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Cover

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EDITORIAL

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Introduction to advancements in synthesis of high-performance materials from Nature's building blocks

Eleftheria Roumeli and Samantha L. Kristufek*

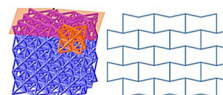


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A review on mechanical metamaterials and additive manufacturing techniques for biomedical applications

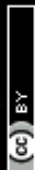
Suhas P., Jaimon Dennis Quadros, Yakub Iqbal Mogul, Ma Mohin, Abdul Aabid,* Muneer Baig and Omar Shabbir Ahmed



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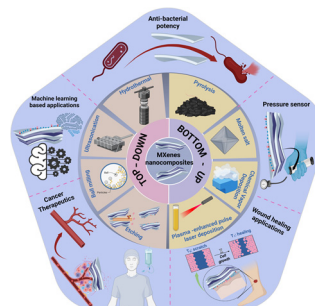
Fundamental questions
Elemental answers

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Translational paradigm of MXene nanocomposites: biophysical advancements to modern applications

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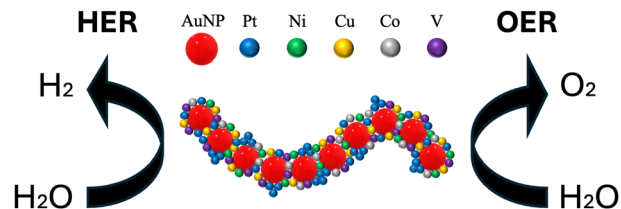


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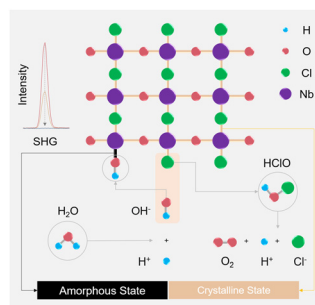
Mohamed Okasha and Vivek Maheshwari*



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Layered NbOCl₂ kinetic degradation mechanism and improved second-order nonlinear optical responses

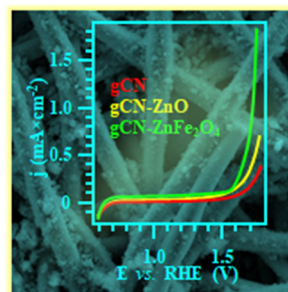
Jianlong Kang, Yiduo Wang, Li Zhou, Ahmed Asad, Defeng Xu, Zhihui Chen, Yingwei Wang,* Jun He and Si Xiao*



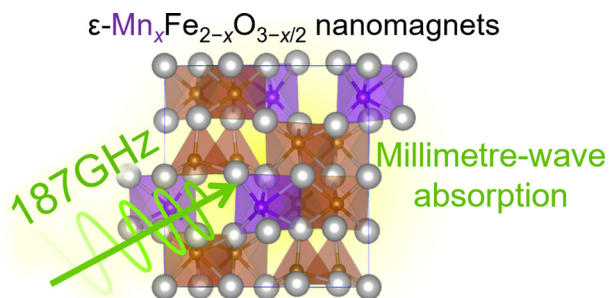
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Tommaso Sturaro, Mattia Benedet, Mattia Brugia, Giacomo Marchiori, Gian Andrea Rizzi, Alberto Gasparotto, Davide Barreca,* Oleg I. Lebedev and Chiara Maccato



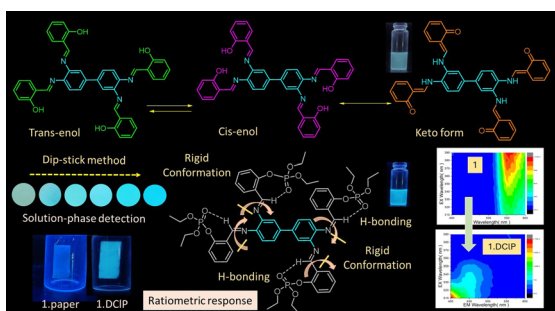
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Mn-substitution effects on the magnetic and zero-field ferromagnetic resonance properties of $\epsilon\text{-Fe}_2\text{O}_3$ nanoparticles

Jessica MacDougall, Asuka Namai,* Onno Strolka and Shin-ichi Ohkoshi*

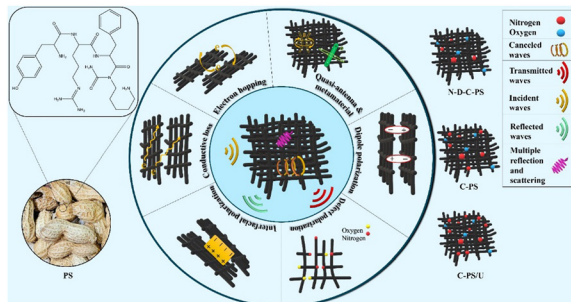
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Sourav Mondal and Nilanjan Dey*

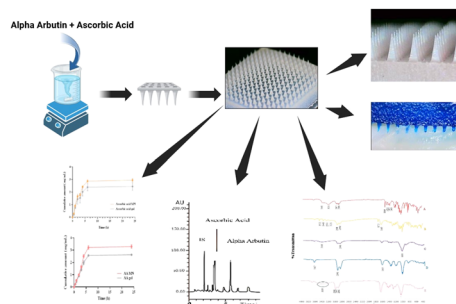
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Haniyeh Dogari, Niloofar Salimi-Turkamani, Hossein Ghafari* and Reza Peymanfar*

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Innovative dissolving microneedles for enhanced delivery of alpha arbutin and ascorbic acid: a novel LC-MS quantification approach

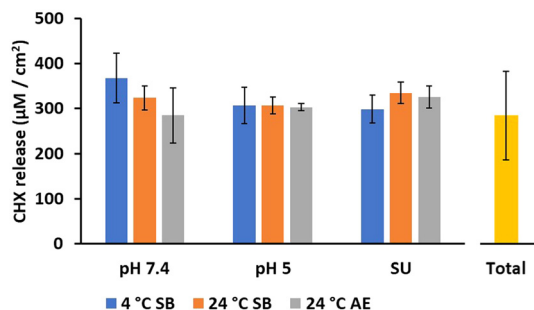
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A novel multilayer antimicrobial urinary catheter material with antimicrobial properties

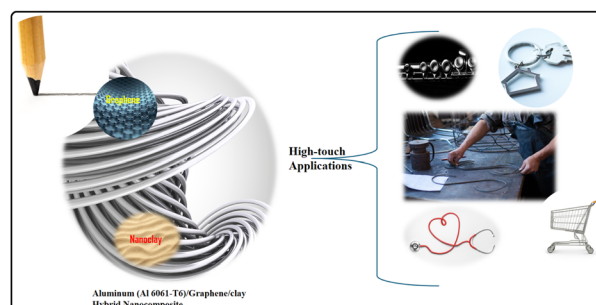
Benjamin Gambrell, Fabrizio Pertusati, Iqbal Shergill, Stephen Hughes and Polina Prokopovich*



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Investigation of the mechanical properties of an aluminum (Al 6061-T6)/graphene/bentonite hybrid nanocomposite experimentally and through finite element analysis study

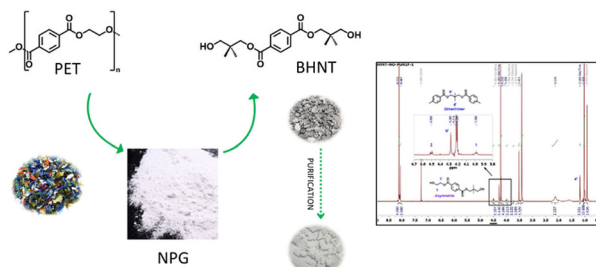
Hasan Bawa'neh, Bashar Lababneh, Ahmad M. Malkawi and Ayat Bozeyah*



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Neopentyl glycol as an alternative solvent for the chemical recycling of complex PET waste

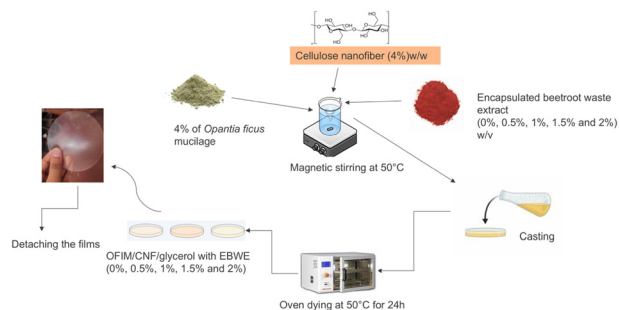
Izotz Amundarain,* Sheila López-Montenegro, Asier Asueta, Sixto Arnaiz and Beñat Pereda-Ayo



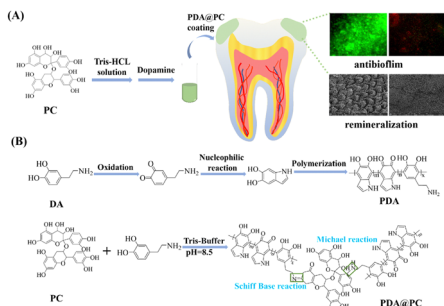
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Fabrication of active and intelligent bio-based edible films using encapsulated beetroot powders for smart packaging

Mkhari Tshamisane, Jerry O. Adeyemi and Olaniyi A. Fawole*



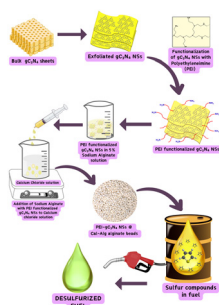
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Mussel-inspired novel coating with cariogenic biofilm inhibition and *in situ* remineralization properties for caries treatment

Jiaolong Wang, Min Ge, Huizhen Wang, Haiyan Yao, Yunyun Deng and Junchao Wei*

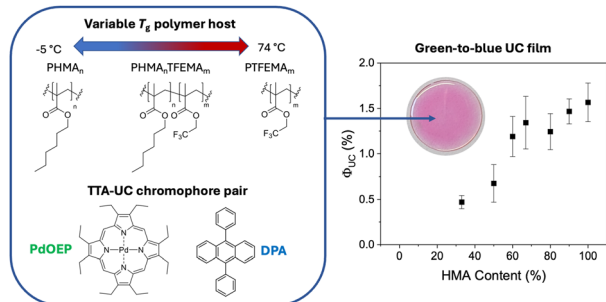
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Poly(ethyleneimine)-exfoliated g-C₃N₄ nanosheets implanted in alginate beads and their application towards adsorptive desulfurization

M. Christina Nilavu, A. Santhana Krishna Kumar,* Himanshu Aggarwal* and N. Rajesh*

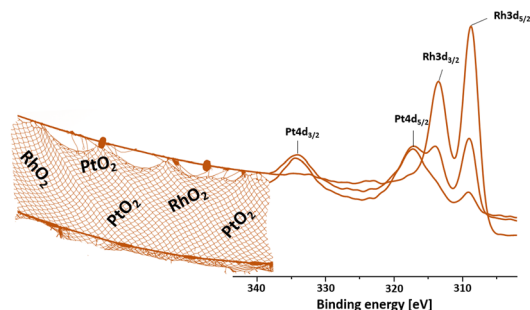
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Methacrylate-based copolymers as tunable hosts for triplet-triplet annihilation upconversion

Michael J. Bennisson, Abigail R. Collins, Larissa Gomes Franca, Georgina H. Burgoyne Morris, Niamh Willis-Fox, Ronan Daly, Joshua K. G. Karlsson, Bethan L. Charles and Rachel C. Evans*

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Reactivity of gaseous PtO₂ and RhO₂ with LaNiO₃ thin films: a systematic XPS study

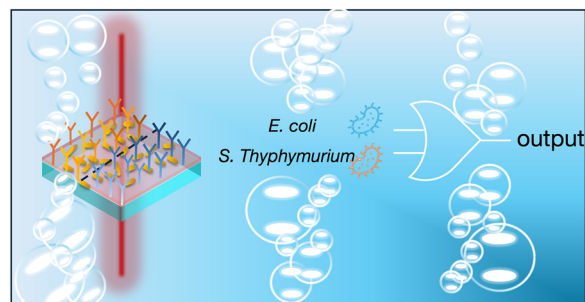
Julie Hessevik,* Henrik H. Sønsteby, Helmer Fjellvåg and Anja O. Sjøstad*



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Logic-OR gate gold nanorod-based plasmonic biosensor for multipathogen detection and photothermal disinfection

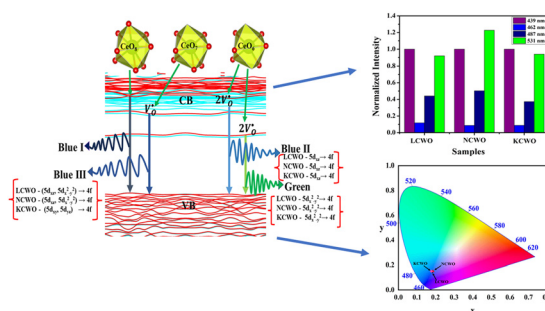
Francesca Petronella,* Daniela De Biase, Carlo Santini, Arianna Avitabile, Maria Laura Sforza, Federica Zaccagnini, Antonio d'Alessandro and Luciano De Sio*



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Influence of alkali metal ions on the defect induced photoluminescence properties of double tungstate compounds $ACe(WO_4)_2$ ($A = Li, Na, K$): experimental and *ab initio* theoretical study

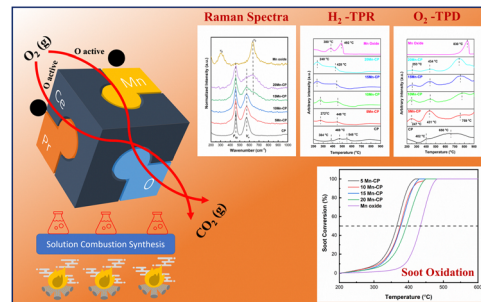
Nibedita Haldar* and Tanmoy Mondal



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Diesel soot oxidation over Mn-Pr-Ce oxide catalysts: structural changes and the impact of Mn doping

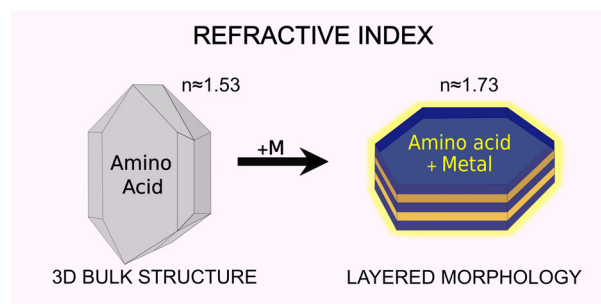
Sunaina S. Patil, Hari Prasad Dasari,* Rahul Kumar Shirasangi and Harshini Dasari*



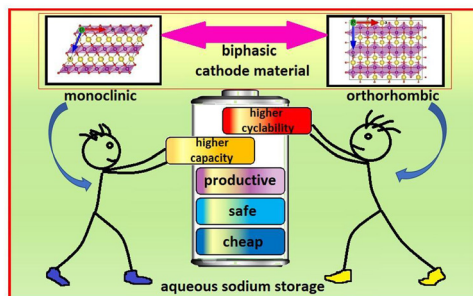
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Role of metal atoms in the refractivity of cysteine- and phenylalanine-based metal-organic crystals

Noam Brown, María Camarasa-Gómez, Angelica Niazov-Elkan, Ashwin Ramasubramaniam, Ehud Gazit,* Leeor Kronik* and Oded Hod*



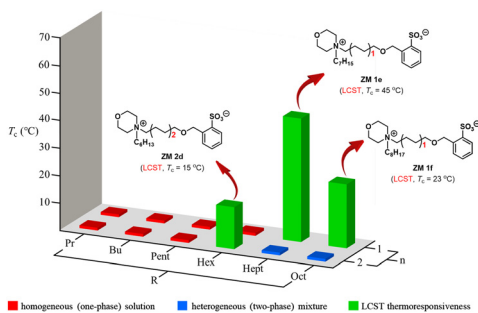
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High-performance biphasic Na_xMnO_2 electrodes for cost-effective and high-power aqueous sodium batteries and capacitors

Andrii Boichuk,* Tetiana Boichuk, Mahesh Eledath-Changarath, Marie Krečmarová, Rafael Abargues, Pablo P. Boix, María C. Asensio, Saïd Agouram and Juan F. Sánchez-Royo*

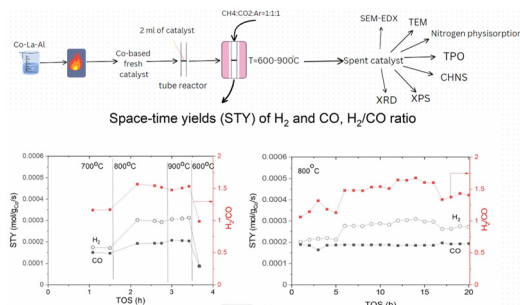
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Small-molecule zwitterionic morpholinium sulfonates as non-cytotoxic materials exhibiting LCST thermo-responsive phase separation in water

Yu-Hsin Chung, Jianbo Jia, Wen-Yi Chen, Pin-Hsuan Chen, Bing Yan* and Yen-Ho Chu*

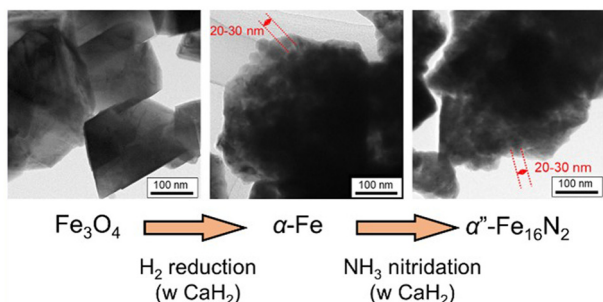
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Dry methane reforming over lanthanide-doped Co–Al catalysts prepared via a solution combustion method

Dinmukhamed Shoganbek, Mark Martinez-Klimov, Olha Yevdokimova, Anssi Peuronen, Mika Lastusaari, Atte Aho, Svetlana A. Tungatarova, Tolkyn S. Baizhumanova, Daulet A. Zhumadullaev, Manap Khan Zhumabek, Yermek A. Aubakirov, Alua Manabayeva, Päivi Mäki-Arvela and Dmitry Yu. Murzin*

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Synthetic route for high-yield α' - Fe_{16}N_2 submicron-sized powder using CaH_2 drying agent

Takayuki Tsuchida,* Jun Fukushima, Masahiro Tobise and Hirotsugu Takizawa



CORRECTION

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Correction: White light emission and superior color stability in a single-component host with exceptional eminent color rendering and theoretical calculations on D_{uv} for color quality

Wasim Ullah Khan, Waheed Ullah Khan, Haris Zaman, Ayaz Mahsud, Dilfaraz Khan,* Salim Ullah Khan, Shuakat Khan and Yueli Zhang*

RETRACTION

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Retraction: Influence of carbon additions on microstructures and mechanical properties in additive manufactured superalloys

Mingjun Xie, Yan Zhao,* Jianjun Guan, Yanhong Yang* and Yuting Fu

