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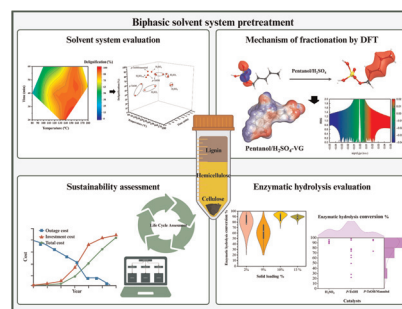
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CRITICAL REVIEWS

4094

Harnessing the potential of biphasic solvent systems in lignocellulosic biomass fractionation through computational insights

Maryam Saleknezhad, Meysam Madadi,* Salauddin Al Azad and Vijai Kumar Gupta*



COMMUNICATIONS

4128

Electrochemical α -hydroxylation of aryl ketones with methanol as the oxygen source

Zhaoliang Yang,* Jianwei Huang, Yahao Wang, Haiyan Du, Yuan Zhou* and Mingming Yu

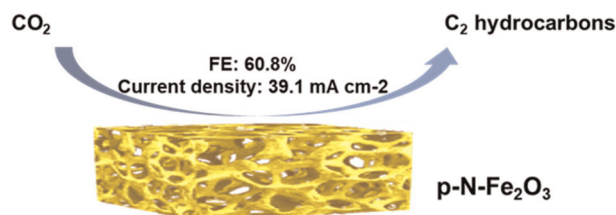


- Oxidant-free and metal-free
- Methanol as the Oxygen Source
- Broad Substrate Scope and high yields
- Scaled up to 2-gram synthesis

4134

Enhancing the selectivity of C₂ hydrocarbons over Fe-based catalysts by controlling nitrogen doping in electrocatalytic CO₂ reduction

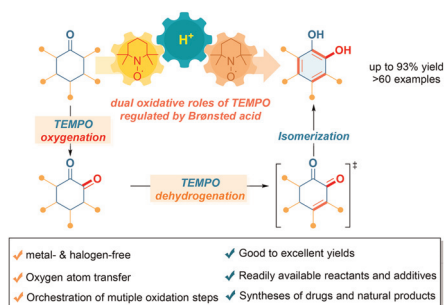
Peng Chen, Shiqiang Liu, Pei Zhang,* Xinchun Kang, Xing Tong, Jun Ma, Chunjun Chen, Zhimin Liu, Xueqing Xing, Zhonghua Wu, Lirong Zheng and Buxing Han*



4143

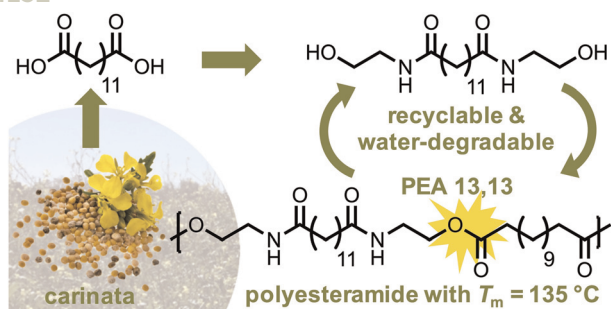
Synthesis of catechols from cyclohexanones via acid-regulated dual oxidative transformations with TEMPO

Biping Xu, Xiaojie Liu, Lei Deng, Yaping Shang, Xiaoming Jie* and Weiping Su*



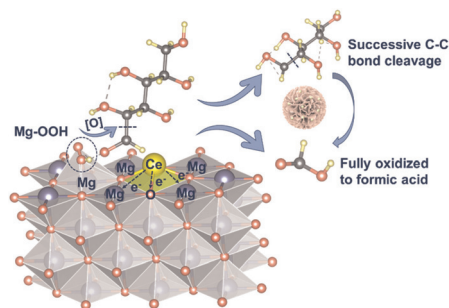
PAPERS

4152

**Bio-oil derived polyesteramides as water-degradable replacements for polyethylene**

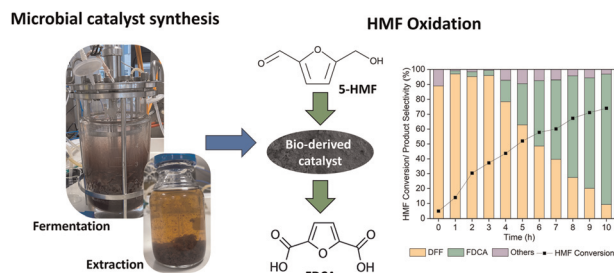
Yohei Yoshinaka and Stephen A. Miller*

4165

**Tailoring the electronic structure and acid–base properties of MgO by Ce doping promotes biomass-derived formic acid production at room temperature**

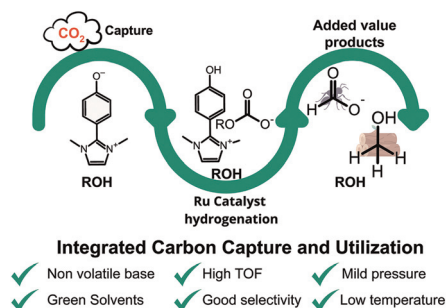
Yiqi Geng, Wenhua Xue, Jian Ye, Ruilong Zhang, Puranjan Mishra and Jun Zhao*

4177

**Pulcherrimin: a bio-derived iron chelate catalyst for base-free oxidation of 5-hydroxymethylfurfural to furandicarboxylic acid**

Swathi Mukundan, Fabio Santomauro, Daniel Miramontes Subillaga, Noelia Villarroel, Adriano Randi, Sandra E. Dann, Jose F. Marco and Jonathan L. Wagner*

4190

**Zwitterionic alcoholic solutions for integrated CO₂ capture and hydrogenation**

Bruno A. Cândido, Marcelli L. C. Zanirati, Francisco P. dos Santos, Wilmer Villarreal, Jairton Dupont and Pedro Migowski*



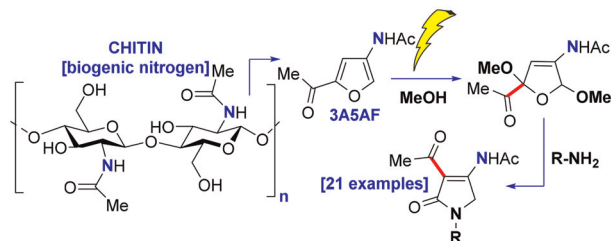
4244



Protective fractionation of highly uncondensed lignin with high purity and high yield: new insights into propanediol-blocked lignin condensation

Yaling Zhao, Deqing Zhao,* Jingpeng He, Kaibin Ma, Jiatian Zhu, Jianrong Liu,* Yongqi Zhang, Qinqin Xia and Ting Li

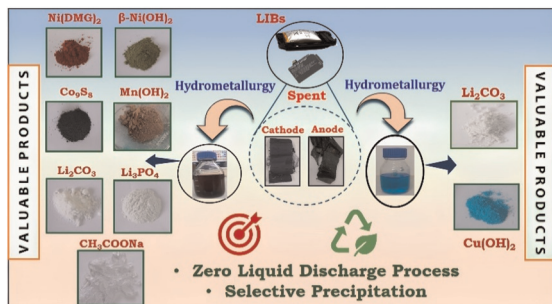
4259



Electrochemical oxidation–cyclocondensation of chitin-derived 3-acetamido-5-acetylfuran (3A5AF) for the synthesis of 3-acetyl-4-acetamidopyrrolin-2-ones

Juan J. Arteaga Giraldo, Tilo Söhnel, Paul A. Kilmartin and Jonathan Sperry*

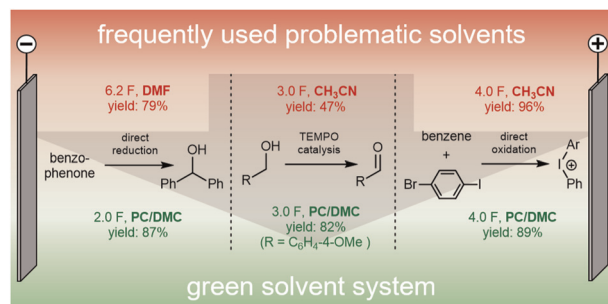
4267



A closed-loop zero-liquid-discharge process for the precipitative separation of all valuable metals from waste lithium-ion batteries of mixed chemistries at room-temperature

Nishu Choudhary, Hiren Jungi, Maulik V. Gauswami, Anu Kumari, Arvind B. Boricha,* Jatin R. Chunawala, Joyee Mitra* and Alok Ranjan Paital*

4280



On the use of propylene carbonate and dimethyl carbonate as green solvents in organic electrosynthesis

Adrian Prudlik, Alexandra Matei, Anton Scherkus, Javier Ivan Bardagi, Sebastian B. Beil* and Robert Francke*

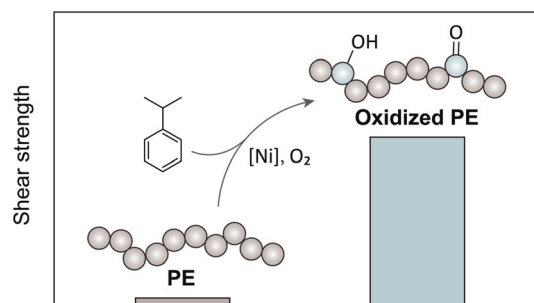


PAPERS

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Cumene-mediated aerobic oxidation of polyethylene

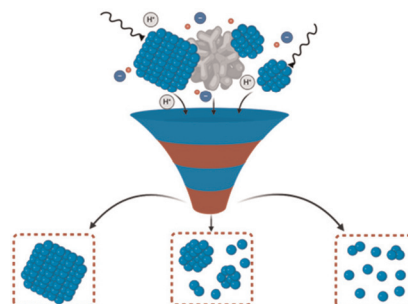
Yizhen Che, Yanfen Wu, Yanyan Zheng, Helai Huang, Qikun Hu and Zhiqiang Niu*



4295

A nano-SPR model for predicting the dissolution rate of metal and metal oxide nanomaterials in the aqueous environment

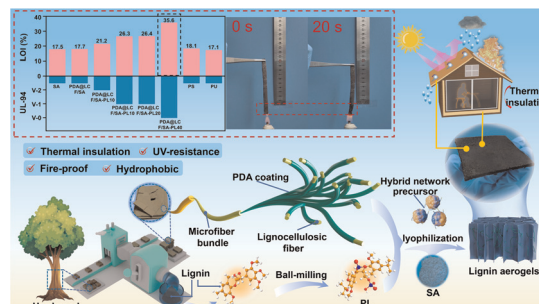
Michal Kalapus and Tomasz Puzyn*



4308

P–N synergy with lignocellulosic biomimetic flame-retardant aerogels for effective fire-safe and thermal insulation

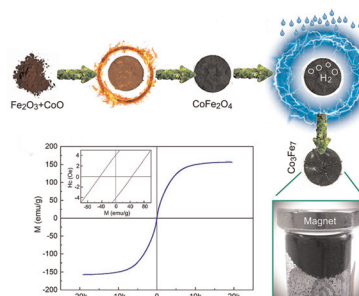
Tao Gui, Shuang-Lin Zou, Hao-Zhen Dou, Wen-Feng Ren, Chang-You Shao, Chun-Lin Xu, Ling-Ping Xiao* and Run-Cang Sun



4320

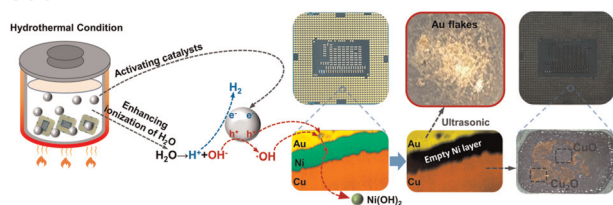
Water-assisted clean electro-preparation of Co₃Fe₇ in molten salts: its enhanced ferromagnetic properties and hydrogen evolution rate

Shengxi Zhao, Kaiyu Xie and Ali Reza Kamali*



PAPERS

4330



Hydrothermal enhanced etching of Ni for direct recovery of gold flakes from electronic waste

Shuling Shen,* Yu Chu, Ziwei Feng, Zheng Du, Huixin Xiu, Xinjuan Liu, Shuning Xiao, Zhihong Tang, Jing Li and Xun Wang*

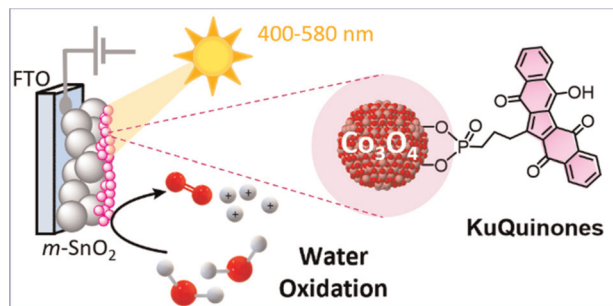
4341



Sustainable and biobased self-blown polycarbonate foams: from synthesis to application

Tansu Abbasoglu, Xabier Lopez de Pariza, Gabriel Perli, Danila Merino, Phœbé Caillard-Humeau, Antoine Duval, Luc Avérous, Lourdes Irusta, Alba González and Haritz Sardon*

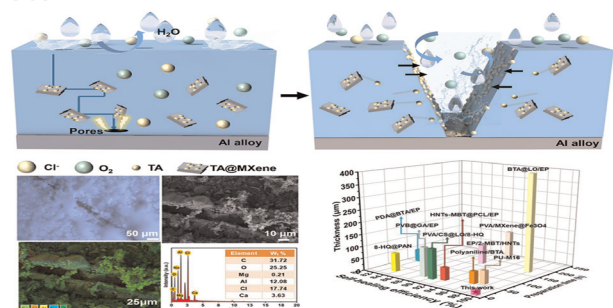
4352



KuQuinone-sensitized cobalt oxide nanoparticles for photoelectrocatalytic oxygen evolution with visible light

Ruggero Bonetto, Nuria Romero,* Federica Sabuzi,* Mattia Forchetta, Mirco Natali, Raffaella Signorini, Roger Bofill, Laia Francàs, Marcos Gil-Sepulcre,* Olaf Rüdiger, Serena DeBeer, Jordi Garcia-Antón, Karine Philippot, Pierluca Galloni, Andrea Sartorel* and Xavier Sala*

4369



Enhanced corrosion resistance of an eco-friendly MXene composite coating with self-healing performance

Xiaoqing Ma, Tiange Wang, Baolong Gong, Jiale Hou, Shuxian Ji and Huaijie Cao*



4385

Shedding light on the path to multifunctional task-specific supported ionic liquids with enhanced catalyst stability and activity

Sergio Alcalde, Raúl Porcar, Nuria Martín, Francisco G. Cirujano, Belén Altava and Eduardo García-Verdugo*

