

# Materials Advances

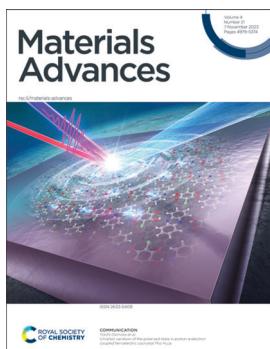
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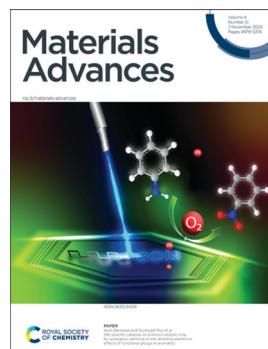
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ISSN 2633-5409 CODEN MAADC9 4(21) 4979–5374 (2023)



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See Yoichi Okimoto et al., pp. 5126–5130.  
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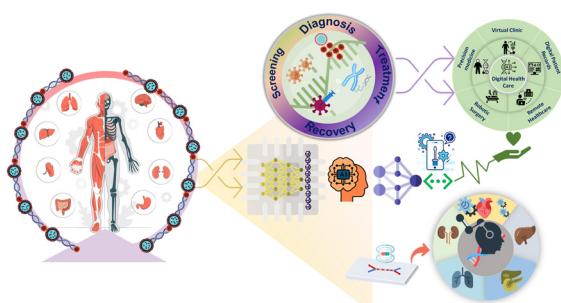
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Kamil Reza Khondakar,\* M. S. Anwar, Hirak Mazumdar and Ajeet Kaushik

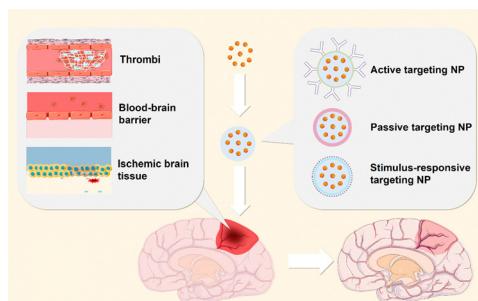


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### Recent advances in targeted nanoparticle drug delivery systems for ischaemic stroke

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



# Materials Advances

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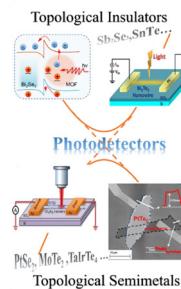


## REVIEWS

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**Research progress on topological material-based photodetectors**

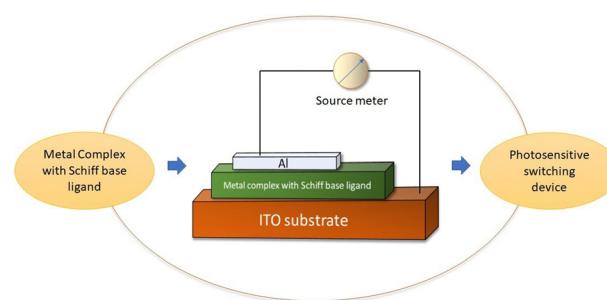
Kewen Wu, Xiaoqi Liao, Muhammad Ahsan Iqbal and Yu-Jia Zeng\*



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

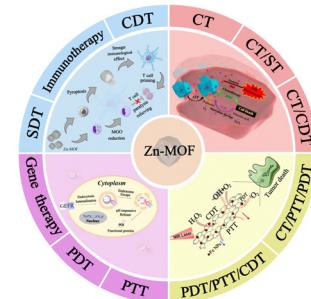
Shibashis Halder



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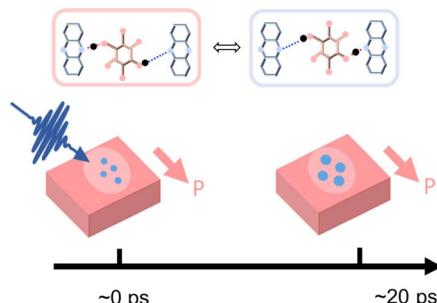
**Response surface methodology: a powerful tool for optimizing the synthesis of metal sulfide nanoparticles for dye degradation**

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



## COMMUNICATION

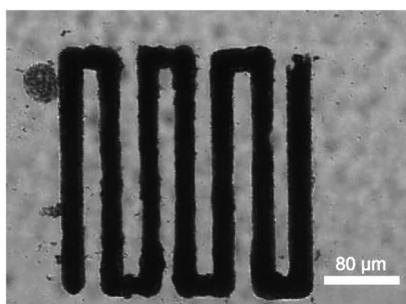
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Ultrafast variation of the polarized state in proton- $\pi$  electron coupled ferroelectric cocrystal Phz-H<sub>2</sub>ca

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

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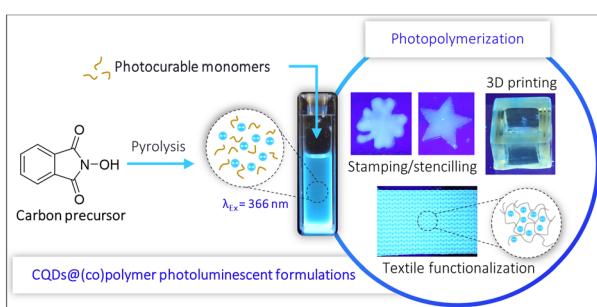
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## Site-specific catalysis on a micro-catalytic chip by synergistic silencing of site-directing electronic effects of functional groups in aromatics

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

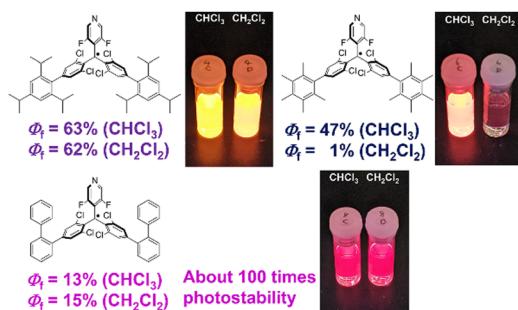
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## Photoinduced polymer-confined CQDs for efficient photoluminescent 2D/3D printing applications

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

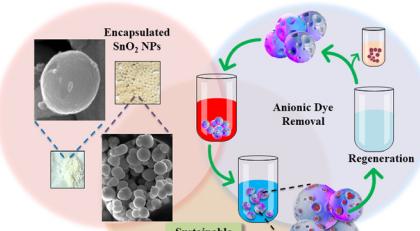


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**Fabrication of highly efficient encapsulated  $\text{SnO}_2$ @alginate beads as regenerative nanosorbents for anionic dye pollutants removal from aqueous solution**

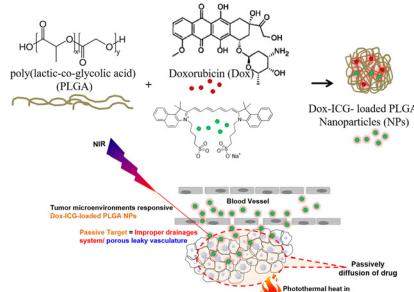
Shikha Jyoti Borah, Akanksha Gupta, Kashyap Kumar Dubey and Vinod Kumar\*



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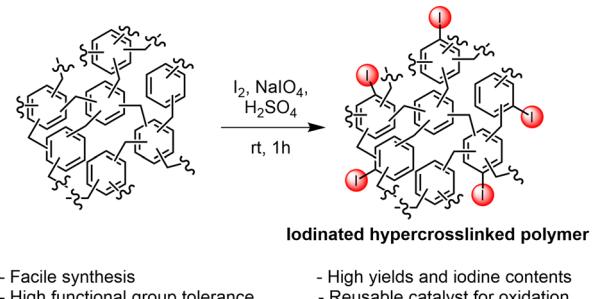
Tunazzina Zaman Khan, Shekh Md Newaj, Ashikur Rahman, Rahnuma Tabassum, Khandaker Nujhat Tasnim, Hasan Mahmud Reza, Md. Selim Reza, Seonki Hong and Shazid Md. Sharker\*



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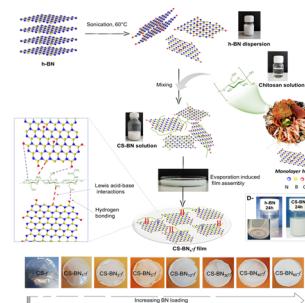
Chanachon Thiamsiri, Thanchanok Ratvijitvech and Torsak Luanphaisarnnont\*



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



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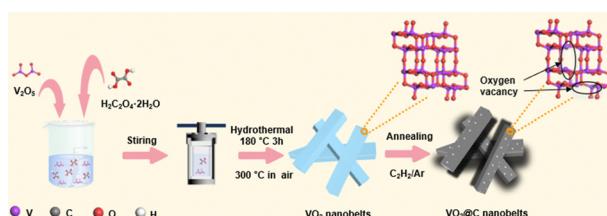
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**From waste to energy: luminescent solar concentrators based on carbon dots derived from surgical facemasks**

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

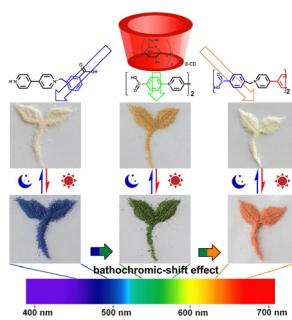
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**Synergistic carbon and oxygen vacancy engineering on vanadium dioxide nanobelts for efficient aqueous zinc-ion batteries**

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

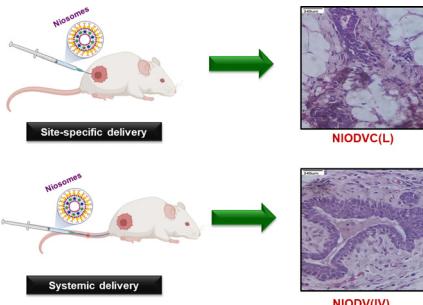
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**Supramolecular inclusion complexes of  $\beta$ -cyclodextrin with bathochromic-shifted photochromism and photomodulable fluorescence enable multiple applications**

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 Pakrudeen, R. Dhanaraj, Niraikulam Ayyadurai, V. Bhavarahamurthy and S. Narayana Kalkura\*

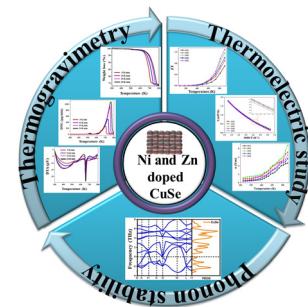


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**The impact of Ni and Zn doping on the thermal durability and thermoelectric variables of pristine CuSe nanoparticles**

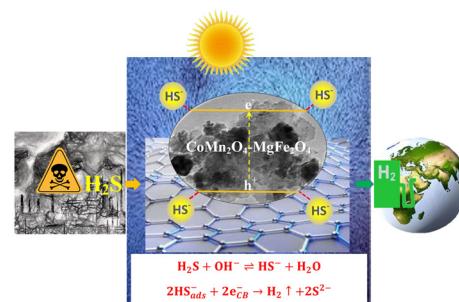
Sefali R. Patel,\* Sunil H. Chaki,\* Mitesh B. Solanki, Rohitkumar M. Kannaujiya, Zubin R. Parekh, Ankurkumar J. Khimani and Milind P. Deshpande



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**A novel magnetic HS<sup>-</sup>-adsorptive nanocomposite photocatalyst (rGO/CoMn<sub>2</sub>O<sub>4</sub>-MgFe<sub>2</sub>O<sub>4</sub>) for hydrogen fuel production using H<sub>2</sub>S feed**

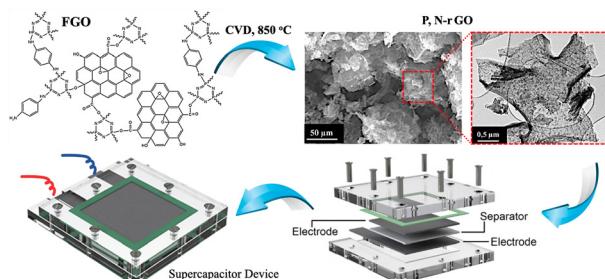
Majid Ghanimati, Mohsen Lashgari,\* Fabio Montagnaro, Vassilios Binas, Michalis Konsolakis and Marco Balsamo



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

Khaled Rhili, Siham Chergui, Juan Carlos Abergó-Martínez, Ahmad Samih El Douhaibi and Mohamed Siaj\*



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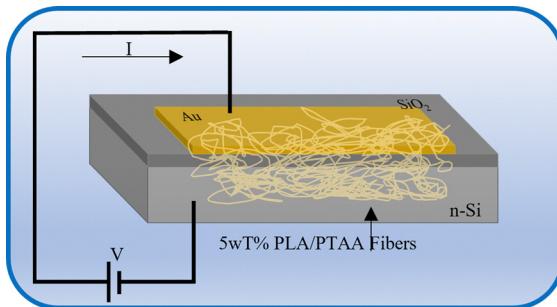
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Walaa Abdullah Sulaiman Al Yahyai, Aya Ali Sulaiman Al Isai, Mohammed F. Alotibi, Bhagavanth Reddy G, Mohammed Al-Abri, Babu Pejjai, Nagaraju Devunuri, Nadavala Siva Kumar, Ahmed S. Al-Fatesh, Ahmed I. Osman\* and Kondaiah Seku\*



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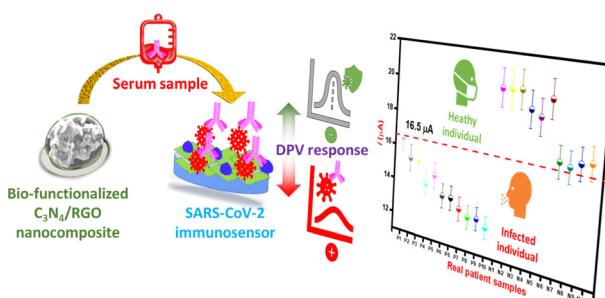
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**Electro-spun poly(lactic acid)/poly(triarylamine)(PLA/PTAA) composite nanofibers with low PLA content for fiber-based electronic applications**

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

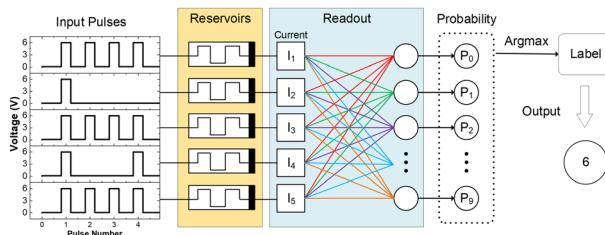
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**Detection of specific antibodies against SARS-CoV-2 spike protein via ultra-sensitive bio-functionalized carbonnitride-reduced graphene oxide electrochemical immunosensing platform in real samples**

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

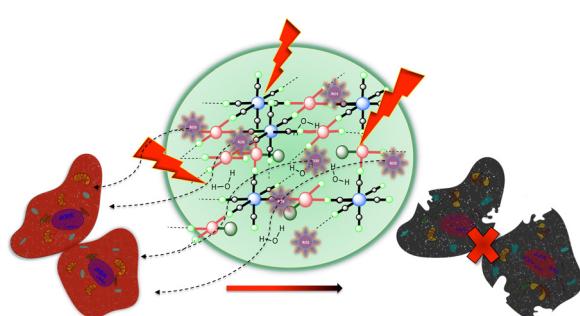
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**Reservoir computing using back-end-of-line SiC-based memristors**

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\*

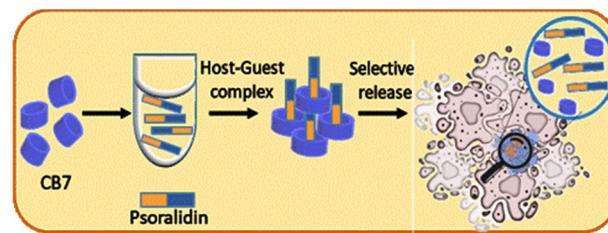


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**Psoralidin–cucurbit[7]uril complex with improved solubility to tackle human colorectal cancer: experimental and computational study**

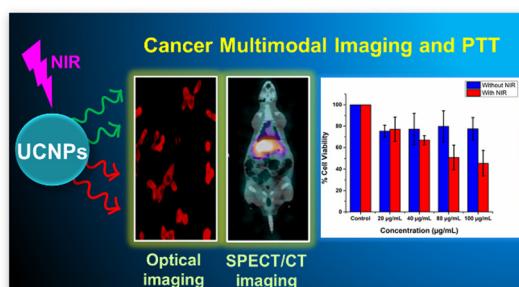
Fortuna Ponte, Nada K. Sedky, Iten M. Fawzy, Fatma Mokhtar, Emilia Sicilia\* and Sherif Ashraf Fahmy\*



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**Remarkably enhanced upconversion luminescence in  $\text{Na}^+$  codoped spinel nanoparticles for photothermal cancer therapy and SPECT imaging**

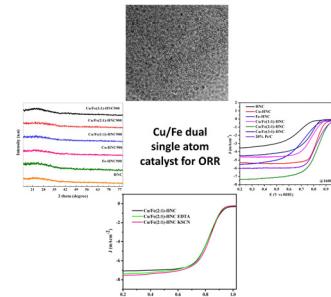
Annu Balhara, Santosh K. Gupta,\* Nidhi Aggarwal, Swapnil Srivastava, Jibon Jyoti Panda,\* Sourav Patra, Avik Chakraborty, Sutapa Rakshit and Rubel Chakravarty



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

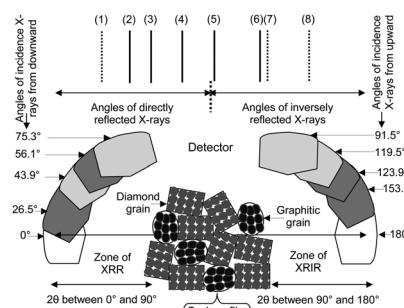
Banafsha Habib, Shaowei Chen, Forrest Nichols, Shamraiz Hussain Talib, Nasima Arshad, Anham Zafar, Arshad Mahmood, Shahid Zaman\* and Naveed Kausar Janjua\*



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

Mubarak Ali



## CORRECTION

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**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 Piš, 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\*

