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Interdisciplinary research for the development of sustainable energy technologies

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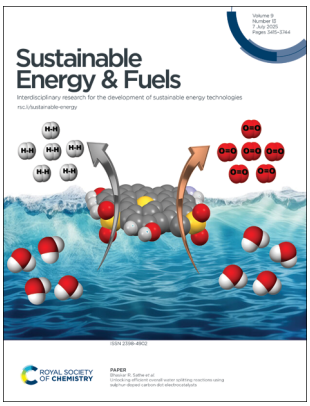

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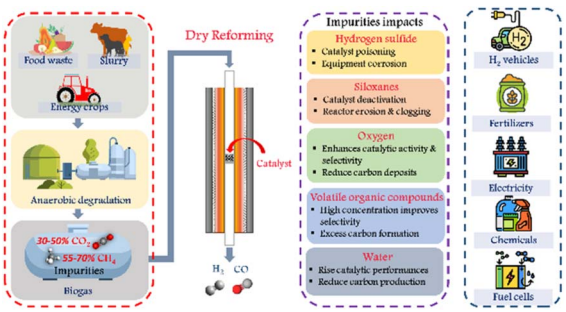
Challenges in biogas valorization, effect of impurities on dry reforming process during H_2 generation: a review

Mahdi Mohamad Ali, Vishal Dutta, Hélène Guy, Sylvain Durécu, Edmond Abi-Aad, Carmen Ciotonea* and Cédric Gennequin



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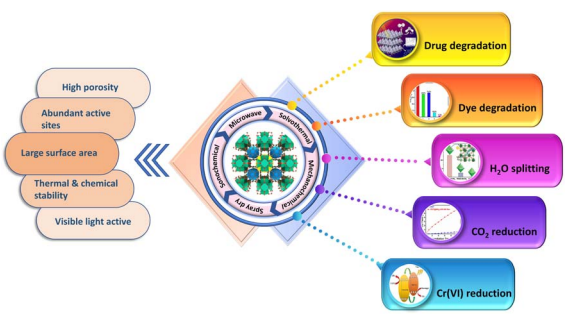
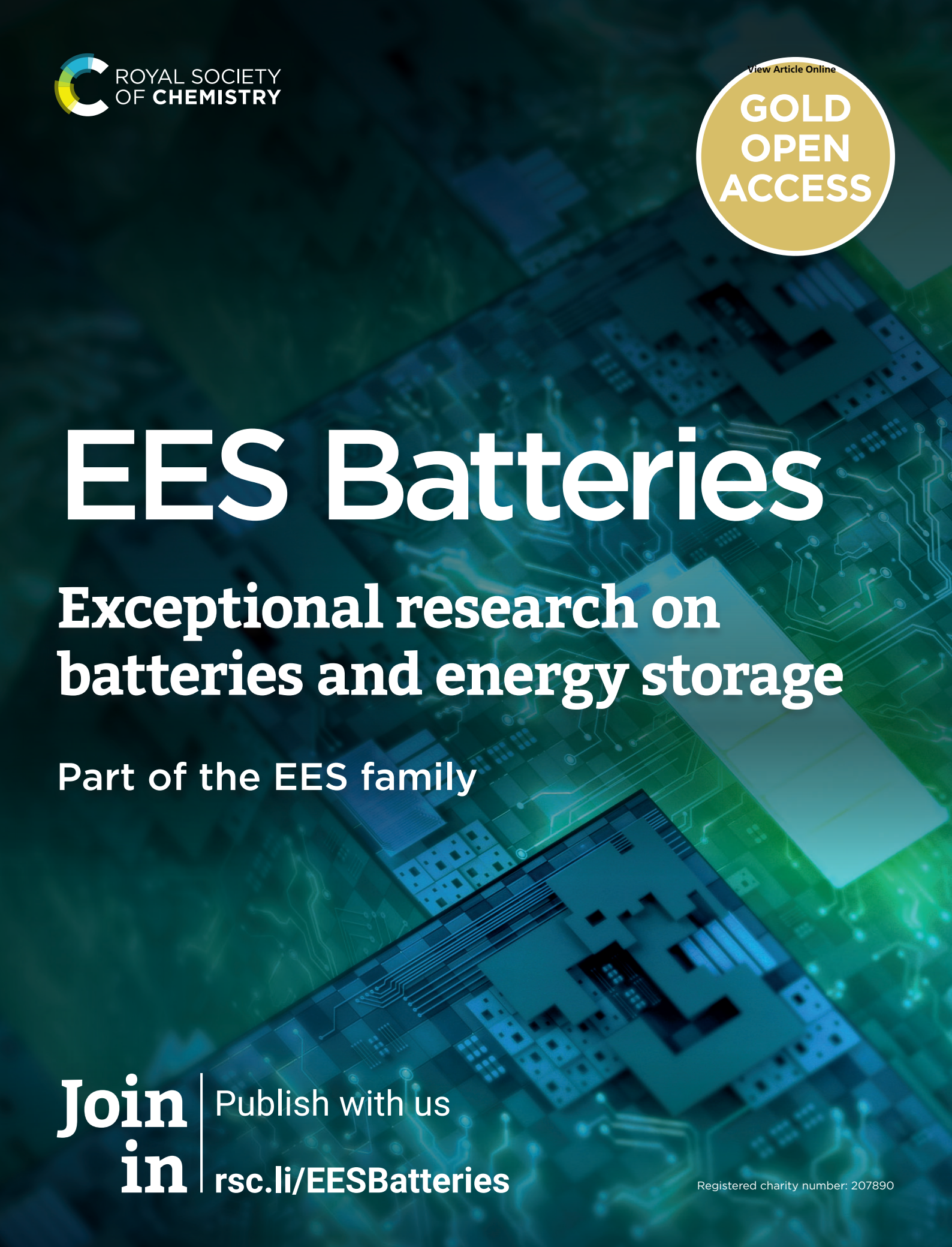
UiO-66-NH_2 and its functional nanohybrids: unlocking photocatalytic potential for clean energy and environmental remediation

Nagma Sultana, Priyanka Priyadarshini and Kulamani Parida*

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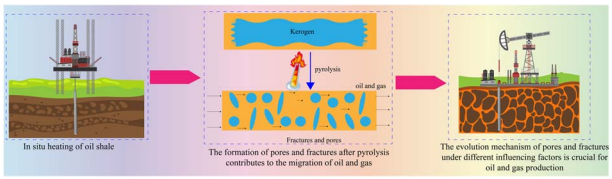
Evolutionary mechanisms of pore-fracture network development in oil shale during pyrolysis: current research progress and perspectives

Yuan Wang, Nianyin Li,* Xiaoqiang Pang, Hong Zhang, Chao Wang and Yuanzhao Yao



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Application of carbon-based electrocatalysts derived from waste materials in fuel cells and electrolyzers

Muqaddas Fatima, Fawad Ahmad, Waiza, Salma Noor, Sana Shafique, Ahmed B. M. Ibrahim, Mohamed A. Habib, Muhammad Imran Khan* and Abdallah Shanableh

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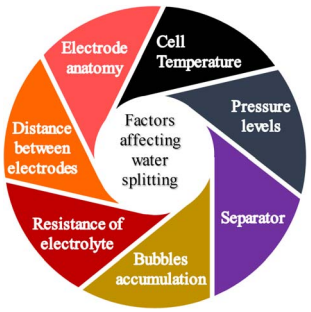
Advancing industrial rate current density in water electrolysis for green hydrogen production: catalyst development, benchmarking, and best practices

Samruddhi V. Chauhan, Kinjal K. Joshi, Pratik M. Pataniya and C. K. Sumesh*



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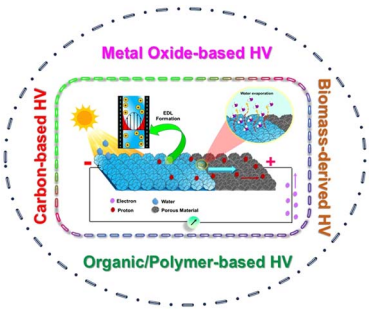
Harnessing evaporation: a mini review on advances in hydrovoltaic technology for green energy generation

Subramanian Rajalekshmi, Subham Kumar Subudhi, Fathima Thanveera Kalathingal and Alagarsamy Pandikumar*



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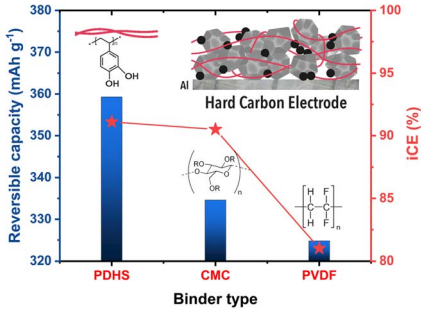

A polydihydroxystyrene (PDHS) mussel-mimetic binder: toward sustainable hard carbon electrodes with outstanding performance in sodium-ion batteries

Adrian Beda, Jason Beaufrez, Charles Cougnon and Camélia Matei Ghimbeu*

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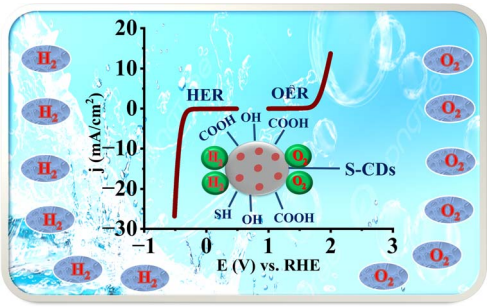

Unlocking efficient overall water splitting reactions using sulphur-doped carbon dot electrocatalysts

Rohini A. Kale, Pratiksha D. Tanwade, Balaji B. Mulik and Bhaskar R. Sathe*

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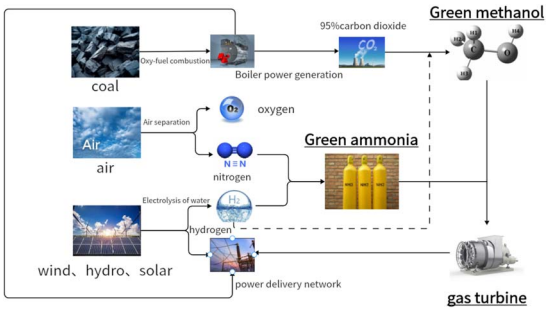

The effect of the formation of key components on the laminar combustion rate of ammonia/methanol mixture combustion under medium-pressure gas turbine related working conditions

Yanfei Zhang, Junjie Li, Mingming Huang,* Qingjun Zhao, Qin Li, Zewen Yu, Jianfang Du, Xiao Zhang, Zhuoming Xiong, Yumeng Cao, Zhengyang Li, Zhaoling Zhang and Lei Dong

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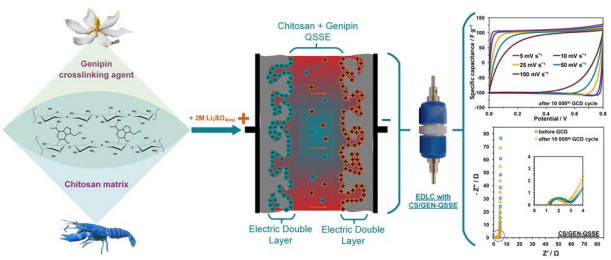

A genipin-crosslinked chitosan hydrogel as a quasi-solid-state electrolyte for sustainable electrochemical capacitors

Krzysztof Nowacki* and Maciej Galiński

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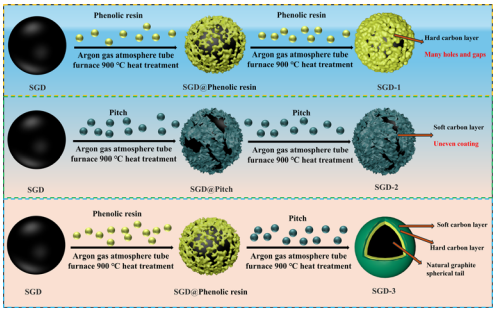
A microcrystalline soft carbon modified hard carbon coating enhances cycling stability and initial efficiency in natural graphite anodes

Jiangtao Liang, Pengtao Wang, Zhuoqi Liu, Song Yang,* Shoujun Liu, Junhao Liu and Xuzhong Gong*



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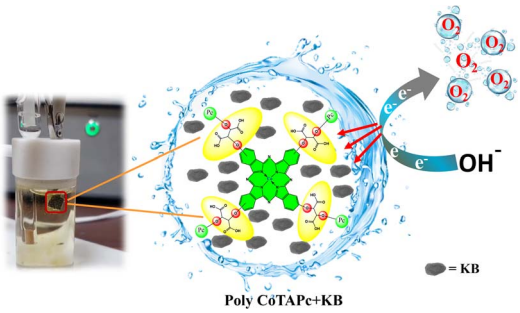
Non-precious macrocycle embedded hybrid nanocomposites for efficient water oxidation

Giddaerappa,* Sundarraj Sriram, P. Abdul Junaid, Lokesh Koodlur Sannegowda, M. H. Naveen and K. Sudhakara Prasad*



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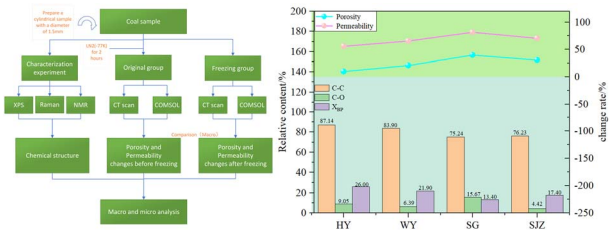
Study on porosity and permeability changes in coal freezing by liquid nitrogen based on the chemical structure

Peng Jia,* Xiaoqi Huang, Jinzhang Jia and Sheng Li



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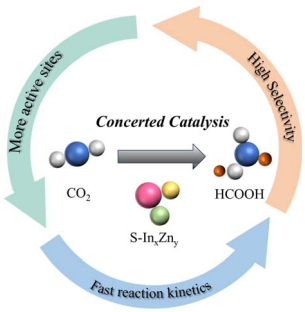
Morphologically engineered S-In_xZn_y bimetallic catalysts *via* an ionothermal approach for enhanced carbon dioxide electroreduction to formate

Xiaoyu Chen, Jie Liu, Shuoshuo Feng, Yanhong Zou,* Kai Wu, Fanghua Ning, Jin Yi and Yuyu Liu*



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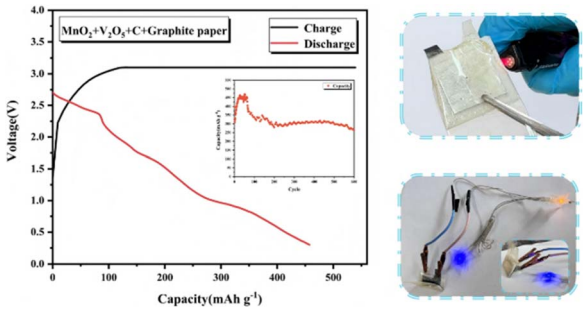

A high-performance chloride-ion battery based on MnO_2@V_2O_5@C cathode synergy

Jingwen Li, Mingqiang Li,* Shuailiang Xu and Haochen Weng

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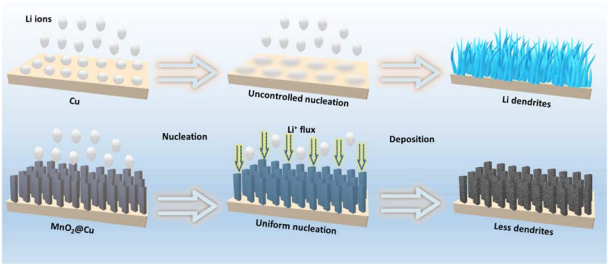

Stable lithium plating/stripping electrochemistry promoted by a MnO_2 modified copper current collector for stable lithium metal anodes

Bidhan Pandit* and Chun Huang*

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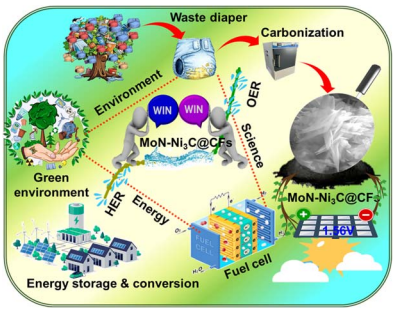

Infant diaper waste-derived multifunctional MoN-Ni_3C@CFs for full water splitting at neutral and alkaline pH and solar-to-hydrogen conversion: a win–win combination

Jayaraman Jayabharathi,* Thanikachalam Akshy, Dhanasingh Thiruvengadam, Ravichandran Nithiasri, Arokiadoss Davidrichetson and Mayakrishnan Raj kumar

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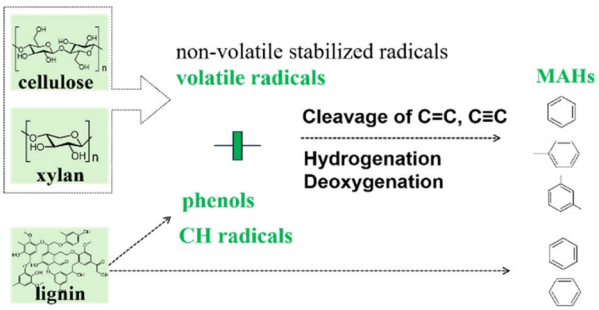

Effect of individual organic components on the thermal decomposition and generation of monocycle aromatic hydrocarbons in the pyrolysis of cellulose/xylan/lignin mixtures

Guozhang Chang, Shanshan Dai, Xingyu Ye, Jie Li, Yunxiu Ren,* Weiwei Cui,* Cuiping Wang and Jian Zhang

A high output triboelectric nanogenerator based on 2D boron nitride nanosheet–PVP composite ink and electrospun cellulose acetate nanofibers for kinetic energy harvesting and self-powered tactile sensing applications

Ainikulangara Sundaran Bhavya, Hasna M. Abdul Hakkeem, Saju Pillai, Achu Chandran* and Kuzhichalil Peethambharan Surendran*