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IN THIS ISSUE

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Cover
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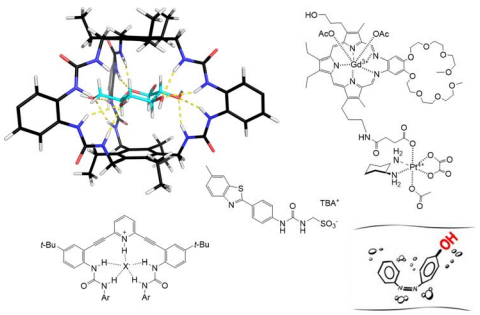
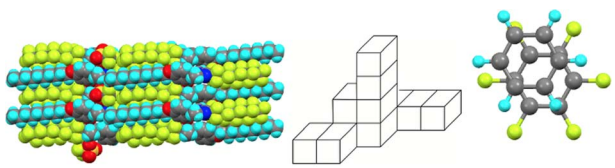
Inside cover
See Nikolay V. Tkachenko, K. Birgitta Whaley, Martin Head-Gordon *et al.*, pp. 22299–22313. Image reproduced by permission of Martin Head-Gordon from *Chem. Sci.*, 2025, **16**, 22299. Image concept created by Nikolay and Anastasiia Tkachenko.

EDITORIAL



PERSPECTIVE



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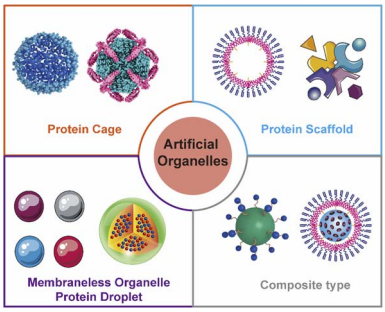

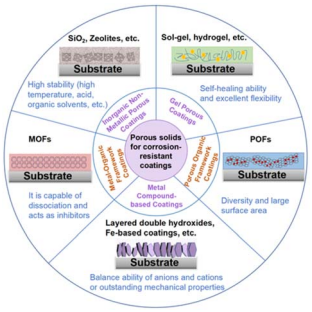

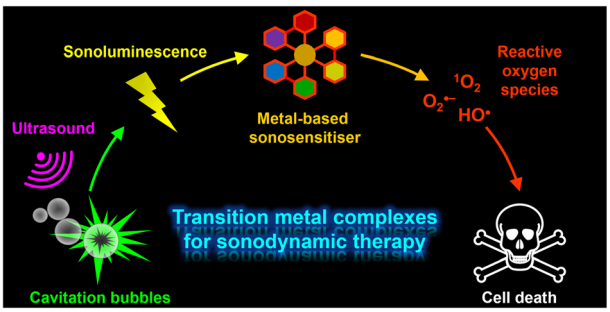

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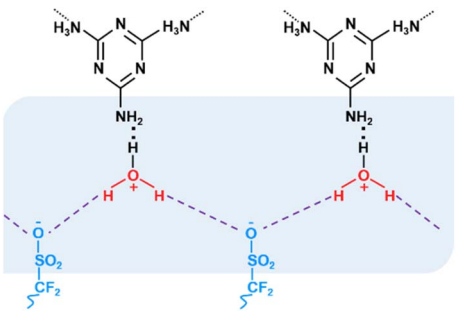

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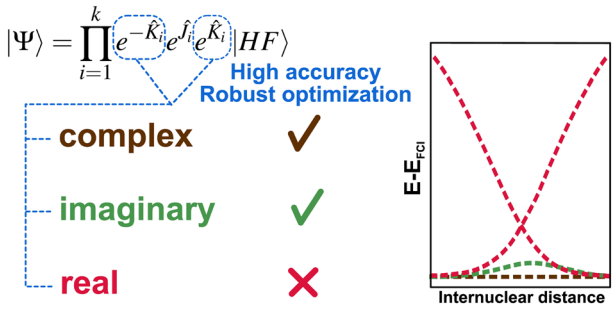
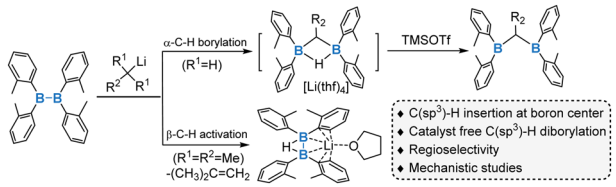


Beyond real: alternative unitary cluster Jastrow models for molecular electronic structure calculations on near-term quantum computers

Nikolay V. Tkachenko,* Hang Ren, Wendy M. Billings, Rebecca Tomann, K. Birgitta Whaley* and Martin Head-Gordon*

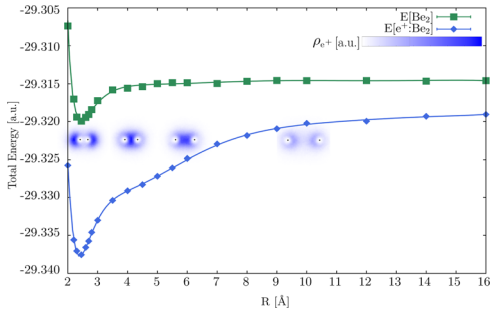
22314



Regioselective C(sp^3)–H borylation *via* a diarylboryl anion surrogate in sp^2–sp^3 diboranes(5)

Xiaofeng Mao, Jie Zhang* and Zuowei Xie*

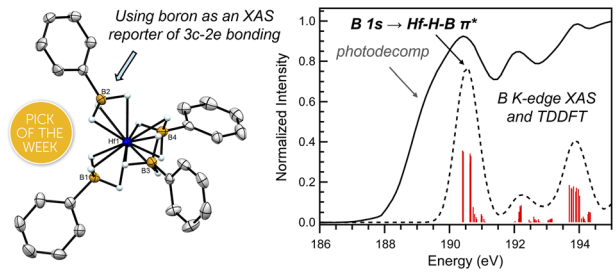
22322



Watch out electrons!: positron binding redefines chemical bonding in Be_2

Rafael Porras-Roldan, Jorge Charry, Felix Moncada, Roberto Flores-Moreno, Márcio T. do N. Varella and Andrés Reyes*

22333



Direct measurement of covalent three-center, two-electron M–H–B bonding in Zr and Hf borohydrides using B K-edge XAS

Hannah M. Hansen, Joshua C. Zgrabik, Peter A. Zacher, III, Jacob J. Schuely, Emily M. Amano, Mai Yer Yang, Daniel K. Unruh, Lucia Zuin, Jason M. Keith* and Scott R. Daly*

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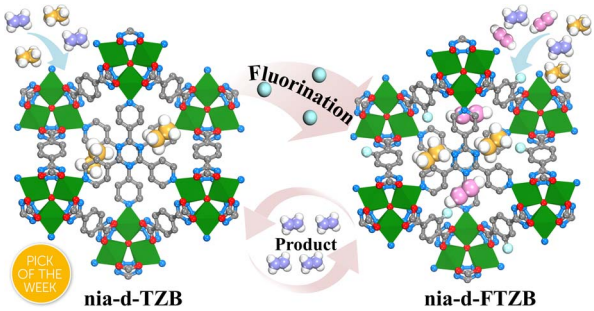

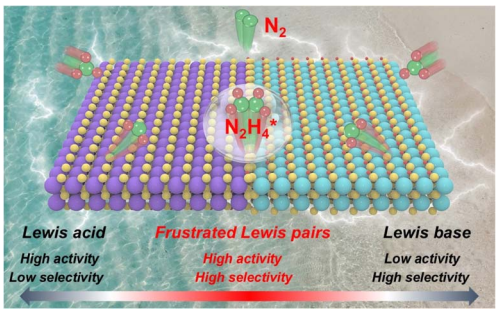

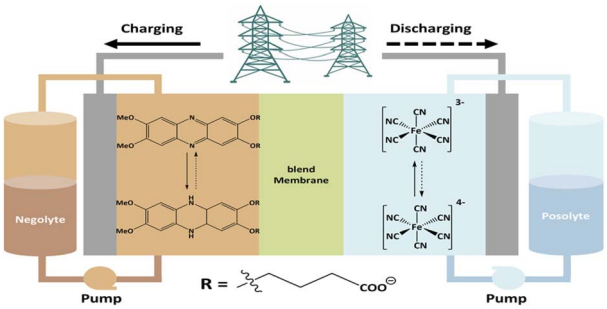

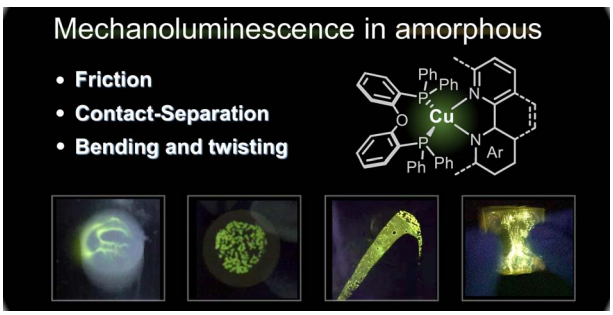

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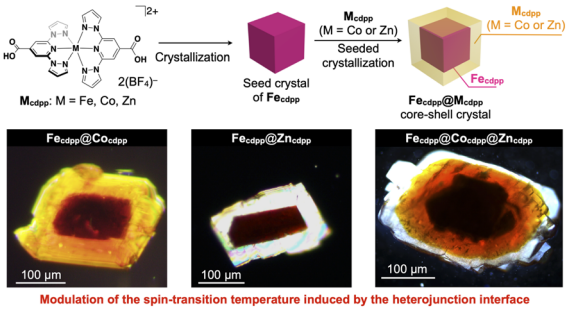
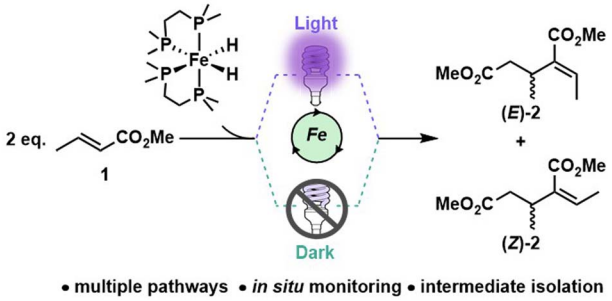


Wrapping a single crystal spin-crossover complex with a single crystal non-spin-crossover complex to modulate the spin-transition temperature

Tomoya Fukui,* Masahiro Tsuchiya, Naoya Mita and Takanori Fukushima

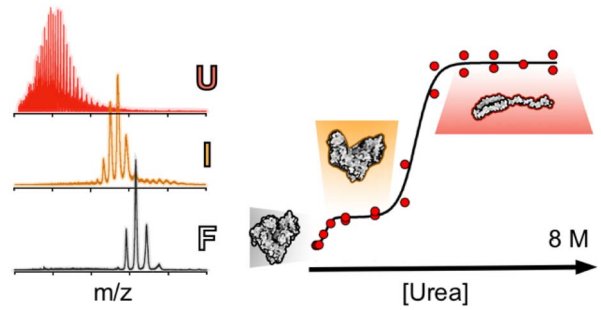
22394



Molecular-level insight into the multiple mechanistic pathways in iron-catalysed alkene dimerisation

Joseph H. P. Cockcroft, Annabel Flook, Patrick J. Boaler, Gary S. Nichol, Jarle Holt, Joost Smit, Jennifer A. Garden* and Stephen P. Thomas*

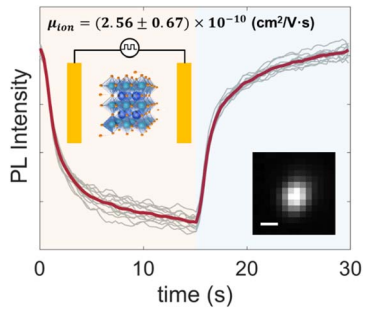
22407



Mass spectrometry detects folding intermediates populated during urea-induced protein denaturation

Nicklas Österlund, Jacob S. Jordan, Eleonora Renzi, Gergo Peter Szekeres and Kevin Pagel*

22417



Non-contact measurement of ion mobility in single halide perovskite particles

Yu-Ling Zou, Ke Li, Ben Niu, Bangyi Yue, Qiang Chen, Yuxi Tian* and Wei Wang*

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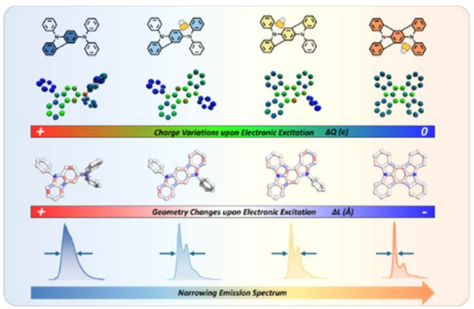

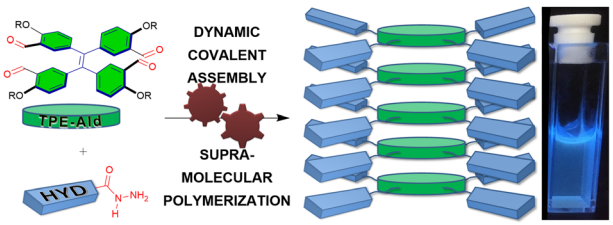

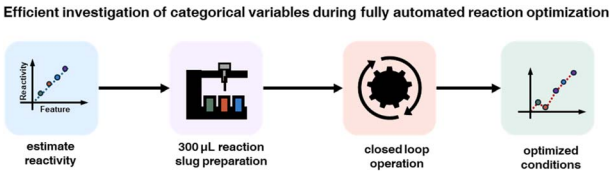

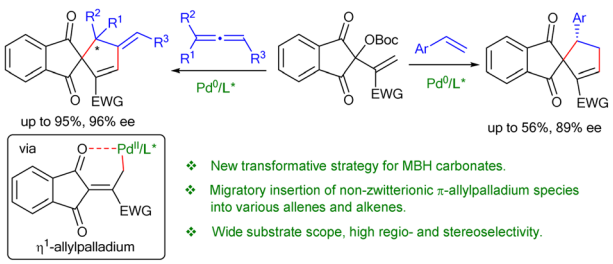

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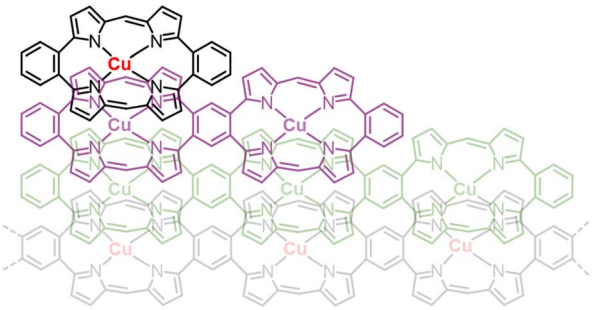

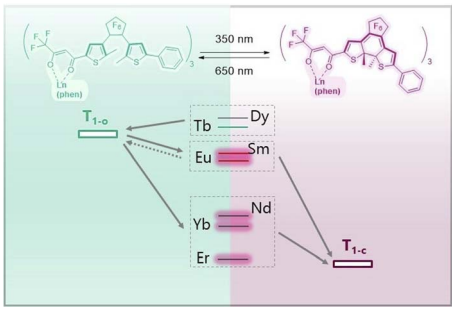

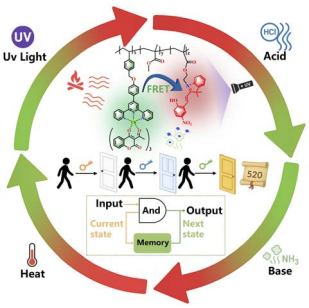

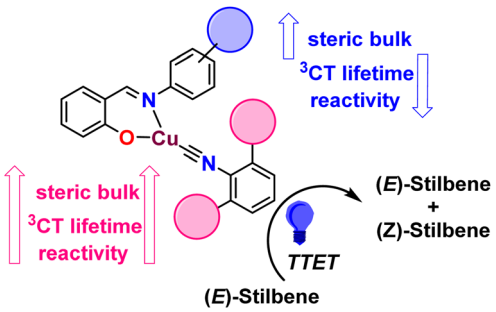

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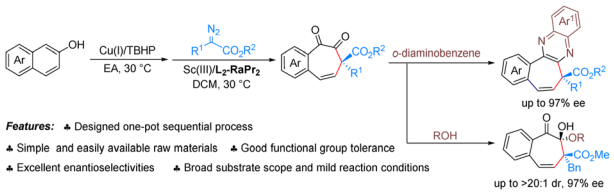
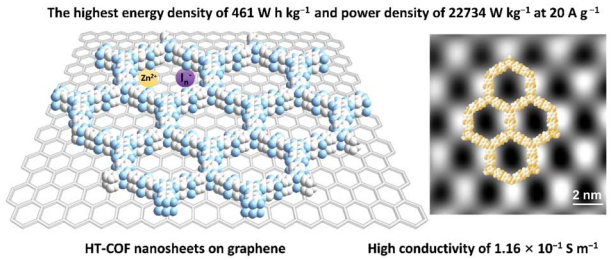


Sequential oxidative dearomatization/asymmetric homologation: from simple naphthols to chiral benzocycloheptanes

Hongkun Zeng, Shiyang Li, Lichao Ning, Tao Huang, Xiaoming Feng* and Lili Lin*

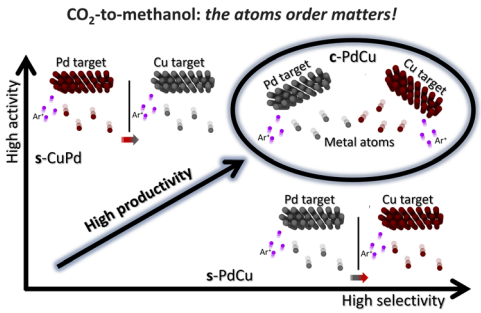
22542



Graphene-supported covalent organic framework nanosheets for high performance aqueous dual-ion batteries

Xiya Yang, Mengying Huang, Guang Lu, Rong Jiang, Xinxin Wang, Zhixin Liu, Lijuan Jiao, Erhong Hao, Dongdong Qi, Kang Wang,* Qian Chen* and Jianzhuang Jiang*

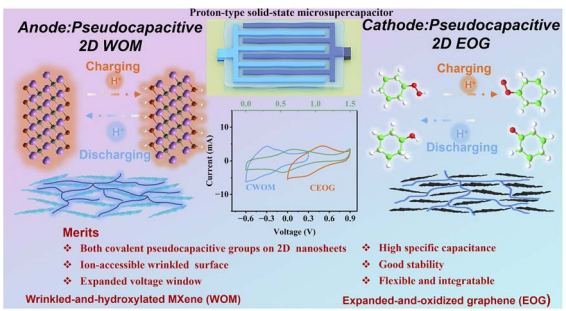
22554



Atom-by-atom assembly reveals structure–performance control in PdCu catalysts for CO_2 hydrogenation to methanol

Louise R. Smith, Emerson C. Kohlrausch, Kieran J. Aggett, Mario Samperi, Sadegh Ghaderzadeh, Andreas Weilhard, Luke T. Norman, Isla E. Gow, Yifan Chen, Giuseppe Bonura, Catia Cannilla, Elena Besley, David J. Morgan, Thomas J. A. Slater, Andrei N. Khlobystov, Jesum Alves Fernandes* and Graham J. Hutchings*

22565



Surface chemistry regulation of conductive two-dimensional nanosheets with highly pseudocapacitive covalent groups for a high-performance flexible asymmetric microsupercapacitor

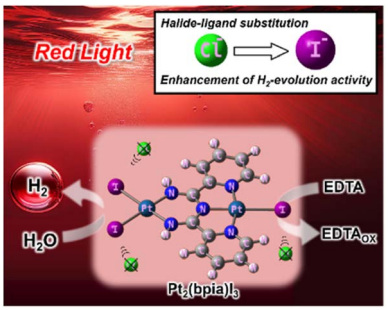
Yuanming Wang,* Jinlong Wu, Jiayue Dong, Xiaoxu Xu, Huan Song, Libei Yuan, Xiaolong Li* and Zhaoqing Lu*

EDGE ARTICLES

22580

Enhanced red-light-driven hydrogen evolution by a diplatinum photocatalyst by the larger wavefunction leakage of iodide coordinated to the platinum center

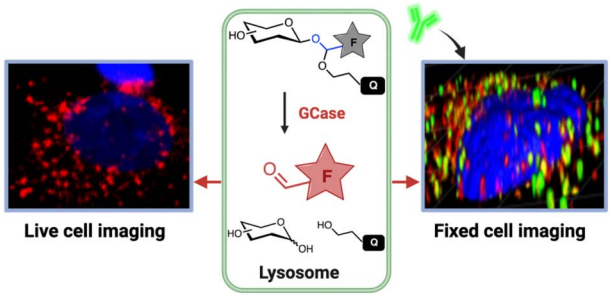
Toma Kunikubo, Raúl Castañeda, Muralee Murugesu, Jaclyn L. Brusso, Kosei Yamauchi, Hironobu Ozawa* and Ken Sakai*



22588

A proto-aldehyde fluorescence quenched substrate for quantitative imaging of both protein and enzyme activity within cells

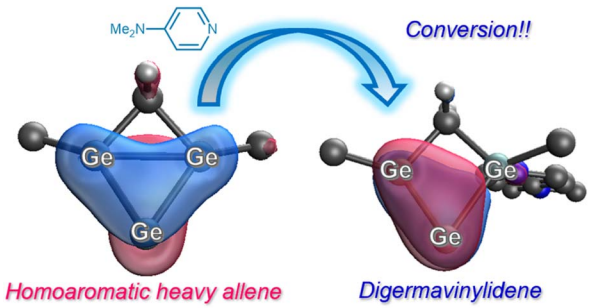
Sha Zhu, Matthew C. Deen, Samy Cecioni, Kim Lam Wong, Evan Perley-Roberston, Weifeng Benny Wu and David J. Vocadlo*



22597

A neutral homoaromatic heavy allene as a platform for selective conversion to a germylene-coordinated digermavinylidene

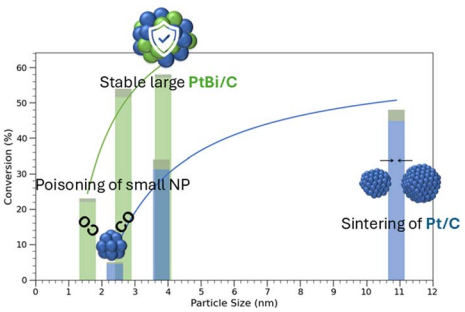
Daichi Uchida, Hiroko Yamada and Yoshiyuki Mizuhata*



22603

Selective aerobic oxidation of alcohols with supported Pt nanoparticles: effect of particle size and bismuth promotion

Anna Giorgia Nobile, Enzo Brack, Milivoj Plodinec and Christophe Copéret*



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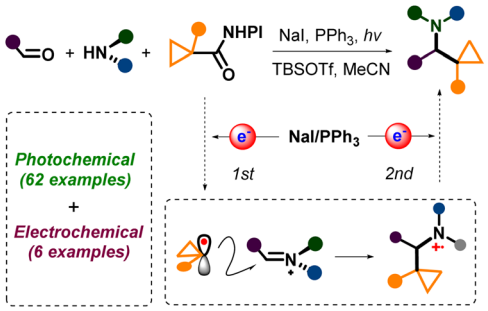

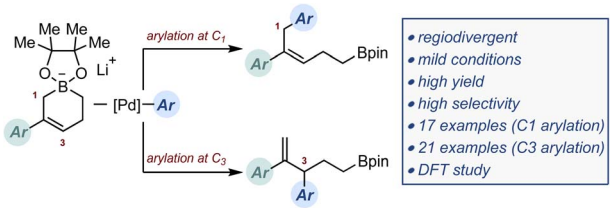

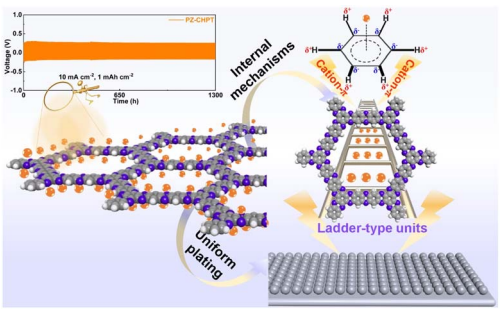

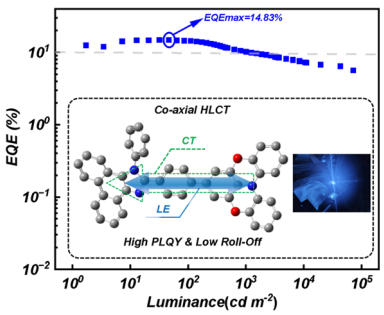

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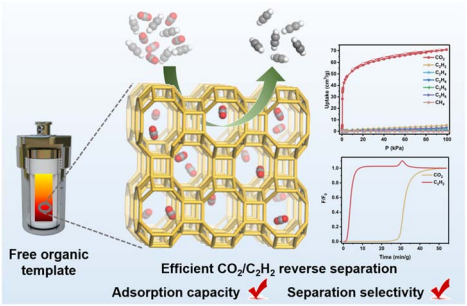

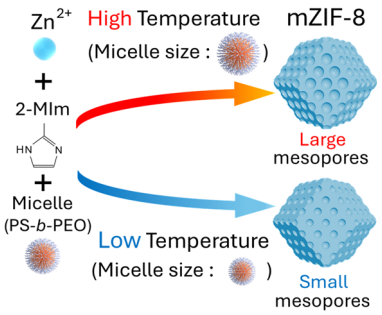

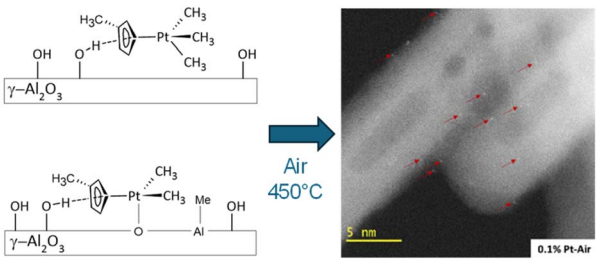

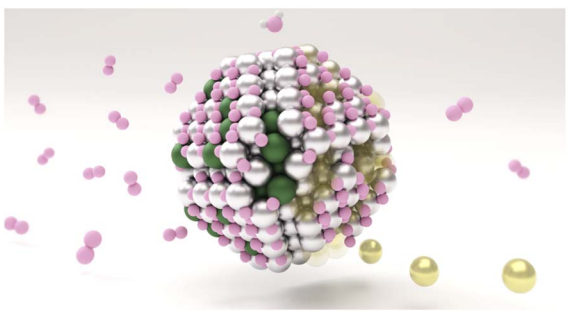

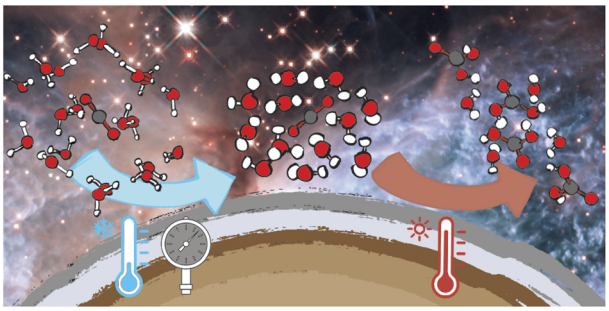

Understanding the formation mechanism of crystalline hydrated polymorphs of carbonic acid from CO_2 clathrate hydrate

Selene Berni, Demetrio Scelta,* Sebastiano Romi, Samuele Fanetti, Frederico Alabarse, Bjorn Wehinger and Roberto Bini*