

# Materials Advances

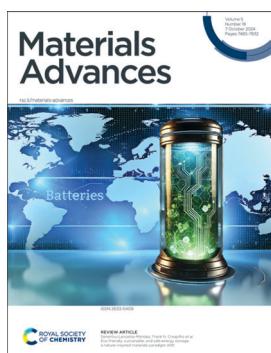
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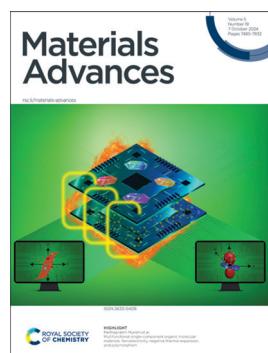
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ISSN 2633-5409 CODEN MAADC9 5(19) 7485–7832 (2024)



### Cover

See Senentxu Lanceros-Méndez, Frank N. Crespilho *et al.*, pp. 7534–7547.  
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### Inside cover

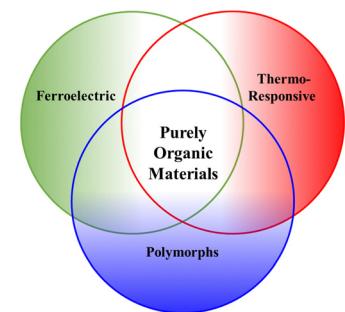
See Parthapratim Munshi *et al.*, pp. 7495–7515.  
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## HIGHLIGHT

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### Multifunctional single-component organic molecular materials: ferroelectricity, negative thermal expansion, and polymorphism

Sanjay Dutta, Lalita Negi and Parthapratim Munshi\*

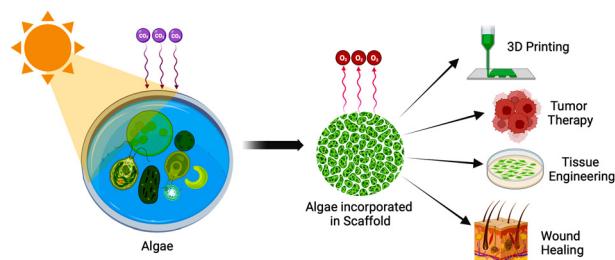


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### Roadmap of algal autotrophic tissue engineering in the avenue of regenerative wound therapy

Nikhita Pandian, Radhika Chaurasia, Satyaki Chatterjee, Bhaskar Biswas, Prabir Patra, Archana Tiwari\* and Monalisa Mukherjee\*



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## REVIEWS

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**Eco-friendly, sustainable, and safe energy storage: a nature-inspired materials paradigm shift**

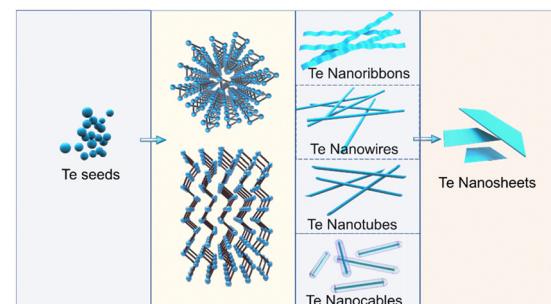
Thiago Bertaglia, Carlos M. Costa, Senentxu Lanceros-Méndez\* and Frank N. Crespilho\*



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**Morphology-controlled synthesis, growth mechanism, and applications of tellurium nanostructures**

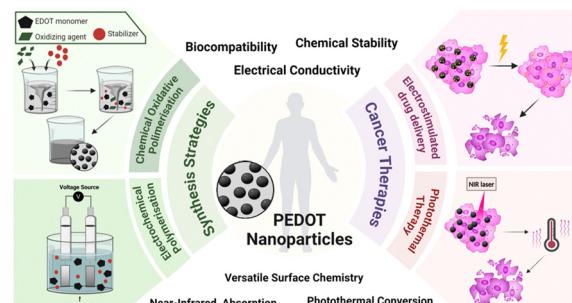
Jinshu Li, Qingshan Yang, Dawei He, Yongsheng Wang, Euyheon Hwang and Yajie Yang\*



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**Synthesis strategies and cancer therapy applications of PEDOT nanoparticles**

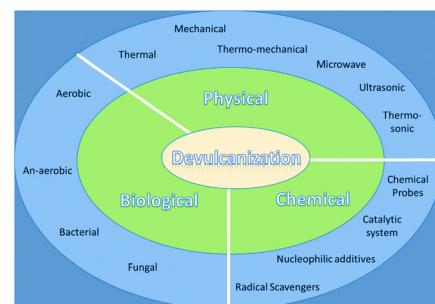
Diogo Dias, Leonor Resina, Frederico Castelo Ferreira, Paola Sanjuan-Alberte\* and Teresa Esteves\*



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**Advances in recycling of waste vulcanized rubber products via different sustainable approaches**

Amit Kumar, Ritesh J. Dhanorkar, Subhra Mohanty and Virendra Kumar Gupta\*



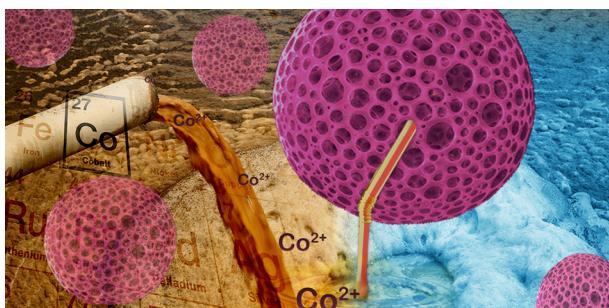
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Porous carbon pellets for physical adsorption of CO<sub>2</sub>: size and shape effect

Baljeet Singh,\* Marianna Kemell and Timo Repo\*

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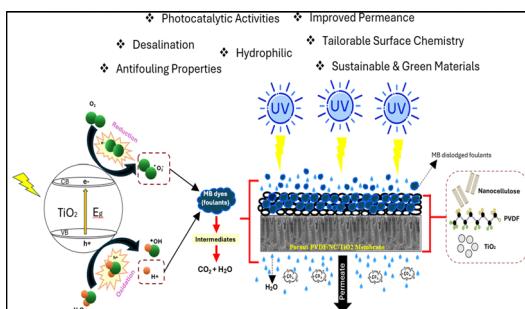


## EDTA-functionalized hierarchical porous microspheres for effective cobalt ion recovery from water

Mao-Hsuan Peng and Chia-Chen Li\*

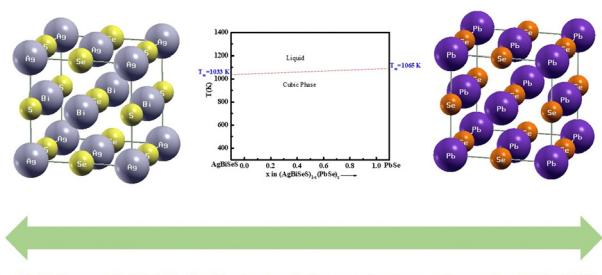
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Entropy engineering in I-VI<sub>2</sub> family: a paradigm to bestow enhanced average ZT in the entire operating temperature regime

Ranita Basu,\* U. Sandhya Shenoy, Ankita Pathak, Shweta Singh, P. Jha, D. Krishna Bhat, Hirakendu Basu and Ajay Singh

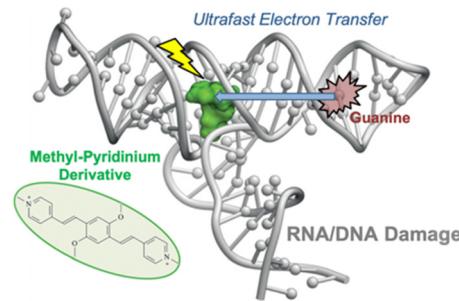


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**Direct observation of guanine photo-oxidation from new potential anticancer drugs via ultrafast electron transfer**

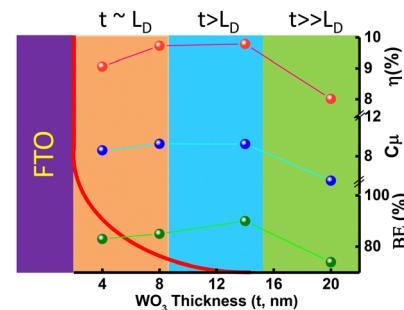
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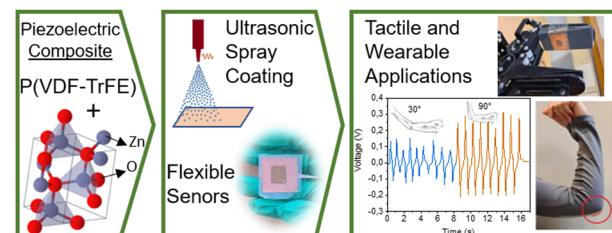
Neeraj Kumar, Sipra Choudhury, Aman Mahajan and Vibha Saxena\*



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**Toward high quality tactile sensors using  $\text{ZnO}/\text{P}(\text{VDF-TrFE})$  flexible piezoelectric composite films**

Sepide Taleb,\* Wiebren M. van Lingen and Mónica Acuña



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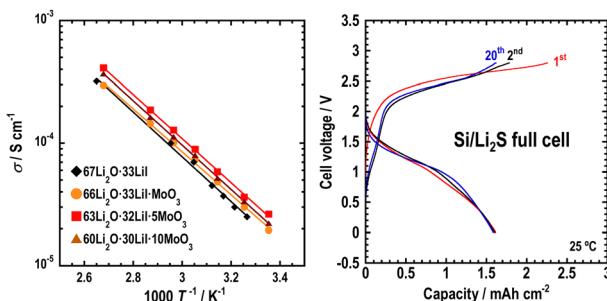
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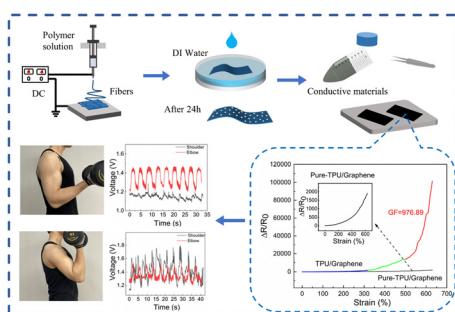
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## Amorphous Li<sub>2</sub>O–LiI–MoO<sub>3</sub> solid electrolytes: mechanochemical synthesis and application to all-solid-state batteries

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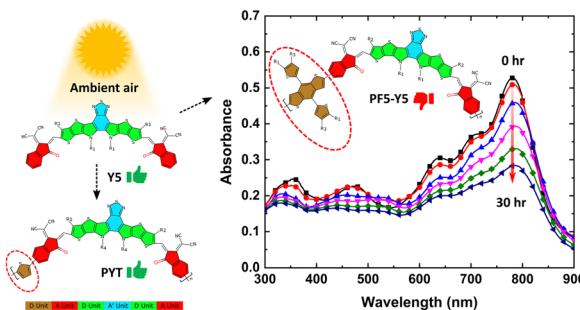
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## Highly tensile and sensitive strain sensors with micro–nano topology optimization

Weixia Lan, Qiqi Ding, Tao Zhou, Zilong Guo, Wenbin Sun, Zhenghui Wu,\* Yingjie Liao,\* Bin Wei and Yuanyuan Liu\*

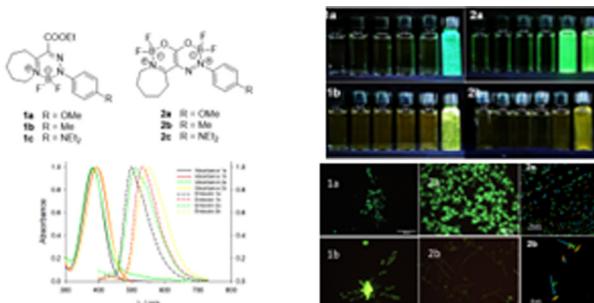
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## Effect of molecular structure on the photochemical stability of acceptor and donor polymers used in organic solar cells

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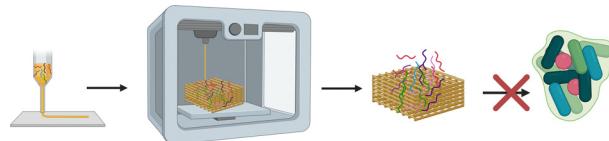


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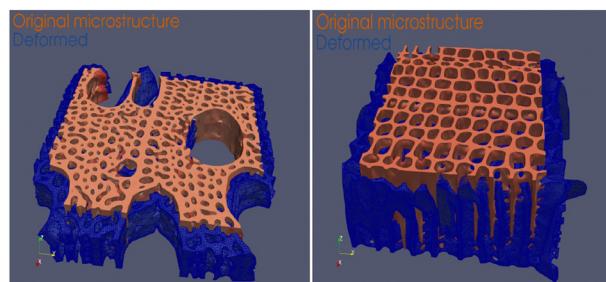
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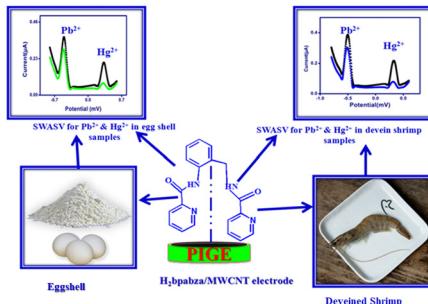
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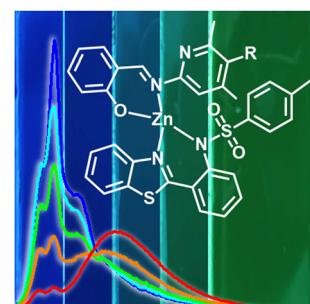
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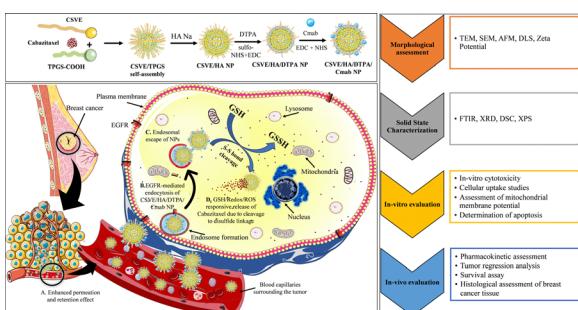
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## PAPERS

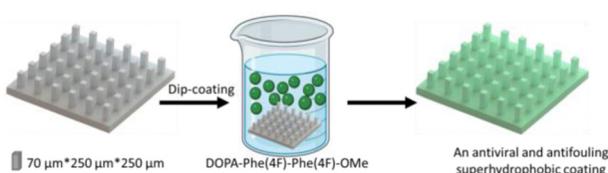
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## Cabazitaxel-loaded redox-responsive nanocarrier based on D-alpha-tocopheryl-chitosan and hyaluronic acid for improved anti-tumor efficacy in DMBA-induced breast cancer model

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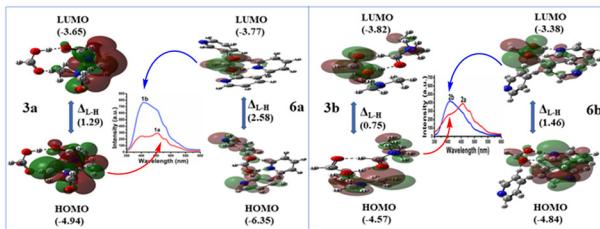
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Tan Hu, Noa Trink, Shlomo Magdassi\* and Meital Reches\*

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