

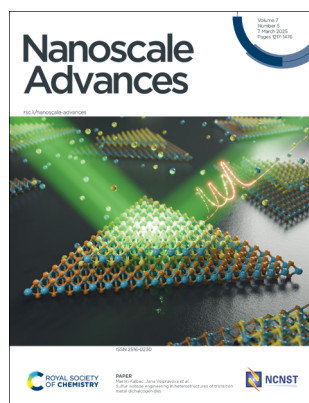
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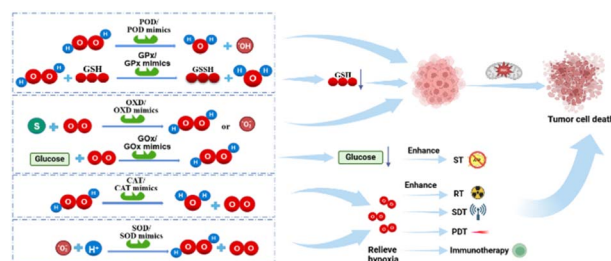
Cover
See Martin Kalbac, Jana Vejpravova *et al.*, pp. 1276–1286. Image reproduced by permission of Jana Kalbáčová Vejpravová from *Nanoscale Adv.*, 2025, 7, 1276.

REVIEWS

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Emerging engineered nanozymes: current status and future perspectives in cancer treatments

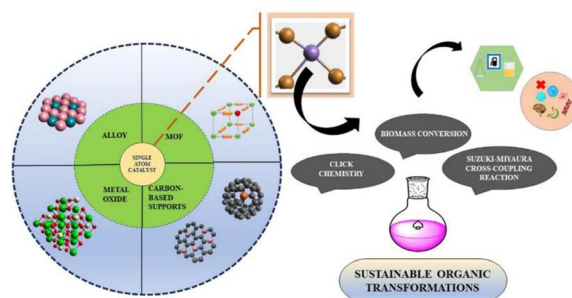
Jiajia Zheng, Weili Peng, Houhui Shi, Jiaqi Zhang, Qinglian Hu and Jun Chen*



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Structure–activity relationships in the development of single atom catalysts for sustainable organic transformations

Deepshikha Roy and Kalyanjyoti Deori*



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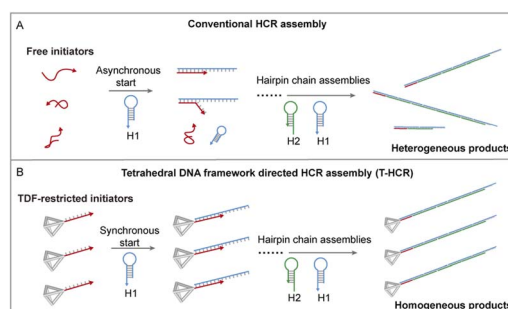
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Tetrahedral DNA framework-directed hybridization chain reaction controlled self-assembly

Dongdong He, Pengyao Wei, Lin Li, Pan Fu, Jianping Zheng* and Kaizhe Wang*

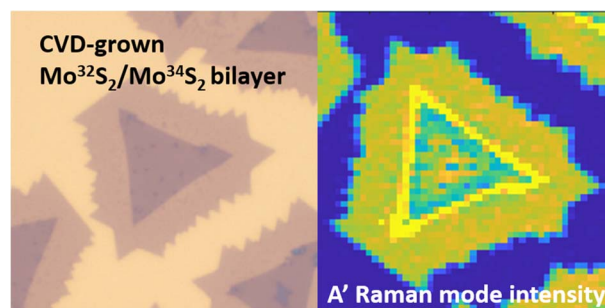


PAPERS

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Sulfur isotope engineering in heterostructures of transition metal dichalcogenides

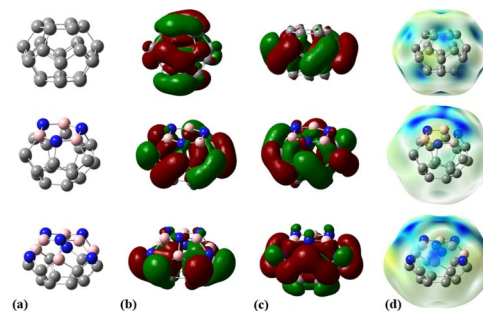
Vaibhav Varade, Golam Haider, Martin Kalbac* and Jana Vejpravova*



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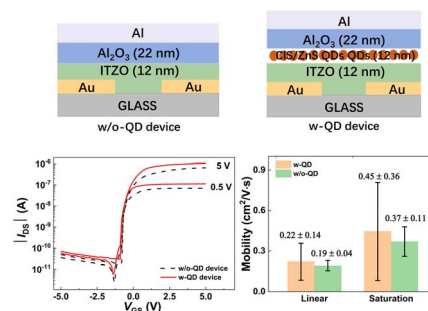
Azam Mouvivand, Fereshteh Naderi,* Omid Moradi and Batoul Makiabadi



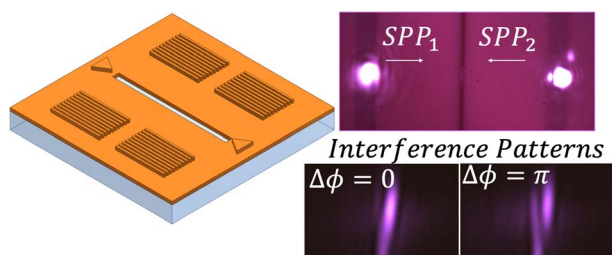
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Performance enhancement of InSnZnO thin-film transistors by modifying the dielectric-semiconductor interface with colloidal quantum dots

Sijie Chen, Haoran Chen, Chenghui Xia* and Zhenhua Sun*



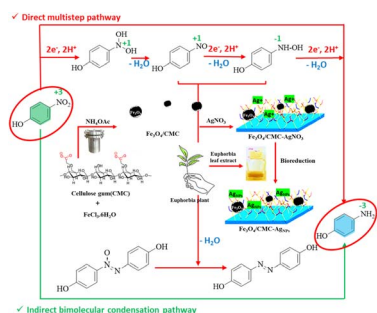
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Selective modal excitation in a multimode nanoslit by interference of surface plasmon waves

Marcos Valero, Luis-Angel Mayoral-Astorga, Howard Northfield, Hyung Woo Choi, Israel De Leon, Mallar Ray* and Pierre Berini*

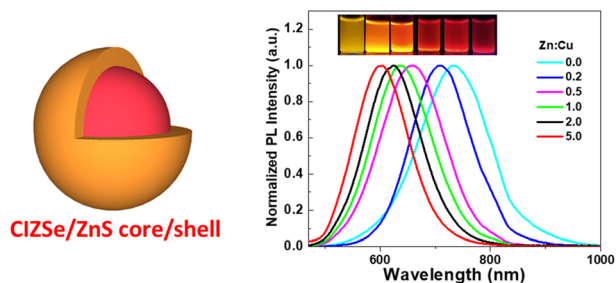
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Controlled bioreduction of silver ions to nanosized particles on a porous magnetic-biopolymer of carboxymethyl cellulose, Fe₃O₄/CMC-Ag NPs, serving as a sustainable nanocatalyst

Mojtaba Azizi,* Mahdi Jafari and Sadegh Rostamnia*

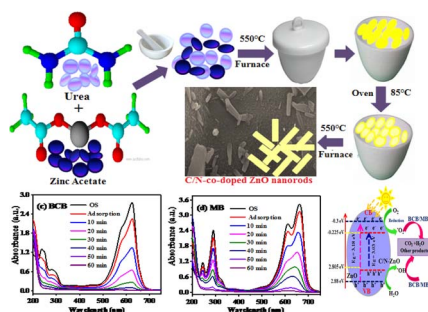
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Microwave-assisted synthesis of highly photoluminescent core/shell CuInZnSe/ZnS quantum dots as photovoltaic absorbers

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Investigation of the photocatalytic potential of C/N-co-doped ZnO nanorods produced via a mechano-thermal process

Parmeshwar Lal Meena,* Ajay Kumar Surela, Lata Kumari Chhachhia, Jugmohan Meena and Rohitash Meena



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Pre-validation of a novel reconstructed skin equivalent model for skin irritation and nanoparticle risk assessment

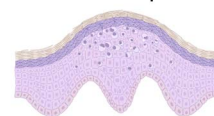
Priscila Laviola Sanches, Rosana Bizon Vieira Carias, Gutember Gomes Alves, Carolina Motter Catarino,* Bruna Bosquetti, Meg Cristina De Castilho Costa, Andrezza Di Pietro Micali, Desirée Cigaran Schuck, José Mauro Granjeiro* and Ana R. Ribeiro*

Epidermis model construction



OECD TG 439
Epidermis morphology
Cytokine production

NPs exposure

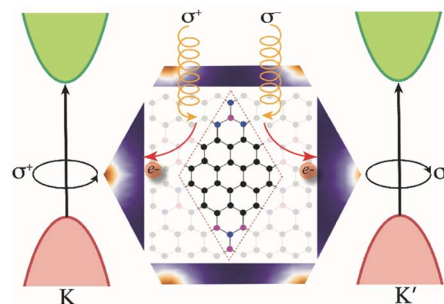


OECD TG 439
Epidermis morphology
Cytokine production
NPs internalization

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Excitonic circular dichroism in boron–nitrogen cluster decorated graphene

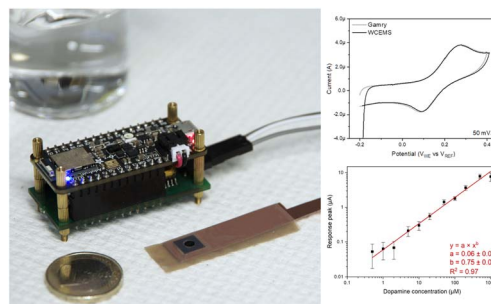
Shneha Biswas,* Souren Adhikary* and Sudipta Dutta*



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A customizable wireless potentiostat for assessing Ni(OH)₂ decorated vertically aligned MoS₂ thin films for electrochemical sensing of dopamine

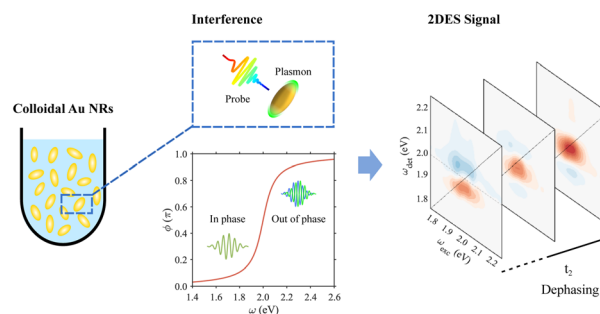
Topias Järvinen,* Olli Pitkänen, Tomi Laurila, Minna Mannerkorpi, Simo Saarakkala and Krisztian Kordas



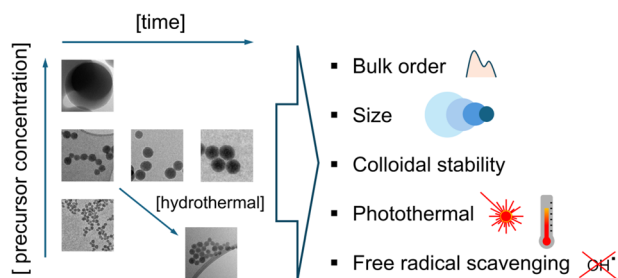
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Direct quantification of the plasmon dephasing time in ensembles of gold nanorods through two-dimensional electronic spectroscopy

Federico Toffoletti and Elisabetta Collini*



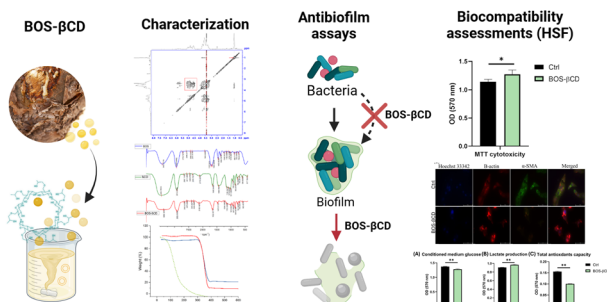
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Hydrothermal carbonization synthesis of amorphous carbon nanoparticles (15–150 nm) with fine-tuning of the size, bulk order, and the consequent impact on antioxidant and photothermal properties

Francesco Barbero,^{*} Elena Destro, Aurora Bellone, Ludovica Di Lorenzo, Valentina Brunella, Guido Perrone, Alessandro Damin and Ivana Fenoglio

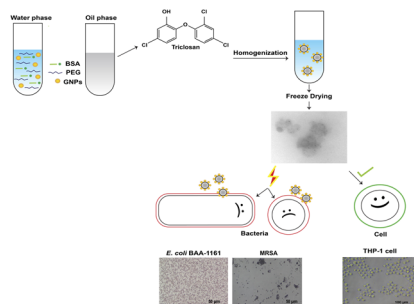
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A biocompatible β -cyclodextrin inclusion complex containing natural extracts: a promising antibiofilm agent

Obaydah Abd Alkader Alabraham, Mostafa Fytory, Ahmed M. Abou-Shanab, Jude Lababidi, Wolfgang Fritzsche, Nagwa El-Badri^{*} and Hassan Mohamed El-Said Azzazy^{*}

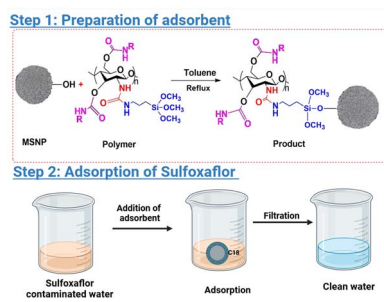
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Improving the aqueous solubility and antibacterial activity of triclosan using re-dispersible emulsion powder stabilized with gold nanoparticles

Arathy J. Nair and Dakrong Pisuwan^{*}

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Synthesis of chiral mesoporous silica nanoparticles for the adsorptive removal of the chiral insecticide sulfoxaflor from water

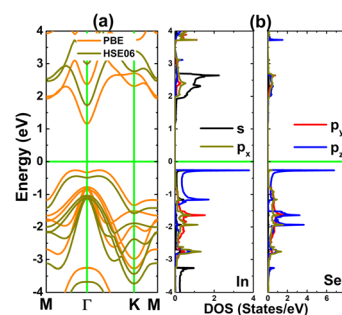
Sarah Alharthi, Ashraf Ali^{*} and Eman Y. Santali



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Band structure and magnetism engineering of InSe monolayers through doping with IVA- and VA-group atoms: role of impurities

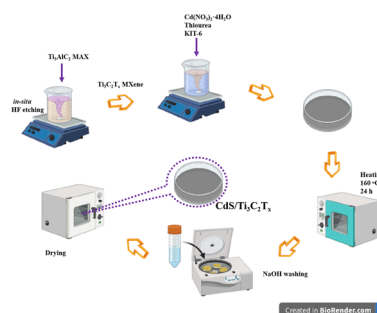
Nguyen Thi Han, J. Guerrero-Sanchez and D. M. Hoat*



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Highly selective ethanol gas sensor based on CdS/Ti₃C₂T_x MXene composites

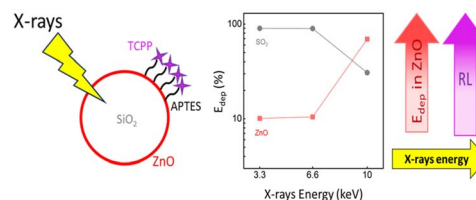
Ly Tan Nhiem, Jianbin Mao, Qui Thanh Hoai Ta* and Soonmin Seo*



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The role of energy deposition on the luminescence sensitization in porphyrin-functionalized SiO₂/ZnO nanoparticles under X-ray excitation

Irene Villa,* Roberta Crapanzano, Silvia Mostoni, Anne-Laure Bulin, Massimiliano D'Arienzo, Barbara Di Credico, Anna Vedda, Roberto Scotti and Mauro Fasoli



Upon X-ray irradiation, the dense ZnO-related enhancement of energy deposition in TCPF-functionalized SiO₂/ZnO nanoparticles is the mechanism that cooperates to activate the sensitization of TCPF luminescence (RL).

