

# Materials Advances

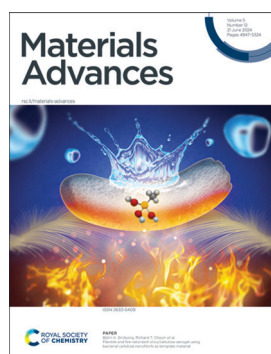
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See Björn K. Birdsong, Richard T. Olsson *et al.*, pp. 5041–5051. Image reproduced by permission of Richard T. Olsson from *Mater. Adv.*, 2024, 5, 5041.



### Inside cover

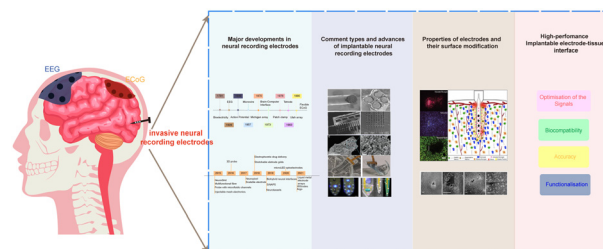
See Alireza Mashaghi *et al.*, pp. 5025–5035. Image reproduced by permission of Tom Evers and Alireza Mashaghi from *Mater. Adv.*, 2024, 5, 5025.

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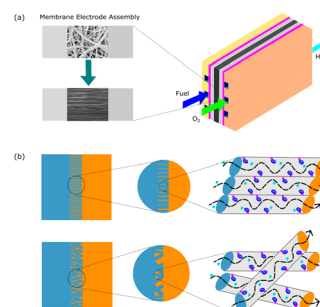
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Muhammad Yusro\* and Viktor Hacker



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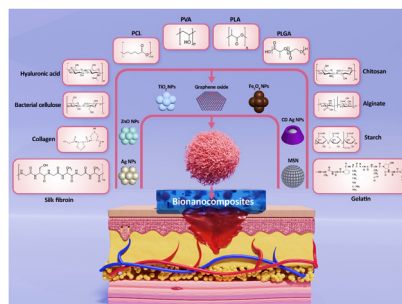


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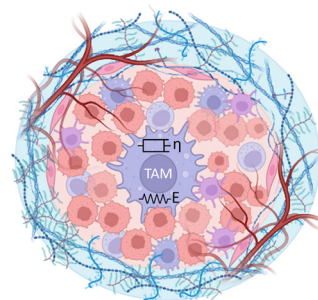


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Tom M.J. Evers, Antoinette van Weverwijk, Karin E. de Visser and Alireza Mashaghi\*

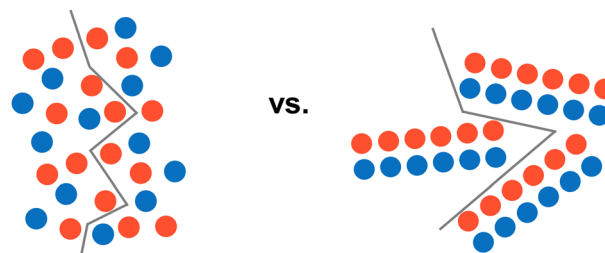


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Hoang Nguyen\* and Paivo Kinnunen

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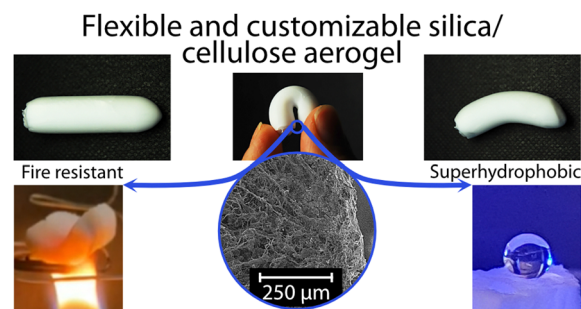


## PAPERS

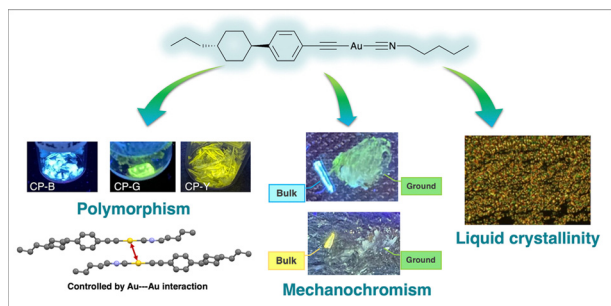
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### Flexible and fire-retardant silica/cellulose aerogel using bacterial cellulose nanofibrils as template material

Björn K. Birdsong\*, Qiong Wu, Mikael S. Hedenqvist, Antonio J. Capezza, Richard L. Andersson, Anna J. Svagan, Oisik Das, Rhoda Afriyie Mensah and Richard T. Olsson\*



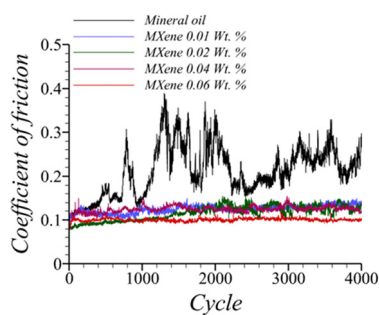
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Andriani Furoida, Misato Daitani, Kohsuke Matsumoto, Kyohei Hisano and Osamu Tsutsumi\*

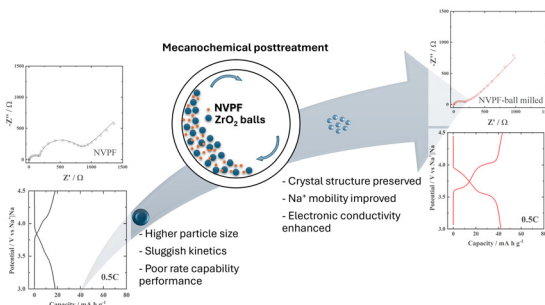
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Mohsen Tajedini, Kailash Arole, Zahra Ghasemi, Rouzhina Azhdari, Micah J. Green and Hong Liang\*

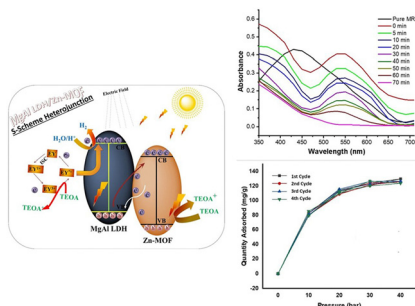
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William G. Morais,\* Eduardo C Melo and Roberto M. Torresi\*

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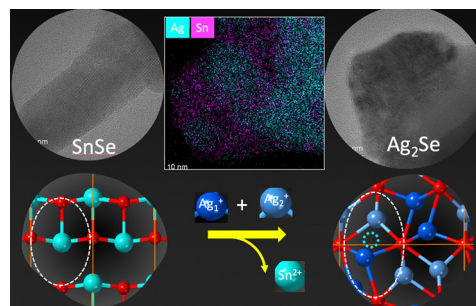
Ihsan Maseeh, Farheen Anwar, Sadia Aroob, Tariq Javed, Ismat Bibi, Afaf Almasoudi, Ahmad Raheel, Muhammad Arshad Javid, Sónia A. C. Carabineiro and Muhammad Babar Taj\*



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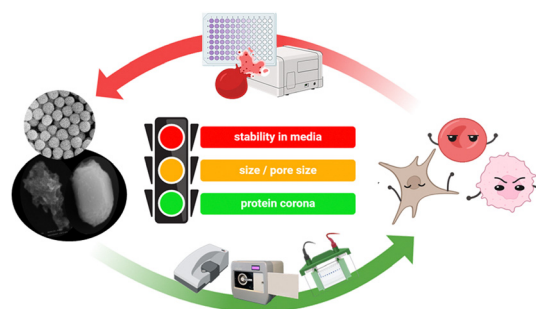
Yiqiao Huang and Pierre F. P. Poudeu\*



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## Understanding the impact of silica nanoparticles in cancer cells through physicochemical and biomolecular characterizations

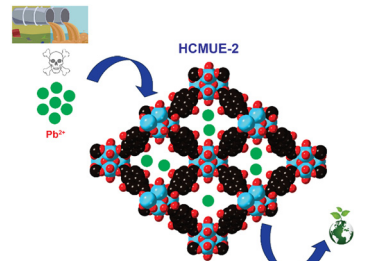
Asia Saorin, Alberto Martinez-Serra, Germán Jose Paporoni-Bruzual, Michele Crozzolin, Vincenzo Lombardi, Michele Back, Pietro Riello, Marco P. Monopoli and Flavio Rizzolio\*



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## Engineering of efficient functionalization in a zirconium-hydroxyl-based metal-organic framework for an ultra-high adsorption of Pb<sup>2+</sup> ions from an aqueous medium: an elucidated uptake mechanism

Hang M. N. Pham, Anh V. N. Phan, Anh N. T. Phan, Vi P. Nguyen, Khang M. V. Nguyen, Hung N. Nguyen, Thai M. Nguyen and My V. Nguyen\*

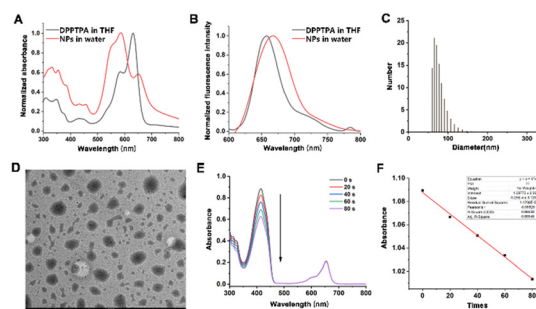


An ultra-high adsorption capacity of Pb<sup>2+</sup> from an aqueous medium  
( $q_m = 1115.9 \text{ mg g}^{-1}$ )

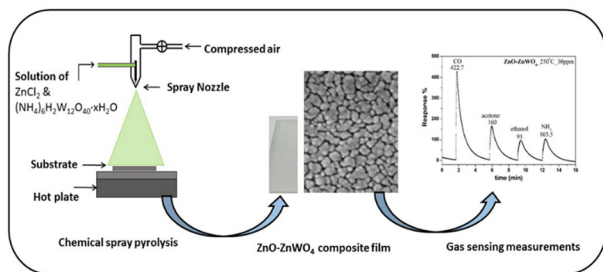
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## A triphenylamine functionalized photosensitizer as a promising candidate for osteosarcoma cancer phototheranostics

Chongchong Yin, Xiaowen Bao, Jiaqi Li, Jianwei Zhu and Jisheng Sui\*



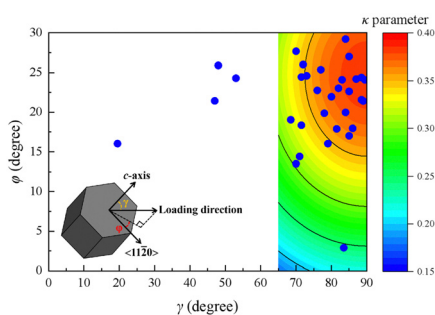
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Mohamed H. Sayed, Tina Dilova, Genoveva Atanasova, Georgi Avdeev, Mostafa Boshta, Anna Og. Dikovska and Mohammed M. Gomaa\*

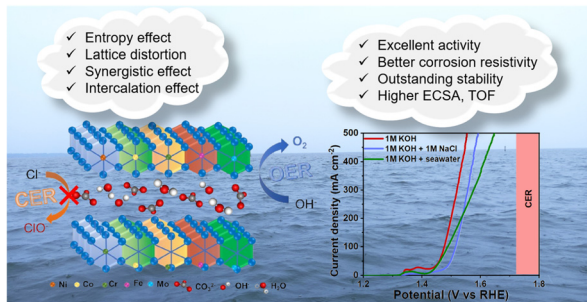
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### $\langle 11\bar{2}0 \rangle$ -orientation-dependent crack initiation in a titanium alloy under dwell fatigue

Zhichun Zhou, Chao Fang, Binbin Jiang,\* Jianke Qiu, Linglei Zhang, Jiafeng Lei, Rui Yang and Kui Du\*

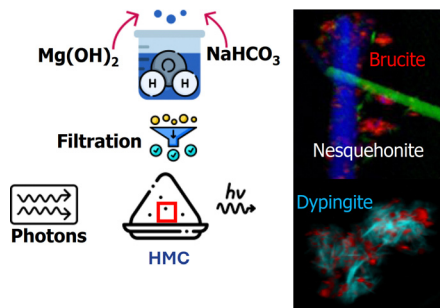
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### High-entropy layered hydroxide for efficient and sustainable seawater oxidation

Santanu Pal, Sakila Khatun and Poulomi Roy\*

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### Characterization of hydrated magnesium carbonate materials with synchrotron radiation-based scanning transmission X-ray spectromicroscopy

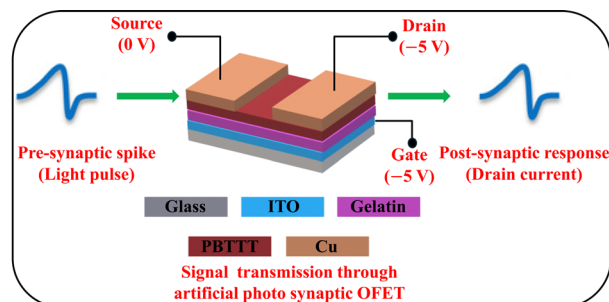
Md Thasfiqzaman,\* Hoang Nguyen, Tuomas Mansikkala, Marko Huttula, Igor Beinik, Jörg Schwenke, Karina Thånell, Adam P. Hitchcock, Paivo Kinnunen and Minna Patanen\*



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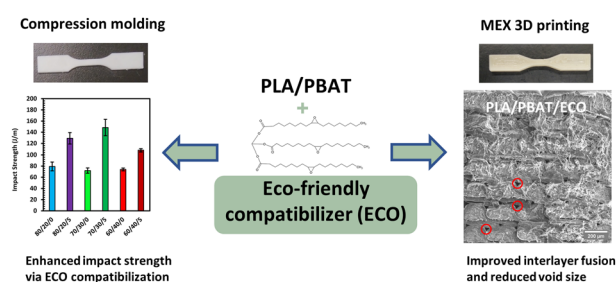
Bishwajit Mandal, M. Raveendra Kiran and Samarendra Pratap Singh\*



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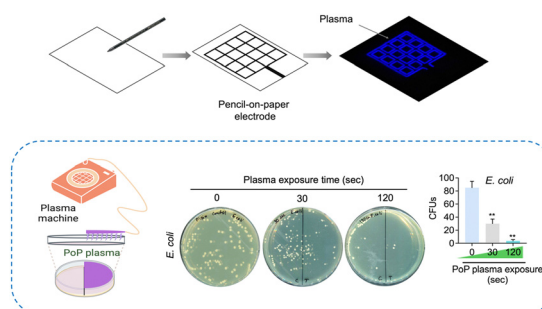
Mohamed Wahbi, Quintin Litke, David Levin, Song Liu, Kevin J. De France and Marianna Kontopoulou\*



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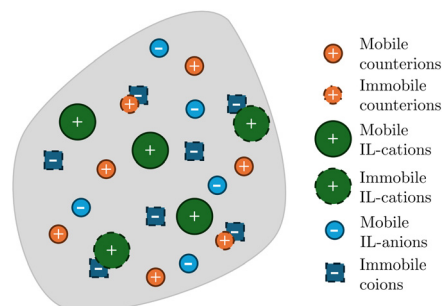
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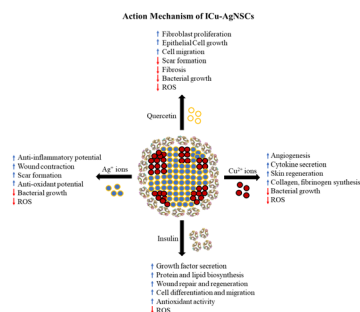
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Alain Boldini



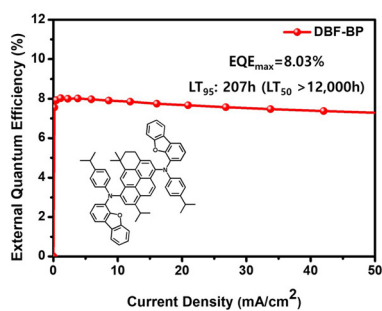
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Deepinder Sharda and Diptiman Choudhury\*

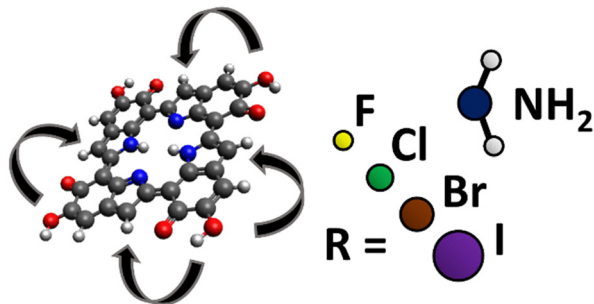
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Hyukmin Kwon, Sunwoo Park, Seokwoo Kang, Sangwook Park, Kiho Lee, Hayoon Lee and Jongwook Park\*

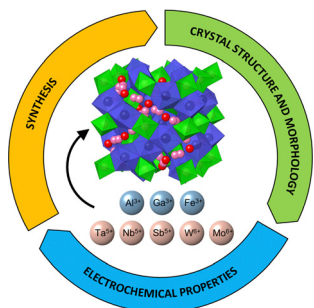
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Florian Heppner, Noah Al-Shamery, Pooi See Lee and Thomas Bredow\*

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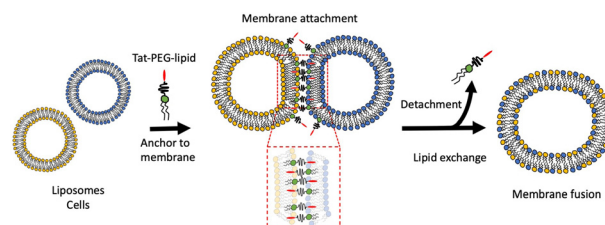
Janez Košir, Seyedabolfazl Mousavihashemi, Milla Suominen, Anna Kobets, Benjamin P. Wilson, Eeva-Leena Rautama and Tanja Kallio\*



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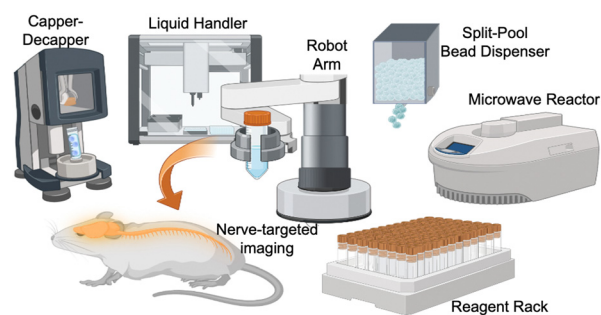
Yuya Sato, Teruhiko Baba, Takeyuki Uchida, Ung-il Chung and Yuji Teramura\*



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Kai Bao, Jong Seo Yoon, Sung Ahn, Jeong Heon Lee, Conor J. Cross, Myung Yung Jeong,\* John V. Frangioni\* and Hak Soo Choi\*



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Nishu Choudhary, Sanjay Yadav, Surjit Bhai, Vasavdutta Sonpal, Bishwajit Ganguly and Alok Ranjan Paital\*



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Md. Roxy Islam, Mizanur Rahaman, Md. Muktedir Billah\* and Muhammad Rakibul Islam\*

