

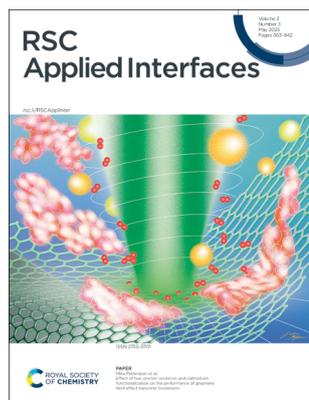
# RSC Applied Interfaces

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## IN THIS ISSUE

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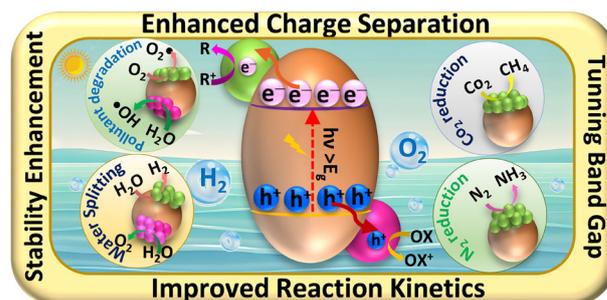
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See Mika Pettersson *et al.*,  
pp. 638–647.  
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*RSC Appl. Interfaces*,  
2025, 2, 638.

## REVIEW

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### Charge carrier dynamics in semiconductor–cocatalyst interfaces: influence on photocatalytic activities

Dipendu Sarkar, Jishu Pramanik, Soumita Samajdar, Maitrayee Biswas and Srabanti Ghosh\*

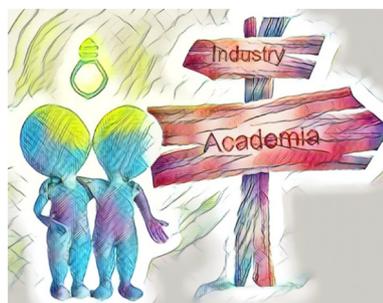


## PERSPECTIVES

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### Heterojunction photocatalysts: where are they headed?

Hanggara Sudrajat\* and Maya Nobatova\*





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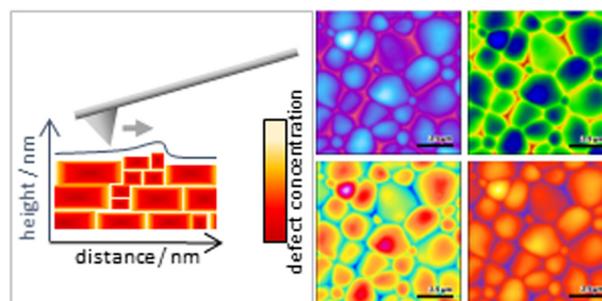


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### Promoting combined AFM-electrochemistry techniques for analysis of charge transport at grain boundaries of ceramic components in electrochemical cells

K. Neuhaus,\* P. Mowe and M. Winter

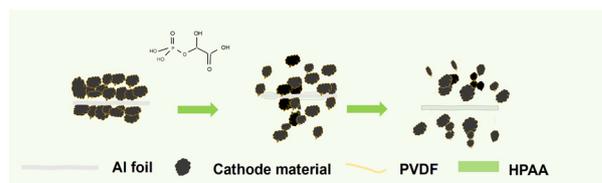


## COMMUNICATION

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### Reaction-passivation-driven delamination of spent $\text{LiFePO}_4$ cathodes and their upgrading to highly efficient catalysts for hydrogen evolution

Jia Yi, Jinsong Hu,\* Cheng Gong, Qilong Liu and Wentuan Bi\*

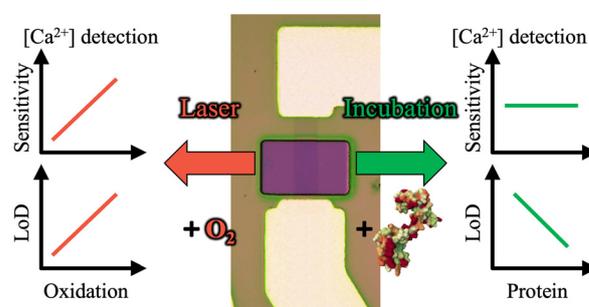


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### Effect of two-photon oxidation and calmodulin functionalization on the performance of graphene field-effect transistor biosensors

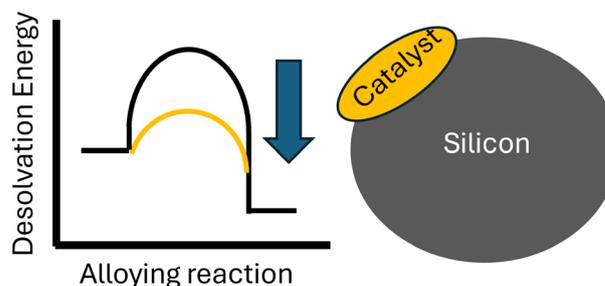
Aku Lampinen, Aleksei Emelianov, Erich See, Andreas Johansson and Mika Pettersson\*



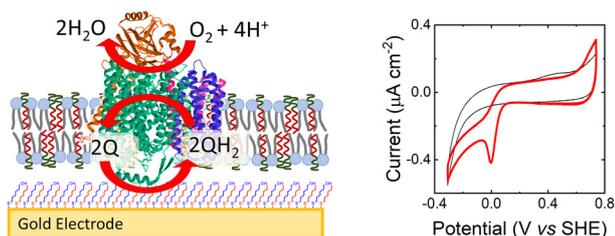
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### Metal decoration of Si particles *via* high-energy milling for lithium-ion battery anodes

Khrysllyn G. Araño,\* Beth L. Armstrong, Robert L. Sacci, Matthew S. Chambers, Chun-Sheng Jiang, Joseph Quinn, Harry M. Meyer III, Anton W. Tomich, Amanda Musgrove, Steven Lam, Elena Toups, Chongmin Wang, Christopher S. Johnson and Gabriel M. Veith\*



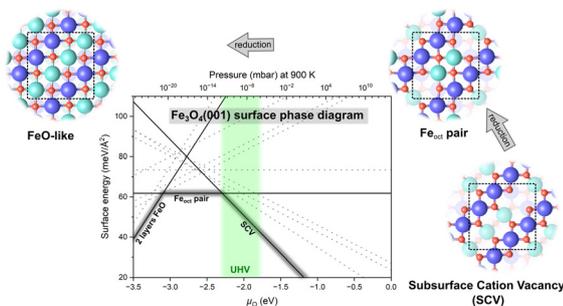
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### Solid-supported polymer–lipid hybrid membrane for bioelectrochemistry of a membrane redox enzyme

Rosa Catania, George R. Heath, Michael Rappolt, Stephen P. Muench, Paul A. Beales\* and Lars J. C. Jeuken\*

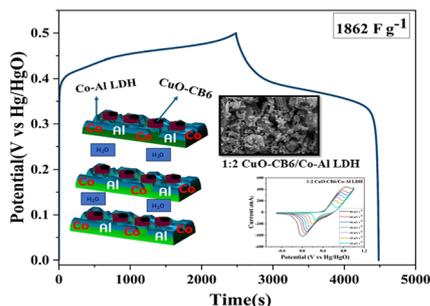
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### The surface phase diagram of Fe<sub>3</sub>O<sub>4</sub>(001) revisited

Panukorn Sombut, Matthias Meier, Moritz Eder, Thomas Angerler, Oscar Gamba, Michael Schmid, Ulrike Diebold, Cesare Franchini and Gareth S. Parkinson\*

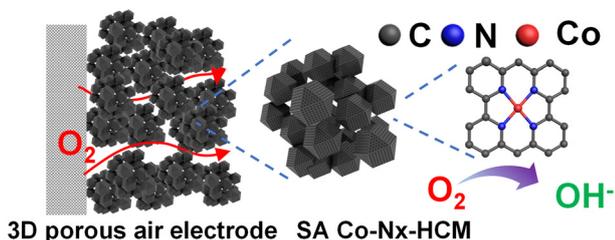
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### High-efficiency CuO-CB6/Co–Al LDH nanocomposite electrode for next-generation energy storage

Anakha D. R., Ashika K. M., Vyshnavi T. V., M. Ananthkumar and R. Yamuna\*

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### Densely atomic Co–Nx moiety-coupled hierarchical-carbon-microspheres for efficient oxygen electrodes in bioadaptable Mg–air batteries

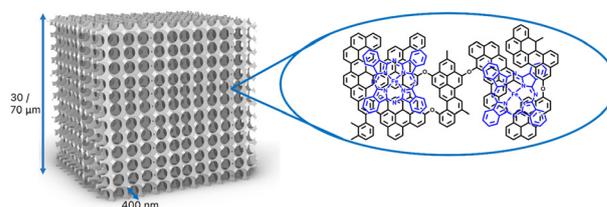
Yanru Liu, Taiqiang Dai, Jia Wang, Lirong Zheng and Xiaogang Fu\*



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## Engineering macroporous carbon film supports for freestanding Fe–N–C cathodes at high current densities

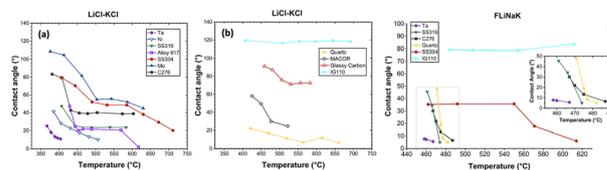
Simon Kellner, Mengnan Wang,\* Ying Wang, Jesús Barrio, Guangmeimei Yang, Jingyu Feng, Sandrine E. M. Heutz, Ifan E. L. Stephens and Maria-Magdalena Titirici\*



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## Wettability studies of LiCl–KCl and FLiNaK on metal and non-metal substrates

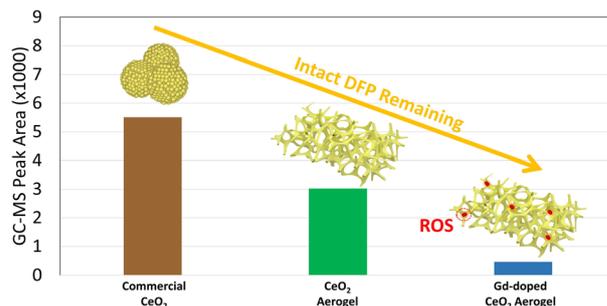
Qiufeng Yang,\* Michael E. Woods and Ruchi Gakhar\*



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## Degradation of chemical warfare simulants over CeO<sub>2</sub> and Gd-doped CeO<sub>2</sub> aerogels: divergent results of DMMP and DFP

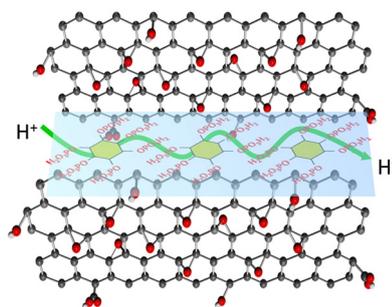
Travis G. Novak,\* Janna Domenico, Alex Balboa, Wesley O. Gordon, Austin E. Herzog, Nam Q. Le, Evan R. Glaser, Paul A. DeSario and Debra R. Rolison



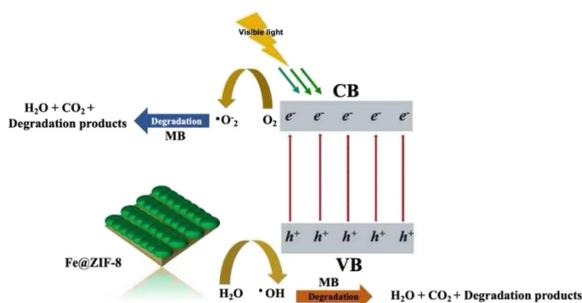
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## Enhanced proton conductivity from phytic acid-intercalated three-dimensional graphene oxide

Shakiba Salehpour, Lutfia Isna Ardhayanti, Yoshiharu Hidaka, Xinyao Liu, Tatsuki Tsugawa, Kazuto Hatakeyama, Md. Saidul Islam,\* Yoshihiro Sekine, Shintaro Ida and Shinya Hayami\*



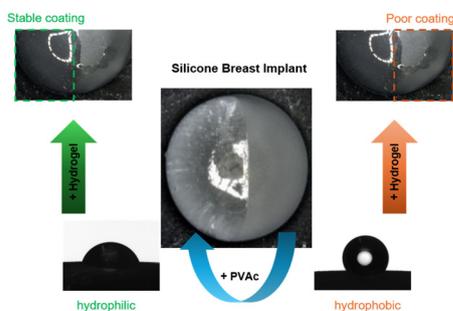
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### *In situ* thermal solvent-free synthesis of doped ZIF-8 as a highly efficient visible-light-driven photocatalyst

Farah Naz, Chun Hong Mak, Zhe Wang, Haihang Tong, Shella Permatasari Santoso,\* Minshu Du, Ji-Jung Kai, Kuan-Chen Cheng, Chang-Wei Hsieh, Wenxin Niu, Zheng Hu and Hsien-Yi Hsu\*

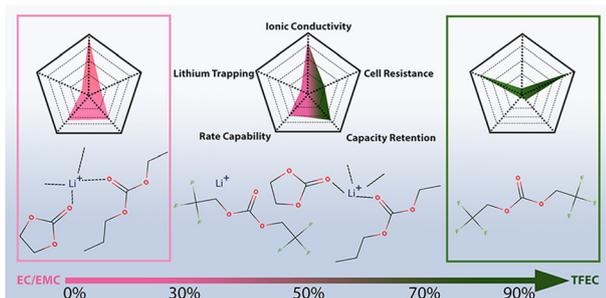
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### Enabling hydrogel coating on silicone breast implants with a poly(vinyl acetate) primer layer

Katrin Stanger, Dardan Bajrami, Peter Wahl, Fintan Moriarty, Emanuel Gautier, Alex Dommann and Kongchang Wei\*

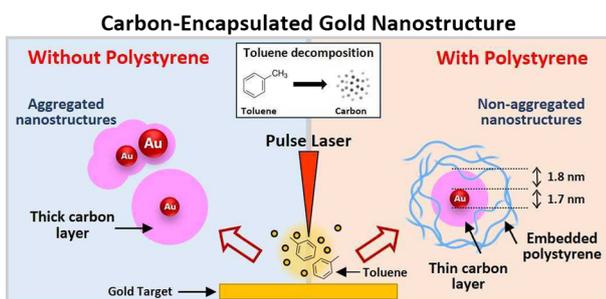
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### Influence of bis(2,2,2-trifluoroethyl) carbonate flame retarding co-solvent on interfacial chemistry in carbonate ester lithium-ion battery electrolytes

Mohammad Baghban Shemirani, Florian Gebert and Andrew J. Naylor\*

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### Tailoring carbon-encapsulated gold nanoclusters via microchip laser ablation in polystyrene solution: controlling size, structure, and photoluminescent properties

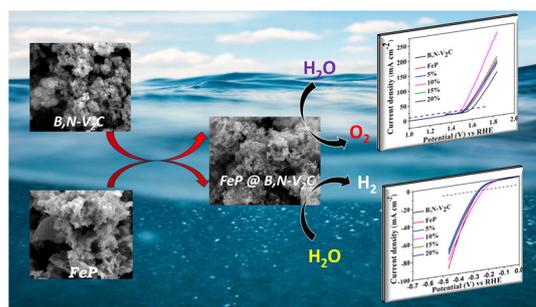
Barana Sandakelum Hettiarachchi, Yumi Yakiyama\* and Hidehiro Sakurai\*



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### B,N co-doped V<sub>2</sub>C nanoparticle embedded FeP nanoflake substrates as unique bifunctional electrocatalysts for overall water splitting in alkaline media

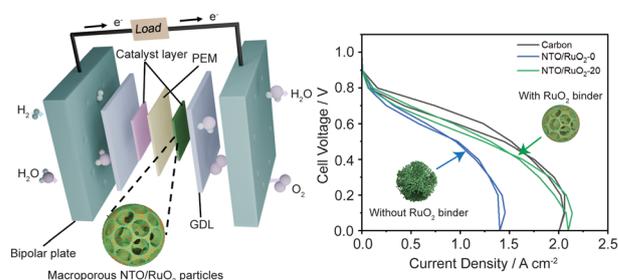
Dasari Sai Hemanth Kumar, Manzoor Ahmad Pandit, Vinay Kumar Kolakaluri and Krishnamurthi Muralidharan\*



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### Conductive RuO<sub>2</sub> binders enhance mechanical stability of macroporous Nb-SnO<sub>2</sub> particles as cathode catalyst supports for high-performance PEFCs

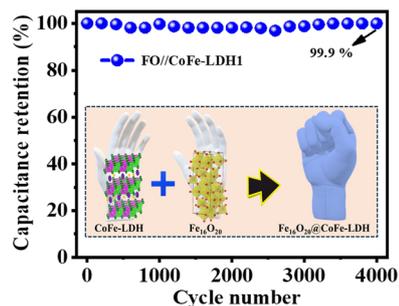
Thi Thanh Nguyen Ho, Tomoyuki Hirano,\* Aoi Takano, Syu Miyasaka, Eishi Tanabe, Makoto Maeda, Eka Lutfi Septiani, Kiet Le Anh Cao and Takashi Ogi\*



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### Iron oxide@CoFe-LDH nanocomposites for highly stable aqueous hybrid supercapacitors

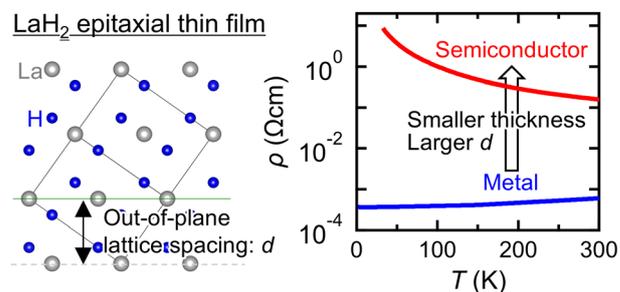
Harishchandra S. Nishad, Sagar M. Mane, Jaewoong Lee and Pravin S. Walke\*



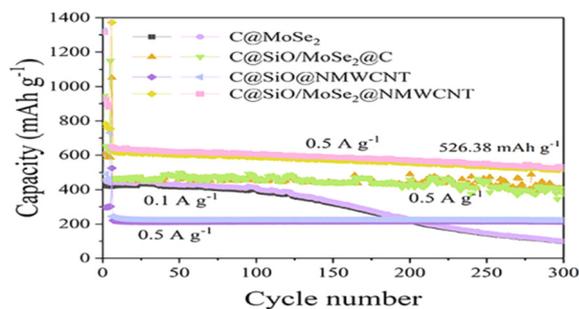
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### Thickness-induced metal-semiconductor transition in LaH<sub>2</sub> epitaxial thin films grown by reactive rf magnetron sputtering

Sumireno Uramoto, Hideyuki Kawasoko,\* Satoru Miyazaki and Tomoteru Fukumura



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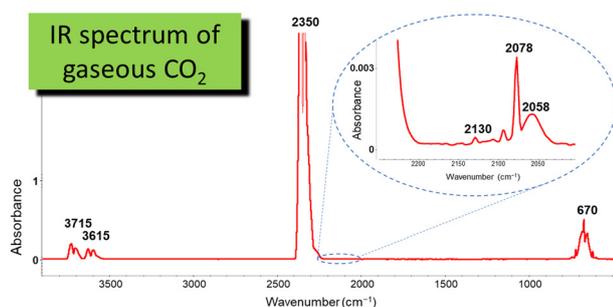


### Strongly coupled C@SiO<sub>x</sub>/MoSe<sub>2</sub>@NMWCNT heterostructures as anodes for Na<sup>+</sup> batteries with excellent stability and capacity

Mengru Bian, Yincai Yang, Youwen Chen,\* Tiantian Wei, Wei Deng,\* Biao Fu and Renhua Qiu\*

## COMMENTS

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### Comment on the “Reaction intermediates recognized by *in situ* FTIR spectroscopy in CO<sub>2</sub> hydrogenation over the Cu/ZnO/SPP-zeolite catalyst” by X. Liu *et al.*, *RSC Appl. Interfaces*, 2025, **2**, 114

Frederic C. Meunier

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### Reply to the ‘Comment on the “Reaction intermediates recognized by *in situ* FTIR spectroscopy in CO<sub>2</sub> hydrogenation over the Cu/ZnO/SPP-zeolite catalyst” by Comment author F. C. Meunier, *RSC Appl. Interfaces*, 2025, **2**, <https://doi.org/10.1039/D5LF00014A>

Xiaobo Yang, Xiaolong Liu, Guangying Fu,\* Qiaolin Lang, Ruiqin Ding, Qiangsheng Guo, Ke Liang, Shuman Gao and Bing Yu\*

