

# RSC Applied Interfaces

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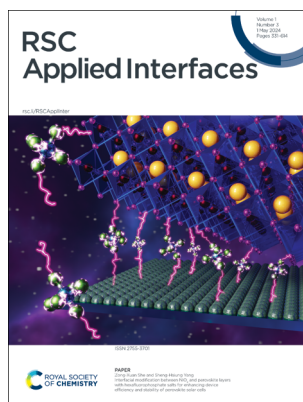
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## IN THIS ISSUE

N/A CODEN RAISCD 1(3) 331–614 (2024)



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2024, 1, 435.



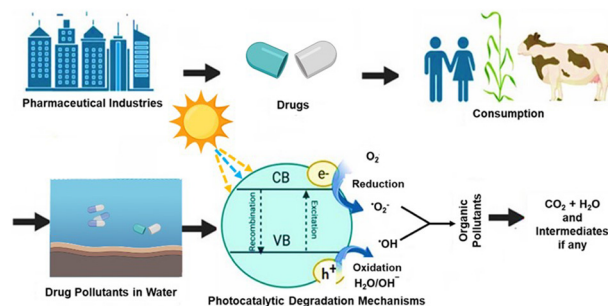
**Inside cover**  
See Zong-Xuan She and  
Sheng-Hsiung Yang,  
pp. 443–454.  
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*RSC Appl. Interfaces*,  
2024, 1, 443.

## REVIEW

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### Recent advances in removal of pharmaceutical pollutants in wastewater using metal oxides and carbonaceous materials as photocatalysts: a review

Suneel Kumar Srivastava\*

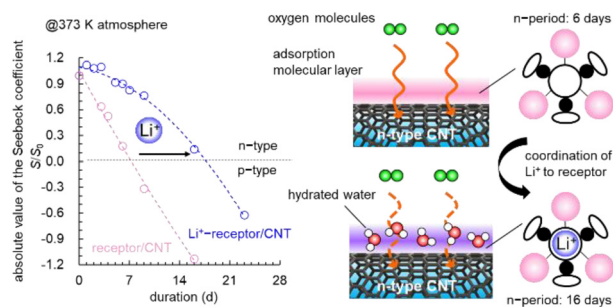


## COMMUNICATION

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### Prolonging the n-type conduction of thermoelectric carbon nanotubes exposed to warm air by mixing hydrated water into the adsorbed dopant layers composed of Li<sup>+</sup>-receptor molecules

Shinichi Hata,\* Chika Nakagawa, Ayako Taketoshi,  
Toru Murayama, Tamao Ishida, Yukou Du,  
Yukihide Shiraishi\* and Naoki Toshima



# RSC Sustainability

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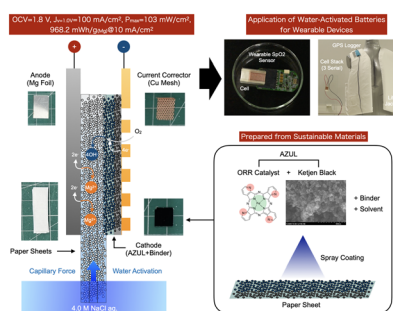
Fundamental questions  
Elemental answers



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### Rare-metal-free high-performance water-activated paper battery: a disposable energy source for wearable sensing devices

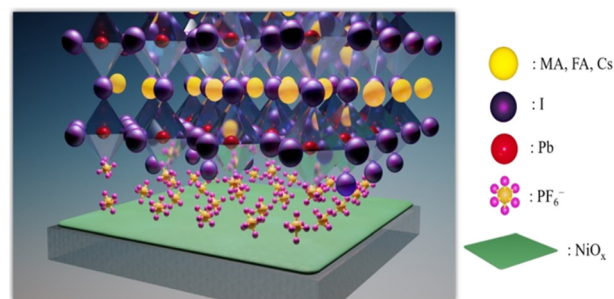
Kosuke Ishibashi, Shimpei Ono, Jun Kamei, Koju Ito and Hiroshi Yabu\*



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### Interfacial modification between $\text{NiO}_x$ and perovskite layers with hexafluorophosphate salts for enhancing device efficiency and stability of perovskite solar cells

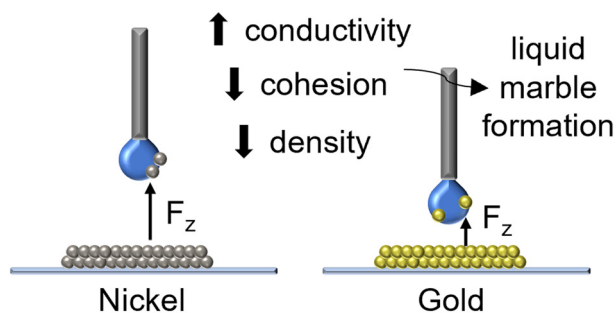
Zong-Xuan She and Sheng-Hsiung Yang\*



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### Impact of high conductivity on particle transport to liquid droplets for liquid marble formation

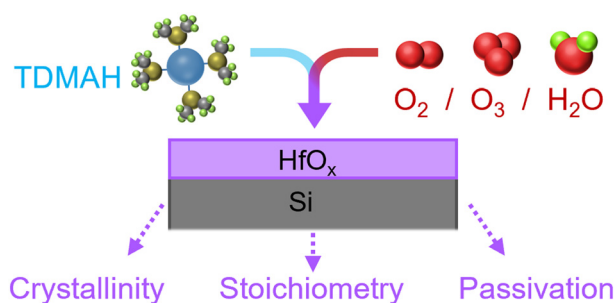
Casey A. Thomas,\* Benjamin T. Lobel, Peter M. Ireland, Erica J. Wanless, Olivier J. Cayre and Grant B. Webber



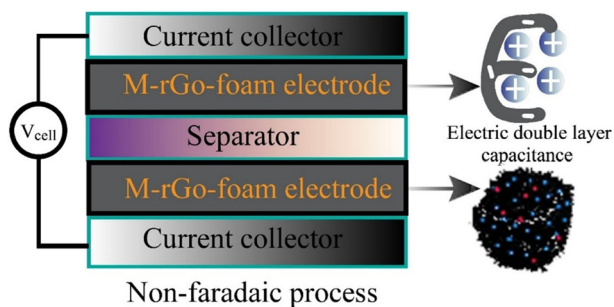
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### Influence of co-reactants on surface passivation by nanoscale hafnium oxide layers grown by atomic layer deposition on silicon

Sophie L. Pain,\* Edris Khorani, Anup Yadav, Tim Niewelt, Antonio Leimenstoll, Brendan F. M. Healy, Marc Walker, David Walker, Nicholas E. Grant and John D. Murphy



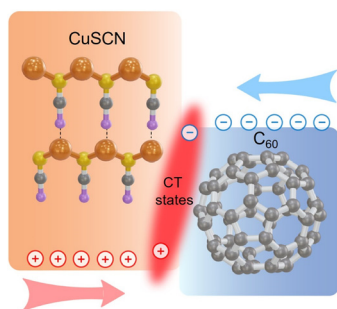
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### A metallated graphene oxide foam with a carbon nanotube shell for an enhanced capacitance device

Rahul Patil, Lingaraj Pradhan, Babasahab M. Matsagar, Rahul R. Salunkhe, Kevin C.-W. Wu, Bikash Kumar Jena\* and Saikat Dutta\*

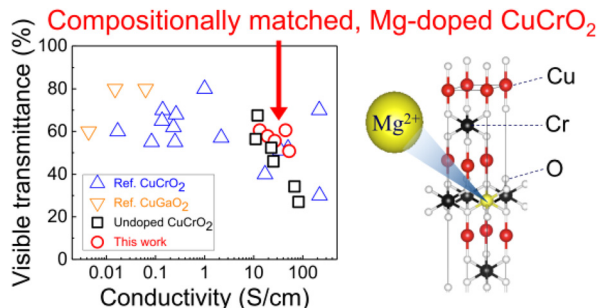
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### Solution treatment controls charge-transfer states and energy-level alignment at hybrid CuSCN-organic interfaces

Yingying Li, Zhewei Chen, Wenjie Zhou, Qi Wang, Yuan Zhang, Tao Song,\* Baoquan Sun\* and Steffen Duhm\*

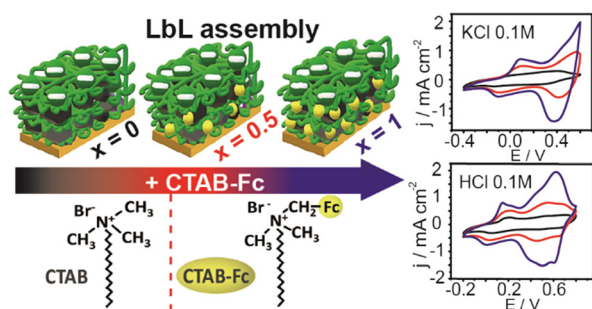
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### Improved transparency and conductivity in copper chromium oxide coatings through aliovalent doping and stoichiometry control

Jaewon Kim,\* Owen Kendall, Triet Thien Huu Nguyen, Joel van Embden and Enrico Della Gaspera\*

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### Ferrocene-labelled surfactants enhance the supercapacitor performance in PANI-PSS/nanocarbon layer-by-layer nanoarchitectonics electrodes

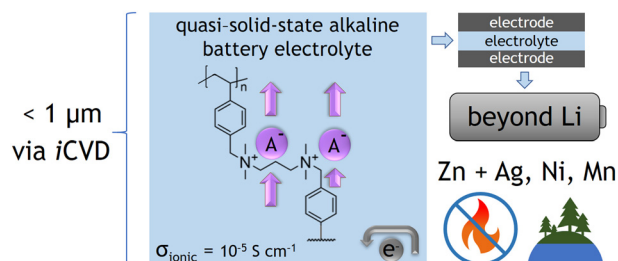
Ana Paula Mártire, Gonzalo E. Fenoy, Omar Azzaroni, Matías Rafti and Waldemar A. Marmisollé\*



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### Submicron-thick single anion-conducting polymer electrolytes

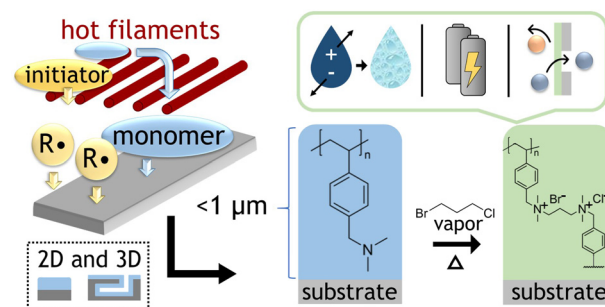
Hunter O. Ford, Brian L. Chaloux, Youngchan Kim, Jeffrey W. Long, Debra R. Rolison\* and Megan B. Sassin\*



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### Non-line-of-sight synthesis and characterization of a conformal submicron-thick cationic polymer deposited on 2D and 3D substrates

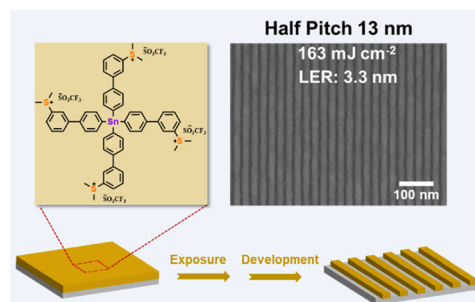
Hunter O. Ford, Brian L. Chaloux, Battogtokh Jugdersuren, Xiao Liu, Christopher A. Klug, Joel B. Miller, Xiaobing Zuo, Michael W. Swift, Michelle D. Johannes, Jeffrey W. Long, Debra R. Rolison\* and Megan B. Sassin\*



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### A novel water developable tetraphenyltin-based nonchemically-amplified molecular resist for sub-13 nm lithography

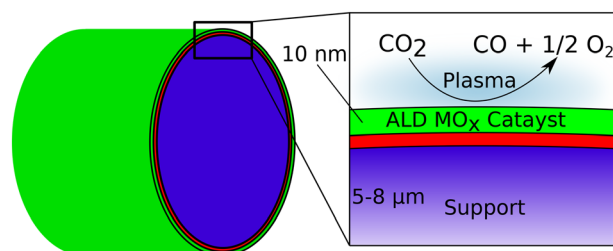
Zhihao Wang, Jinping Chen,\* Tianjun Yu, Yi Zeng, Xudong Guo, Shuangqing Wang, Rui Hu, Peng Tian, Michaela Vockenhuber, Dimitrios Kazazis, Yasin Ekinci,\* Guoqiang Yang\* and Yi Li\*



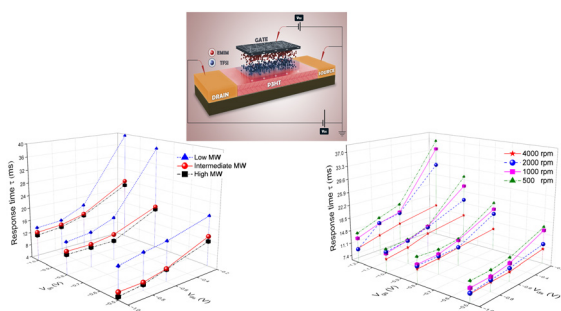
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### Characterizing catalyst function and transformations in the plasma reduction of CO<sub>2</sub> on atomic layer deposition-synthesized catalysts

Samuel K. Conlin, Hamed Mehrabi, David N. Parette, Eva M. Nichols and Robert H. Coridan\*



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### Exploring response time and synaptic plasticity in P3HT ion-gated transistors for neuromorphic computing: impact of P3HT molecular weight and film thickness

Ramin Karimi Azari,\* Zhaojing Gao, Alexandre Carrière and Clara Santato\*

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### SARS-CoV-2 inactivation: assessing the efficacy of GO-anchored filters *versus* various commercial masks

Md. Saidul Islam, Nurun Nahar Rabin, Mst Monira Begum, Nonoka Goto, Ryuta Tagawa, Mami Nagashima, Kenji Sadamasu, Kazuhisa Yoshimura, Junko Matsuda, Yoshihiro Sekine, Terumasa Ikeda\* and Shinya Hayami\*

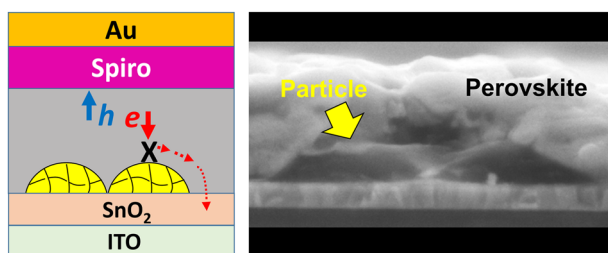
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### Green synthesis of a disordered N-doped carbonaceous aerogel from waste for the removal of over-the-counter drugs and environmental assessment

Himanshu Asati, Raka Mondal and Kumud Malika Tripathi\*

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### The effects of selectively blocking the electron transport layer of n-i-p perovskite solar cells with polymer particles on device performance

Amal Altujjar,\* Ran Wang, Xuelian Wang, Jennifer M. Saunders, Zhenyu Jia, Ben Spencer, Nigel Hodson, Janet Jacobs, Osama M. Alkudhari, Andrew Thomas, Richard Curry and Brian R. Saunders\*



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

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

