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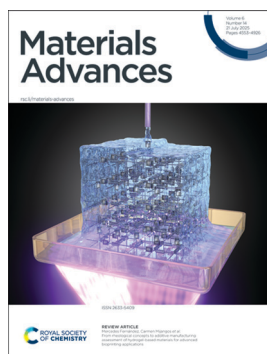
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See Gaétan Laroche, Marie-Christine Durrieu *et al.*, pp. 4646–4659. Image reproduced by permission of Marie-Christine Durrieu from *Mater. Adv.*, 2025, 6, 4646.



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See Mercedes Fernández, Carmen Mijangos *et al.*, pp. 4566–4597. Image reproduced by permission of M. Itxaso Calafel Martínez from *Mater. Adv.*, 2025, 6, 4566.

EDITORIAL

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Introduction to Advances in nanoporous metal films: production methods and applications

Eva Pellicer* and Maria Eugenia Toimil-Molares*

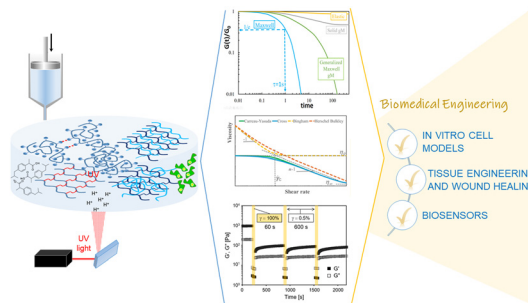


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From rheological concepts to additive manufacturing assessment of hydrogel-based materials for advanced bioprinting applications

M. Itxaso Calafel, Miryam Criado-Gonzalez, Robert Aguirresarobe, Mercedes Fernández* and Carmen Mijangos*



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Fundamental questions
Elemental answers

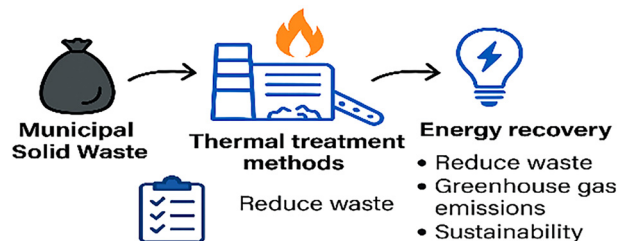
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Waste-to-energy technologies: a sustainable pathway for resource recovery and materials management

Ashish Soni, Sonu Kumar Gupta, Natarajan Rajamohan and Mohammad Yusuf*

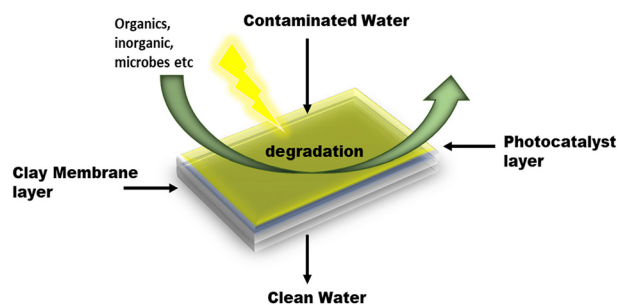
Waste-to-Energy (WtE) Techniques



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Clay-based photocatalytic membranes: low-cost alternative materials for water treatment

Chidinma G. Olorunnisola,* Damilare Olorunnisola, Morenike. O. Adesina, Moses O. Alfred, Abisola O. Egbedina, Oluwayimika O. Oluokun, Martins O. Omorogie, Emmanuel I. Unuabonah and Andreas Taubert*

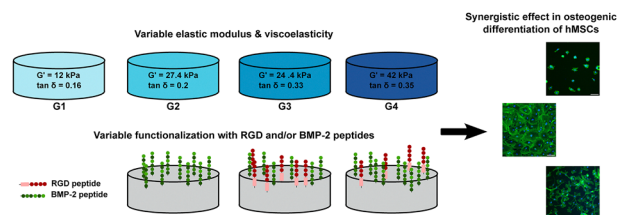


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Unravelling the synergies: effects of hydrogel mechanics and biofunctionalization on mesenchymal stem cell osteogenic differentiation

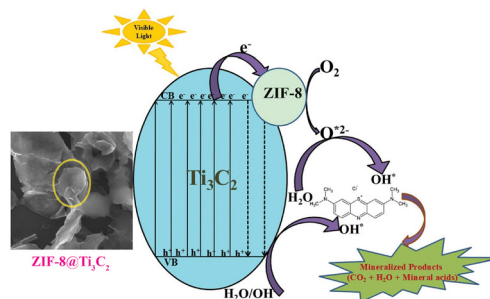
Cristina López-Serrano, Murielle Rémy, Thierry Leste-Lasserre, Gaétan Laroche* and Marie-Christine Durrieu*



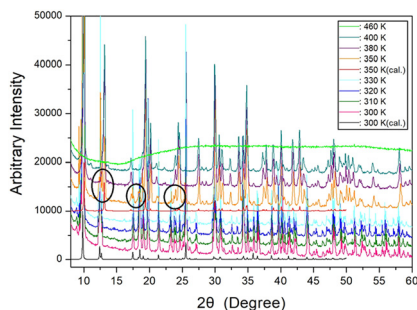
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In situ synthesis of 3D ZIF-8 on 2D MXene nanosheets for efficient photocatalytic degradation of methylene blue (MB)

Francis Ashamary, P. Catherine Neba, S. Harivarsha, Atchudan Raji, Padmanaban Annamalai, Mohamed Gamal Mohamed,* Pramod Kalambate,* Pandi Muthirulan, Shiao-Wei Kuo* and Devaraj Manoj*



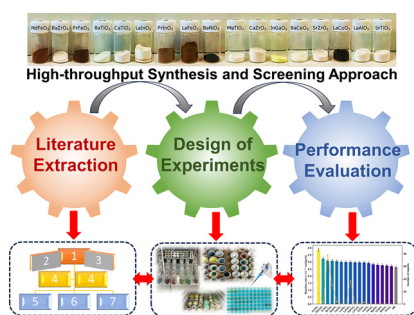
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Phase transition of $(\text{CH}_3)_2\text{CHNH}_3\text{CuCl}_3$: crystal growth, crystal structure, coordination geometry, and molecular motion

Hyunje Park and Ae Ran Lim*

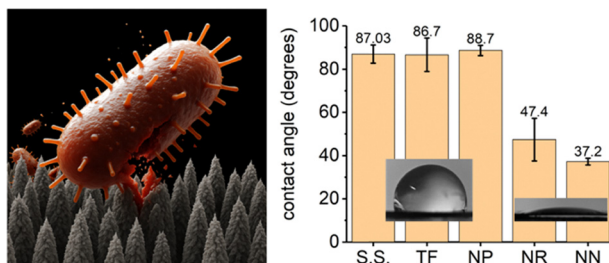
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Accelerated perovskite discovery: screening new catalysts for photocatalytic methylene blue degradation

Poulami Mukherjee,* Yohei Cho, Phulkerd Panitha and Toshiaki Taniike*

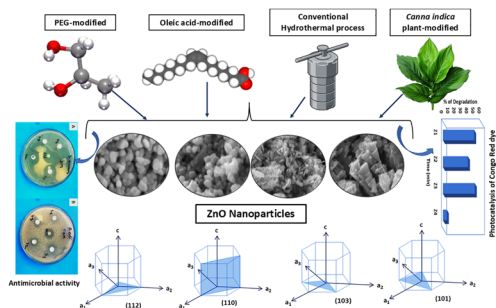
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Void engineering to promote the self-cleaning properties of bactericidal zinc oxide nanopillar array coatings

Amir Hassanpour,* Marie-Christine Groleau, Dalya Messaoudi, Andrea A. Greschner, Katharina Kohlmann, Andreas Ruediger, Eric Déziel, Shuhui Sun and Marc A. Gauthier*

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Crystallographic facet engineering of ZnO nanoparticles for photocatalytic organic pollutant degradation and antibacterial activity

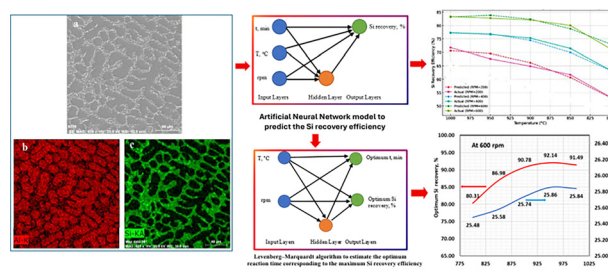
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Optimizing the processing parameters of producing Al–Si alloys using sodium fluosilicate via artificial neural network

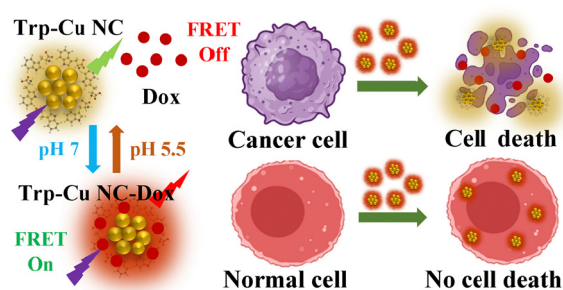
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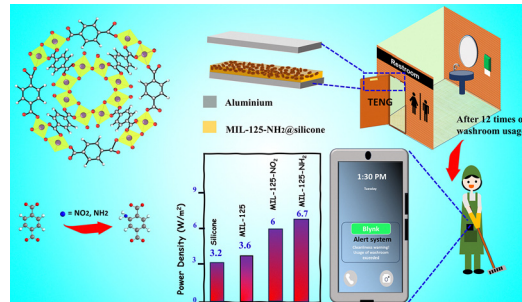
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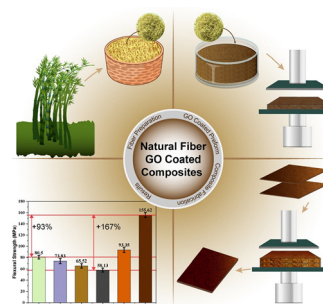
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Enhanced properties of bamboo short fiber reinforced polymer composites with alkali and graphene oxide

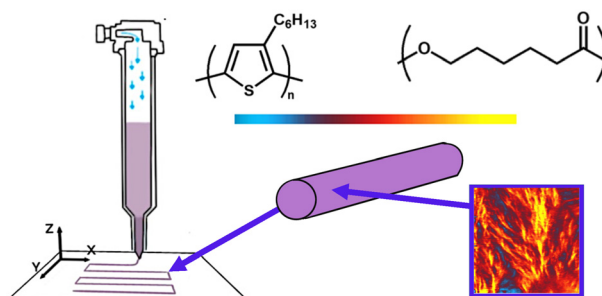
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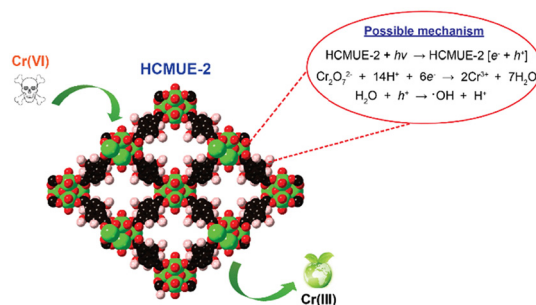
Jiayi Chen, Nahel Blanc and Audrey Laventure*



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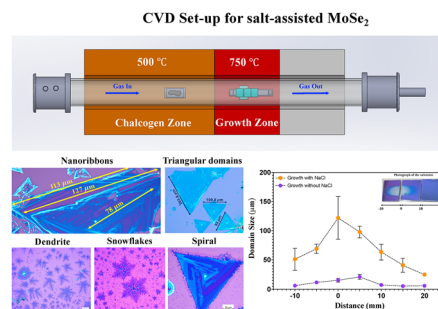
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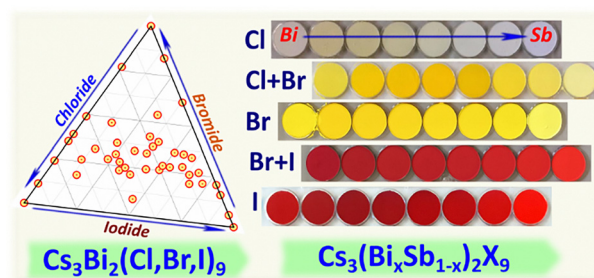
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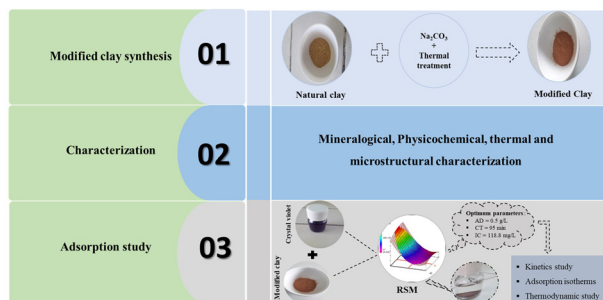
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Exploring compositional versatility of perovskite-like Cs₃(Bi,Sb)₂X₉ (X = Cl, Br, I) compounds by high-throughput experimentation

Oleksandr Stroyuk,* Oleksandra Raievska, Sachin Kinge, Jens Hauch and Christoph J. Brabec



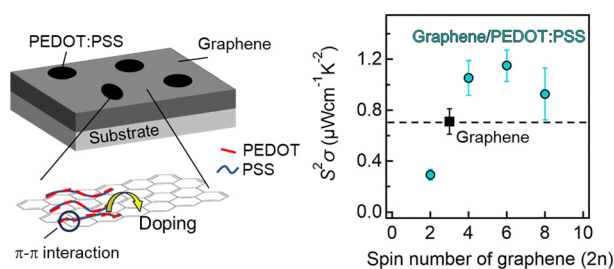
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Improving the adsorption efficiency of a low-cost natural adsorbent for the removal of an organic pollutant: optimization and mechanism study

Yahia Saghir,* Ayoub Chaoui, Salaheddine Farsad, Aboubakr Ben Hamou, Asma Amjlef, Mohamed Benafqir, Nouredine El Alem and Mohamed Ez-zahery

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Molecular interaction-induced thermoelectric performance enhancement of graphene thin films with an agglomerated conductive polymer

Keito Uchida, Shunya Sakane,* Takashi Shimizu, Akito Ayukawa, Haruhiko Udono and Hideki Tanaka*

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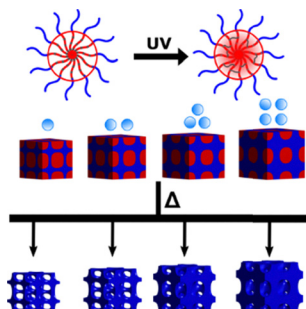
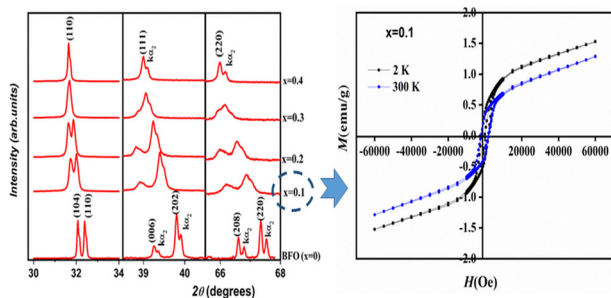


Photo-crosslinked persistent micelle templates with near universal solvent compatibility

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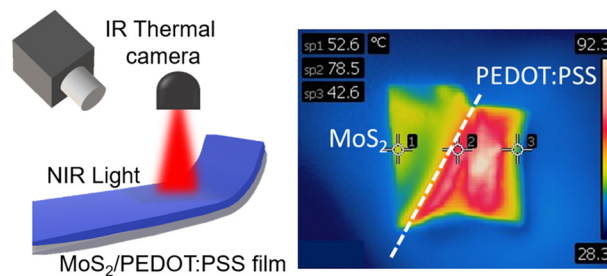
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Raksha D. Salian, Avijit Kumar Das and Partha Kumbhakar*



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Ignacio Centeno-Vega,* Lorenzo José González-Rubio, Cristina Megías-Sayago and Svetlana Ivanova

