## Sustainable Energy & Fuels

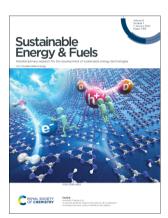
Interdisciplinary research for the development of sustainable energy technologies

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#### Cover

See Kazuhiko Maeda et al., pp. 36–42. Image reproduced by permission of Kazuhiko Maeda from Sustainable Energy Fuels, 2024, 8, 36.

#### REVIEW

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### Syngas conversion to biofuels and biochemicals: a review of process engineering and mechanisms

Habiba Khalid, Farrukh Raza Amin, Lian Gao, Limei Chen, Wuxi Chen, Sundus Javed and Demao Li\*

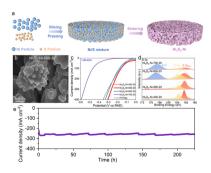


#### COMMUNICATION

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## An efficient Ni<sub>3</sub>S<sub>2</sub>-Ni electrode constructed by a one-step powder metallurgy approach for the hydrogen evolution reaction

Yang Zhao, Xiaoqian Shi, Bin Zhang, Shizhong Wei,\* Jiping Ma, Jianbin Lai, Guangmin Zhou and Huan Pang







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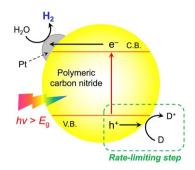
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Fundamental questions
Elemental answers

#### A rational guide to improve the activity of a hydrogen-evolving polymeric carbon nitride photocatalyst

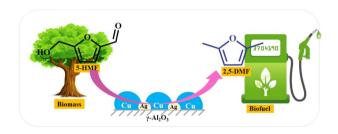
Kazuhiko Maeda,\* Tomoharu Maeda, Chomponoot Suppaso, Shunta Nishioka, Yoshinobu Kamakura, Shuhei Yasuda and Toshiyuki Yokoi



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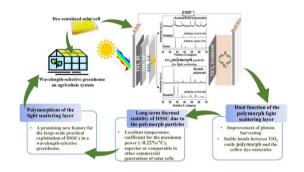
#### Studies on bimetallic Cu-Ag supported alumina catalysts for hydrodeoxygenation of 5hydroxymethylfurfural to 2,5-dimethylfuran

D. Dhana Lakshmi, Yogita, B. Srinivasa Rao and N. Lingaiah\*



#### Towards the thermal stability of dye-sensitized solar cells for wavelength-selective greenhouses using the polymorphism of light-scattering layers

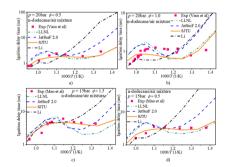
Daniel Ursu, Melinda Vajda, Elisei Ilieş, Radu Ricman, Magdalena Marinca, Szilard Bularka, Marinela Miclau\* and Aurel Gontean\*



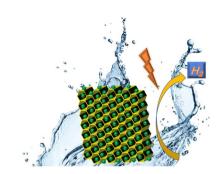
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#### Auto-ignition and reaction kinetic characteristics of hydrogen-enriched n-dodecane mixtures under engine-like thermodynamic conditions

Zhihao Yang, Changhui Zhai,\* Zhen Gong and Yejian Qian



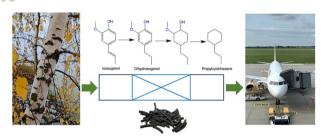
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#### Honeycomb-like hollow carbon loaded with ruthenium nanoparticles as high-performance HER electrocatalysts

Peng-Cheng Ji, Yang Teng, Hong-Cheng Li, Ming-Yun Guan and Hai-Lang Jia\*

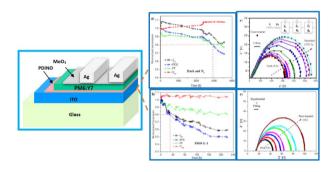
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#### Hydrodeoxygenation of isoeugenol in continuous mode using bifunctional Pt-Beta 25-binder catalysts for renewable jet fuel production

Mark E. Martínez-Klimov,\* Olha Yevdokimova, Päivi Mäki-Arvela, Jennifer Cueto, Nataliya Shcherban, Zuzana Vajglová, Kari Eränen and Dmitry Yu. Murzin\*

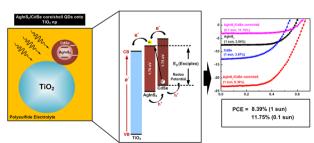
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#### Degradation analysis of inverted PM6 (PBDB-T-2F):Y7 (BTP-4CI) solar cells with PDINO and MoO<sub>3</sub> as the ETL/HTL

Angel Sacramento,\* José L. Abad, Magaly Ramírez-Como, Victor S. Balderrama and Magali Estrada

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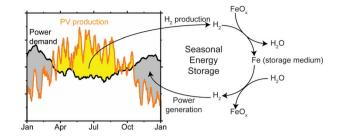
#### AgInS<sub>2</sub>/CdSe type-II core/shell quantum dotsensitized solar cells with an efficiency of 11.75% under 0.1 sun

Siti Utari Rahayu, Yu-Rou Wang, Jen-Bin Shi and Ming-Way Lee\*

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Safe seasonal energy and hydrogen storage in a 1:10 single-household-sized pilot reactor based on the steam-iron process

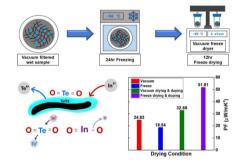
Samuel P. Heiniger, Zhiyuan Fan, Urs B. Lustenberger and Wendelin J. Stark\*



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Powerful drying and doping strategies for enhancing the thermoelectric performance of tellurium nanostructures prepared *via* green hydrothermal synthesis

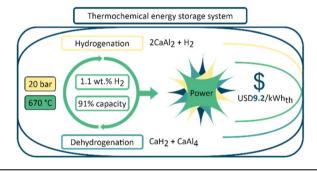
In Ho Kim and Yong Jin Jeong\*



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Calcium hydride with aluminium for thermochemical energy storage applications

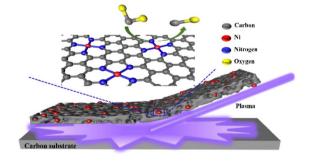
Lucie Desage, Terry D. Humphries,\* Mark Paskevicius and Craig. E. Buckley



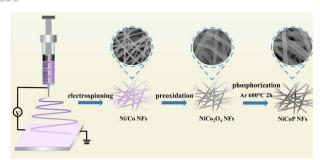
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Ni single-atom catalysts for highly efficient electrocatalytic CO<sub>2</sub> reduction: hierarchical porous carbon as a support and plasma modification

Qiulin Ye, Yaqi Peng,\* Dongdong Wang, Jiabao Lv, Yaoyue Yang, Yue Liu, Zhifu Qi, Songqiang Zhu, Chunliang Ge, Yan Yang, Angjian Wu\* and Shengyong Lu\*



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#### One-dimensional nickel-cobalt bimetallic phosphide nanostructures for the oxygen evolution reaction

Yue Wang, Xin Chang, Zexing Huang, Jiahui Fan, Lu Li\* and Mingyi Zhang\*