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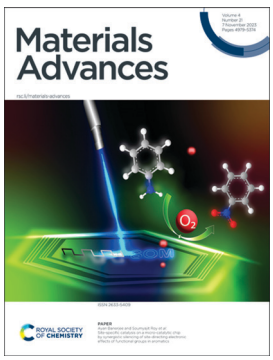

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See Ayan Banerjee and Soumyajit Roy *et al.*, pp. 5131–5139. Image reproduced by permission of Soumyajit Roy (image credit: Nidhi Kumari) from *Mater. Adv.*, 2023, **4**, 5131.

PERSPECTIVE

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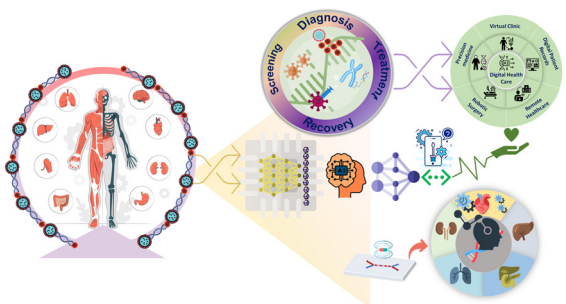
Perspective of point-of-care sensing systems in cancer management

Kamil Reza Khondakar,* M. S. Anwar, Hirak Mazumdar and Ajeet Kaushik



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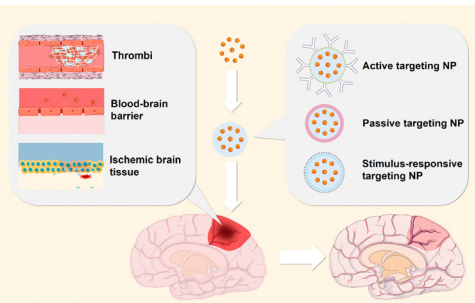
Recent advances in targeted nanoparticle drug delivery systems for ischaemic stroke

Xiaojun Li, Qi Wang, Qi Fang, Jianling Xu, Baosong Han, Yongquan Chen, Weidong Yao,* Sheng Ye* and Bin Wang*



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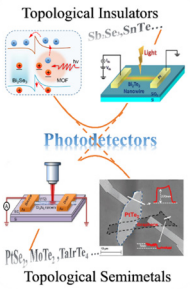
REVIEWS

5018

Research progress on topological material-based photodetectors

Kewen Wu, Xiaoqi Liao, Muhammad Ahsan Iqbal and Yu-Jia Zeng*



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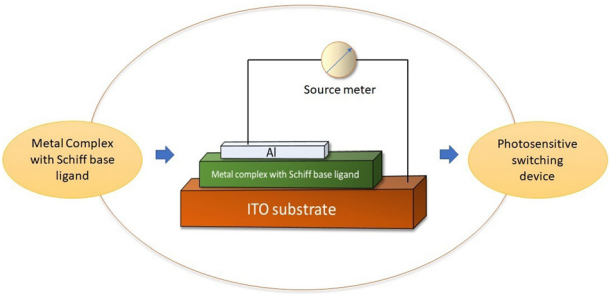
Development of electrical conductivity-based photosensitive switching devices using metal complexes with Schiff base ligands

Shibashis Halder



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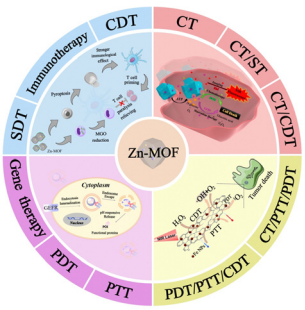
Recent advances in Zn-MOFs and their derivatives for cancer therapeutic applications

Minmin Li, Zhixin Zhang, Yamei Yu, Hui Yuan,* Alireza Nezamzadeh-Ejhieh, Jianqiang Liu,* Ying Pan and Qian Lan*



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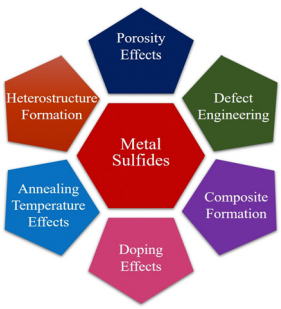
Response surface methodology: a powerful tool for optimizing the synthesis of metal sulfide nanoparticles for dye degradation

Zeshan Ali Sandhu,* Muhammad Asam Raza, Umme Farwa, Samia Nasr, Ibrahim Sayed Yahia, Seerat Fatima, Mehmuna Munawar, Yousra Hadayet, Sufyan Ashraf and Haseeb Ashraf



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COMMUNICATION

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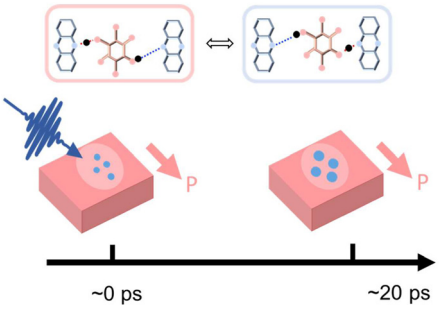

Ultrafast variation of the polarized state in proton-π electron coupled ferroelectric cocrystal Phz-H_2ca

Akihiro Sugisawa, Tsugumi Umanodan, Hongwu Yu, Tadahiko Ishikawa, Shin-ya Koshihara, Sachio Horiuchi and Yoichi Okimoto*

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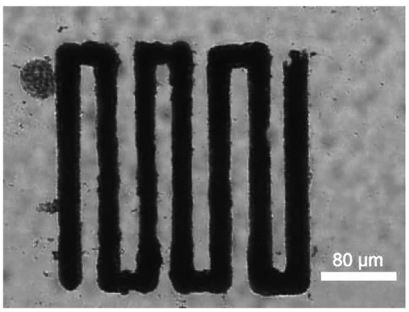

Site-specific catalysis on a micro-catalytic chip by synergistic silencing of site-directing electronic effects of functional groups in aromatics

Rakesh Sen, Kousik Das, Subhrokoli Ghosh, Anand Dev Ranjan, Khokan Manna, Ayan Banerjee* and Soumyajit Roy*

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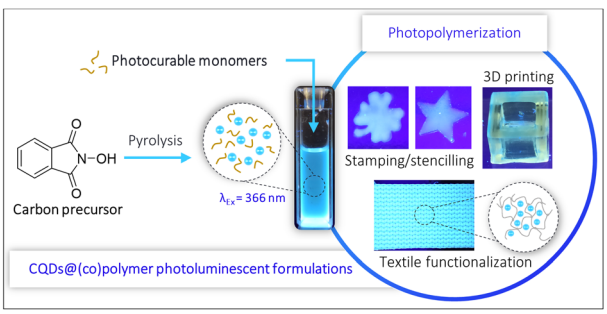

Photoinduced polymer-confined CQDs for efficient photoluminescent 2D/3D printing applications

Jessica Plé, Corneliu S. Stan, Didier Zanghi, Cécile Genevois, Samar Hajjar-Garreau and Lavinia Balan*

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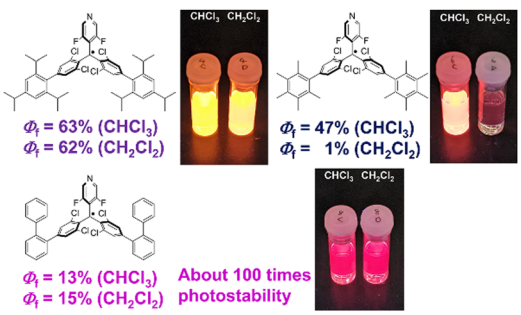

Effects of hydrocarbon substituents on highly fluorescent bis(4-phenylphenyl)pyridylmethyl radical derivatives

Yohei Hattori,* Ryota Kitajima, Atsumi Baba, Kohei Yamamoto, Ryota Matsuoka, Tetsuro Kusamoto and Kingo Uchida

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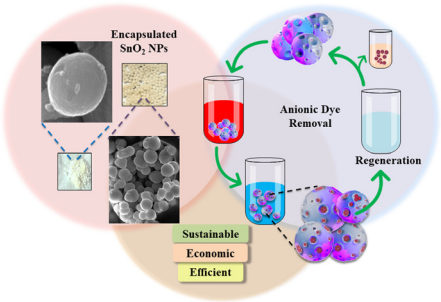
Fabrication of highly efficient encapsulated SnO_2@alginate beads as regenerative nanosorbents for anionic dye pollutants removal from aqueous solution

Shikha Jyoti Borah, Akanksha Gupta, Kashyap Kumar Dubey and Vinod Kumar*



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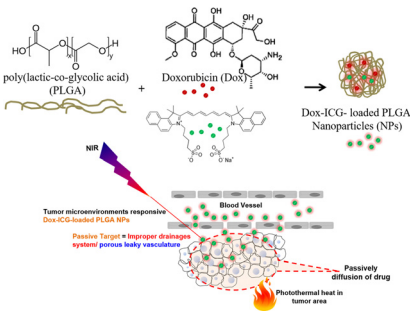
NIR-light-triggered delivery of doxorubicin-loaded PLGA nanoparticles for synergistic cancer therapy on DMBA/TPA induced tumor-bearing mice

Tunazzina Zaman Khan, Shekh Md Newaj, Ashikur Rahman, Rahnuma Tabassum, Khandaker Nujhat Tasnim, Hasan Mahmud Reza, Md. Selim Reza, Seonki Hong and Shazid Md. Sharker*



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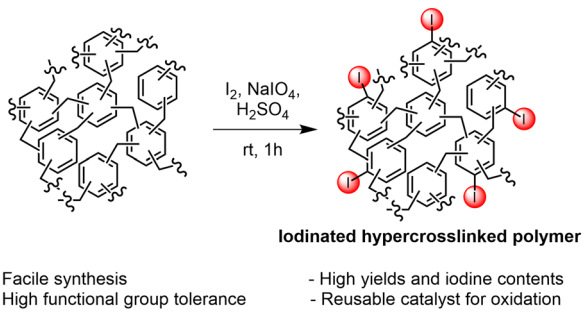
A facile synthesis of iodine-functionalized hypercrosslinked polymers

Chanachon Thiamsiri, Thanchanok Ratvijitvech and Torsak Luanphaisarnnont*



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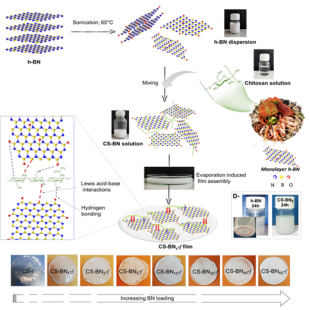
Boron nitride embedded in chitosan hydrogel as a hydrophobic, promising metal-free, sustainable antibacterial material

Nisrine Hammi, Marta Kędzierska, Natalia Wrońska, Nadia Katir, Jeremy Dhainaut, Sebastien Royer, Katarzyna Lisowska, Maria Bryszewska, Katarzyna Miłowska and Abdelkrim El Kadib*



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From waste to energy: luminescent solar concentrators based on carbon dots derived from surgical facemasks

Antonino Arrigo,* Ambra M. Cancelliere, Maurilio Galletta, Antonio Burtone, Giovanni Lanteri, Francesco Nastasi* and Fausto Puntoriero

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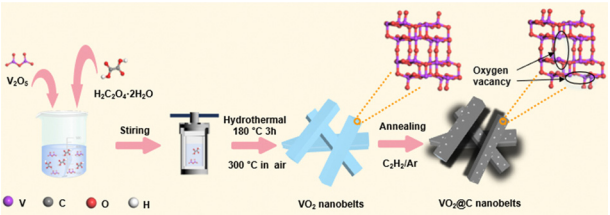

Synergistic carbon and oxygen vacancy engineering on vanadium dioxide nanobelts for efficient aqueous zinc-ion batteries

Xin Gu,* Juntao Wang, Shuang Wu, Sijin Dong, Fengchun Li, Akang Cui, Mengdi Zhang, Pengcheng Dai* and Mingbo Wu*

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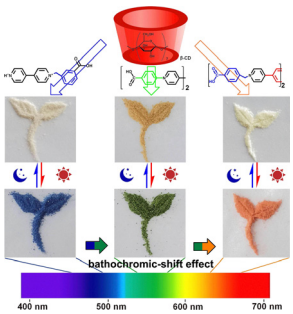

Supramolecular inclusion complexes of β-cyclodextrin with bathochromic-shifted photochromism and photomodulable fluorescence enable multiple applications

Dong-Xue Xia, Li-Wen Fan, Ming-Fu Ye, Wen-Qi Sun,* Rui-Lian Lin and Jing-Xin Liu*

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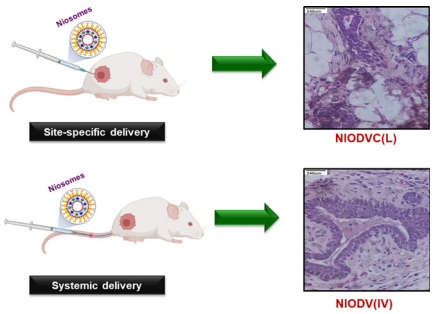

Epidermal growth factor receptor targeted doxorubicin and vitexin loaded niosomes for enhanced breast cancer therapy

S. Malathi, Valappil Sisila, V. Singaravel, Nandakumar Venkatesan, Iqbal Pakrudheen, R. Dhanaraj, Niraikulam Ayyadurai, V. Bhuvarahamurthy and S. Narayana Kalkura*

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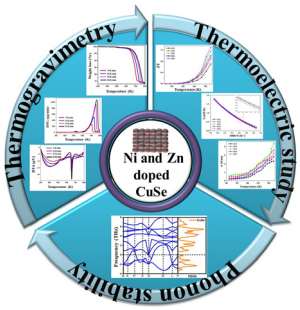
The impact of Ni and Zn doping on the thermal durability and thermoelectric variables of pristine CuSe nanoparticles

Sefali R. Patel,* Sunil H. Chaki,* Mitesh B. Solanki, Rohitkumar M. Kannaujiya, Zubin R. Parekh, Ankurkumar J. Khimani and Milind P. Deshpande



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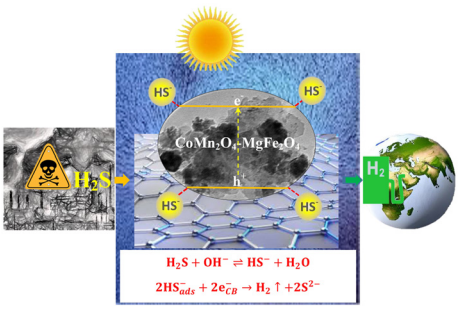
A novel magnetic HS^--adsorptive nanocomposite photocatalyst ($rGO/CoMn_2O_4–MgFe_2O_4$) for hydrogen fuel production using H_2S feed

Majid Ghanimati, Mohsen Lashgari,* Fabio Montagnaro, Vassilios Binas, Michalis Konsolakis and Marco Balsamo



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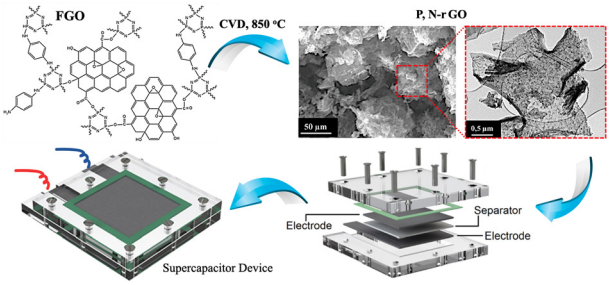
Phosphorus and nitrogen co-doped reduced graphene oxide as superior electrode nanomaterials for supercapacitors

Khaled Rhili, Siham Chergui, Juan Carlos Abergo-Martinez, Ahmad Samih El Douhaibi and Mohamed Siaj*



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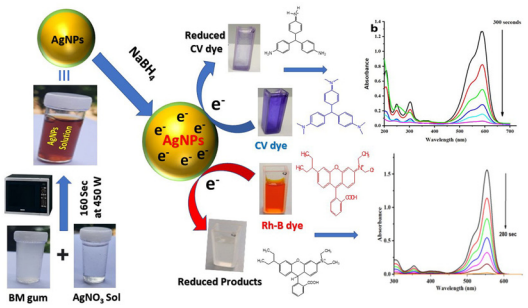
Green synthesis of *Mesona Blumes* gum capped silver nanoparticles and their antioxidant, antibacterial and catalytic studies

Walaa Abdullah Sulaiman Al Yahyai, Aya Ali Sulaiman Al Isai, Mohammed F Alotibi, Bhagavanth Reddy G, Mohammed Al-Abri, Babu Pejjai, Nagaraju Devunuri, Nadavala Siva Kumar, Ahmed S. Al-Fatesh, Ahmed I. Osman* and Kondaiah Seku*



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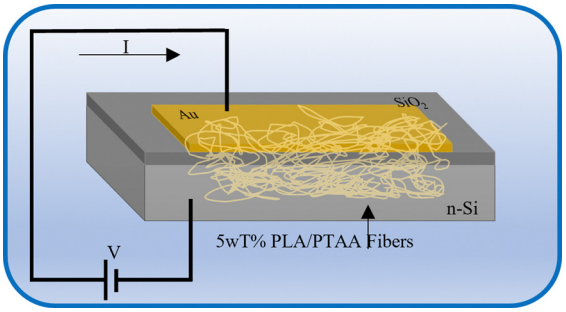

Electro-spun poly(lactic acid)/poly(triarylamine)(PLA/PTAA) composite nanofibers with low PLA content for fiber-based electronic applications

Alejandro J. Cruz-Arzón, Nitza V. Falcón-Cruz, William Serrano-García, Nicholas J. Pinto* and Rolando Oyola*

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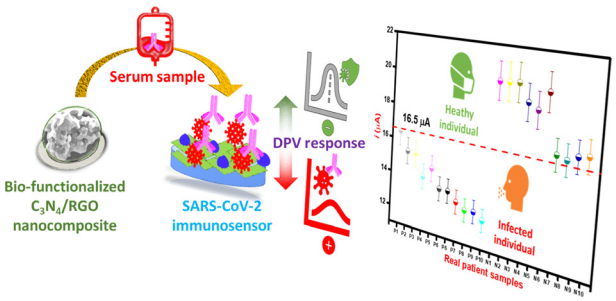

Detection of specific antibodies against SARS-CoV-2 spike protein *via* ultra-sensitive bio-functionalized carbonnitride-reduced graphene oxide electrochemical immunosensing platform in real samples

Mohd. Abubakar Sadique, Shalu Yadav, Pushpesh Ranjan, Raghuraj Singh Chouhan,* Ivan Jerman, Ashok Kumar, Saurabh Saigal, Sagar Khadanga, Raju Khan* and Avanish K. Srivastava

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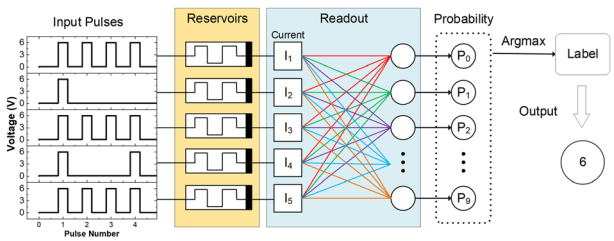

Reservoir computing using back-end-of-line SiC-based memristors

Dongkai Guo, Omesh Kapur, Peng Dai, Yisong Han, Richard Beanland, Liudi Jiang, C. H. (Kees) de Groot and Ruomeng Huang*

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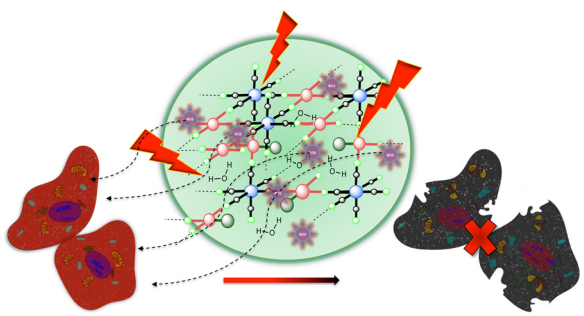

Ultra-small platinum-based coordination nanoparticles for radiotherapy

Riya George,* Lucile Fétiveau, Erika Porcel,* Farah Savina, Charles Bosson Bapaume, Diana Dragoe, François Brisset, Hynd Remita, Sandrine Lacombe and Laure Catala*

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PAPERS

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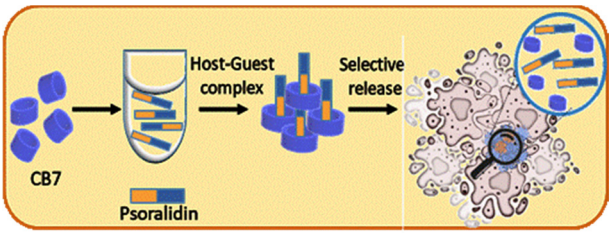
Psoralidin–cucurbit[7]uril complex with improved solubility to tackle human colorectal cancer: experimental and computational study

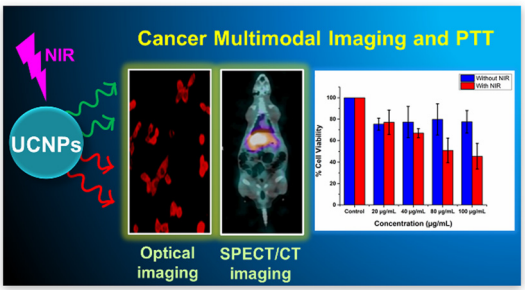
Fortuna Ponte, Nada K. Sedky, Iten M. Fawzy, Fatma Mokhtar, Emilia Sicilia* and Sherif Ashraf Fahmy*



5338

Remarkably enhanced upconversion luminescence in Na^+ codoped spinel nanoparticles for photothermal cancer therapy and SPECT imaging

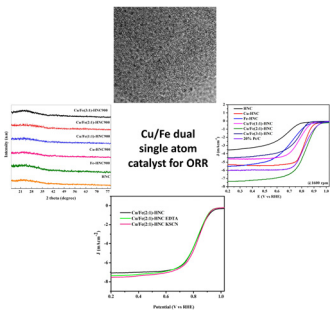
Annu Balhara, Santosh K. Gupta,* Nidhi Aggarwal, Swapnil Srivastava, Jiban Jyoti Panda,* Sourav Patra, Avik Chakraborty, Sutapa Rakshit and Rubel Chakravarty



5353

Cu/Fe embedded N-doped carbon as a highly durable oxygen reduction electrocatalyst

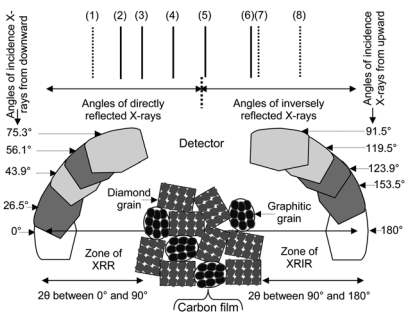
Banafsha Habib, Shaowei Chen, Forrest Nichols, Shamraiz Hussain Talib, Nasima Arshad, Anham Zafar, Arshad Mahmood, Shahid Zaman* and Naveed Kausar Janjua*



5361

Structural analyses of carbon films deposited at different total mass rates in a hot-filament CVD system

Mubarak Ali



CORRECTION

5371

Correction: Impact of thermal gas treatment on the surface modification of Li-rich Mn-based cathode materials for Li-ion batteries

Maximilian Mellin, Zhili Liang, Hadar Sclar, Sandipan Maiti, Igor Píš, Silvia Nappini, Elena Magnano, Federica Bondino, Ilargi Napal, Robert Winkler, Réne Hausbrand, Jan P. Hofmann, Lambert Alff, Boris Markovsky, Doron Aurbach, Wolfram Jaegermann and Gennady Cherkashinin*

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