

Industrial Chemistry & Materials

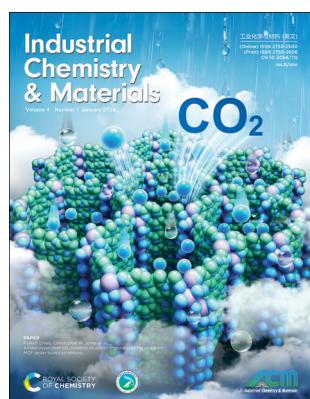
An international journal of significant innovative research and major technological breakthroughs in all aspects of industrial chemistry and materials

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Cover

See Ryan P. Lively,
Christopher W. Jones et al.,
pp. 52-64.

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REVIEWS

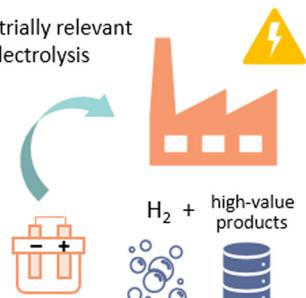
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Electrooxidation of alcohols under the operating conditions of industrial alkaline water electrolysis

Floris van Lieshout, Eleazar Castañeda-Morales,
Arturo Manzo-Robledo and Dulce M. Morales*

Oxidizing alcohols under industrially relevant
conditions for alkaline water electrolysis

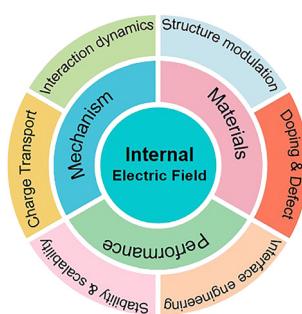
- High current density
- Low overpotential
- Concentrated electrolyte
- High selectivity
- Elevated temperatures



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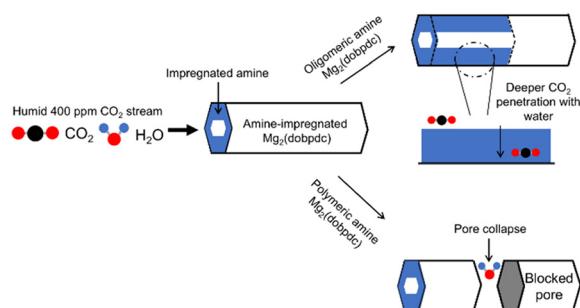
Engineering internal electric fields in photoelectrochemical systems for enhanced hydrogen evolution: mechanisms, characterization and design strategies

Fen Qiao* and Bo Li



PAPERS

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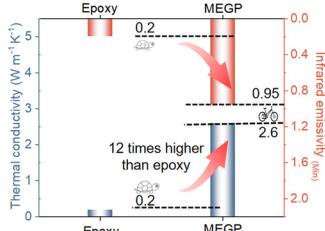


Amine-dependent CO_2 sorption on amine-impregnated $\text{Mg}_2(\text{dobpdc})$ MOF under humid conditions

MinGyu Song, Guanhe Rim, Ghazal Mirzazadeh, Jacob Hoffman, Hyun June Moon, Johannes E. Leisen, Omid Ghaffari Nik, Ryan P. Lively* and Christopher W. Jones*

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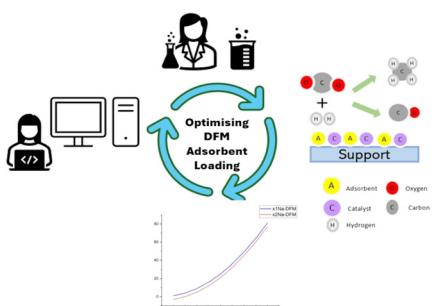
- ✓ High thermal conductivity
- ✓ High infrared emissivity
- ✓ Anti-corrosion
- ✓ Good adhesion
- ✓ Eco-friendly



A novel high thermal conductivity powder coating based on synergistic reinforcement of heat conduction and infrared heat radiation

Di Bao, Junqi Ning, Dan Lin, Sicheng Yuan, Jianwen Peng, Yue Sun, Huaiyuan Wang,* Yanji Zhu and Ruitao Wang

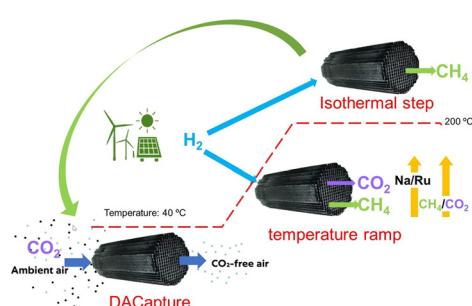
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Effect of adsorbent loading on NaNiRu-DFMs' CO_2 capture and methanation: finding optimal Na-loading using Bayesian optimisation guided experiments

Soudabeh Bahrami Gharamaleki, Sergio Carrasco Ruiz, Tomas Ramirez Reina, Michael Short and Melis S. Duyar*

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Bifunctional Na-Ru on gamma-alumina for CO_2 capture from air and conversion to CH_4 : impact of the regeneration method and support on monolithic contactors

Enrique García-Borjé,* José M. Conesa, Antonio Guerrero-Ruiz and Inmaculada Rodríguez-Ramos

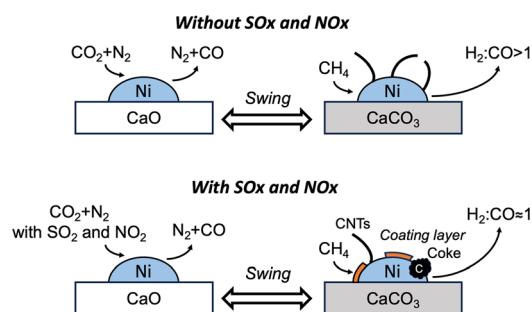


PAPERS

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Integrated CO₂ capture and methane dry reforming over a Ni–Ca dual functional material under SO₂/NO_x-containing flue gas conditions: a mechanistic study

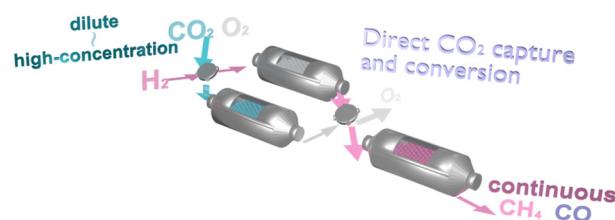
Bocheng Yu, Muqing Yang, Yijian Qiao, Yaozu Wang, Yongqing Xu, Xuan Bie, Qinghai Li, Yanguo Zhang, Shuzhuang Sun* and Hui Zhou*



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Continuous direct air capture and conversion tandem system applicable to a wide range of CO₂ concentrations

Shinta Miyazaki, Akihiko Anzai,* Masaki Yoshihara, Hsu Sheng Feng, Shinya Mine, Takashi Toyao and Ken-ichi Shimizu*



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Synthesis and properties of symmetric glycerol-derived (E/Z)-1,3-diether-2-alkenes

Jun Wang, Shuai Qian, Gbolagade Olajide, Sourav Chatterjee, Tibor Szilvási and Jason E. Bara*

