot Kaur Bakshi, Aakanksha Agarwal, Mousumi Sen, Praveen Mamidala, R. K. Dey, Mukesh Chourasia\* and Monalisa Mukherjee\*

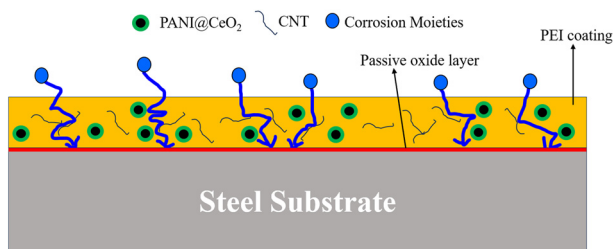
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### Utilizing pi-peptide supramolecular polymers to template growth of hybrid organic-inorganic electronic materials

Grant E. K. Hall, Taein Lee, John D. Tovar and Howard E. Katz\*

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### A 'tortuous path' and 'protective oxide layer' work in tandem in unique corrosion-resistant polyetherimide coatings

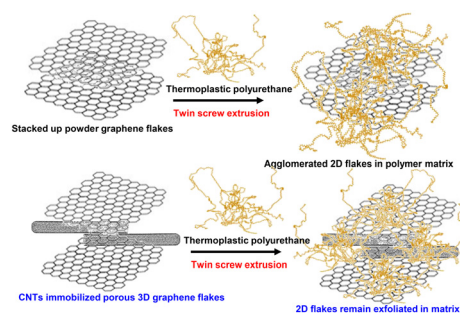
Kuntal Sarkar, Amerjit, Rishi Raj, Tapan Kumar Rout and Suryasarathi Bose\*



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## Mechanistic insight into the role of the aspect ratio of nanofillers in the gas barrier properties of polymer nanocomposite thin films

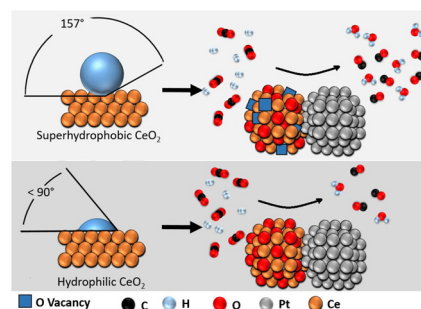
Subhash Mandal, Debmalya Roy,\*  
Kingsuk Mukhopadhyay, Mayank Dwivedi  
and Mangala Joshi\*



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## Engineering Pt–CeO<sub>2</sub> interfaces for reverse water-gas shift (RWGS) reaction

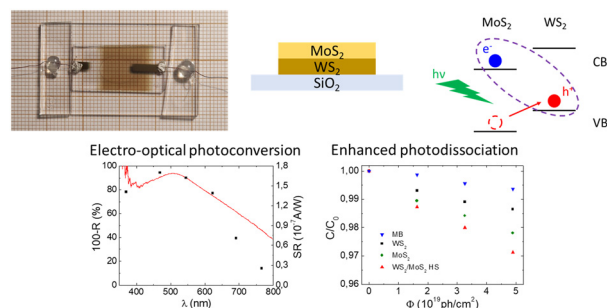
Kauê G. G. dos Santos, Alisson S. Thill, Livia P. Matte,  
Gustavo Z. Giroto, Mateus V. Costa, Denise R. Bohn,  
Fernanda Poletto and Fabiano Bernardi\*



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## Large area van der Waals MoS<sub>2</sub>–WS<sub>2</sub> heterostructures for visible-light energy conversion

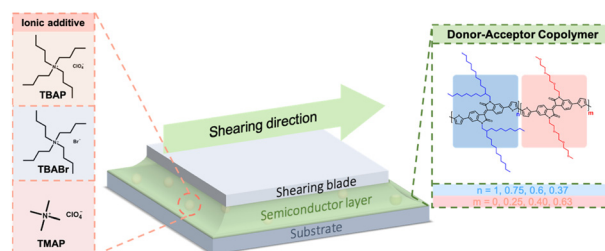
Matteo Gardella, Giorgio Zambito, Giulio Ferrando,  
Francesco Bisio, Maria Caterina Giordano\*  
and Francesco Buatier de Mongeot\*



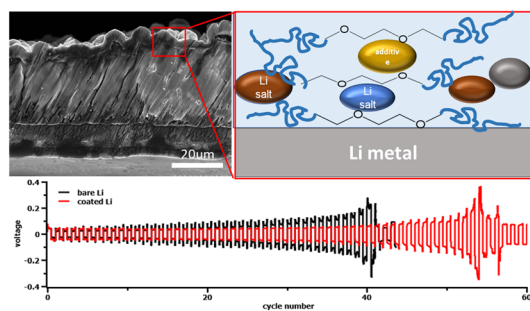
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## Enhancing charge transport in isoindigo-based donor-acceptor copolymers by combining ionic doping with polar alkoxy side chains

Sheng Chuo, Yun-Ching Peng, Thanapon Puangniyom,  
Qun-Gao Chen, Chu-Chen Chueh\* and Wen-Ya Lee\*



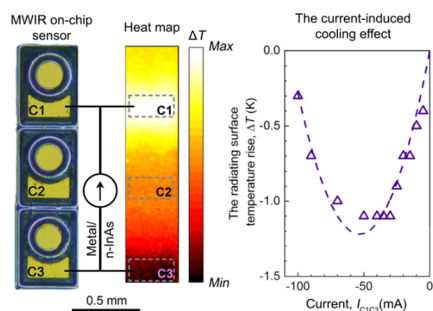
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### Ex situ poly-DOL coatings for lithium metal protection

Yifan Zhao, Sanaz Ketabi,\* Manuela Ferreira, Xingcheng Xiao, Fang Dai and Mei Cai

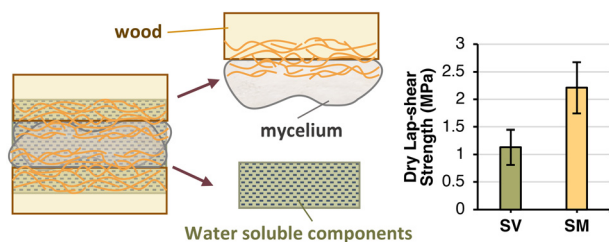
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### Current induced cooling in a metal/n-InAs structure

N. D. Il'inskaya, S. A. Karandashev, T. S. Lukhmyrina, B. A. Matveev,\* M. A. Remennyi and A. E. Chernyakov

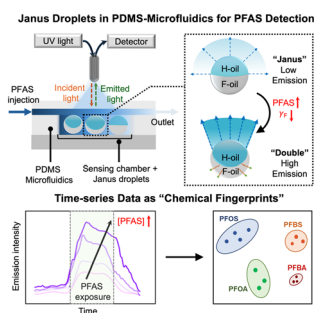
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### A closer examination of white-rot fungal mycelia assisted wood bonding

Wenjing Sun,\* Islam Hafez, Barbara J. W. Cole and Mehdi Tajvidi

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### Real-time detection and classification of PFAS using dynamic behaviors at liquid-liquid interfaces

Baishali Barua, Laura K. Dunham, Aakanksha Gadh and Suchol Savagatrup\*

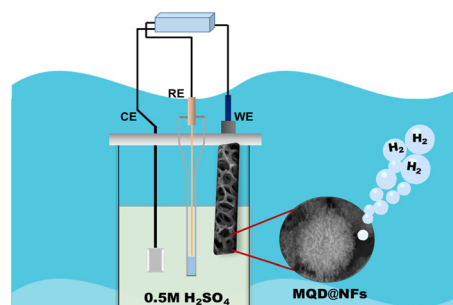


## PAPERS

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### MoS<sub>2</sub> quantum dot-modified MXene nanoflowers for efficient electrocatalytic hydrogen evolution reaction

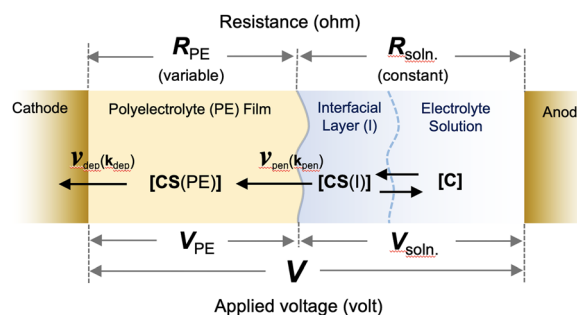
Savan K. Raj, Vartika Sharma, Shubham Mishra and Vaibhav Kulshrestha\*



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### Interfacial analysis of the ion-transport process controlling the steady-state current in a two-phase electrodeposition system using polyelectrolyte membranes

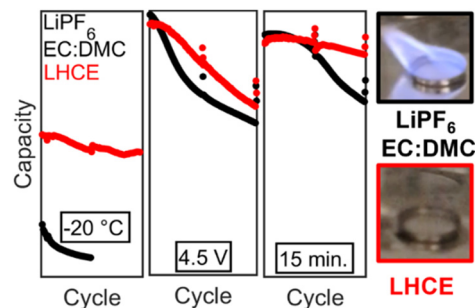
Shunsuke Yamada, Yohei Takashima, Takaaki Tsuruoka and Kensuke Akamatsu\*



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### Lithium-ion battery functionality over broad operating conditions via local high concentration fluorinated ester electrolytes

Calvin D. Quilty, Edelmy J. Marin Bernardez, Andrew Nicoll, MD Jamil Hossain, Arun Kingan, David J. Arnot, Hafsa A. Mohamed, Ciara L. O'Connor, Xiao Tong, Chernoo Jaye, Daniel A. Fischer, Lei Wang, Yue Qi, Esther S. Takeuchi, Amy C. Marschilok, Shan Yan, David C. Bock\* and Kenneth J. Takeuchi\*



## CORRECTION

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### Correction: Polyvinylpyrrolidone-mediated synthesis of ultra-stable gold nanoparticles in a nonaqueous choline chloride-urea deep eutectic solvent

Raúl Ortega-Córdova, Kaori Sánchez-Carrillo, Saúl Carrasco-Saavedra, Gonzalo Ramírez-García, María G. Pérez-García, J. Félix Armando Soltero-Martínez and Josué D. Mota-Morales\*

