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Inside cover
See Gilmar F. Salgado *et al.*, pp. 3314–3320.
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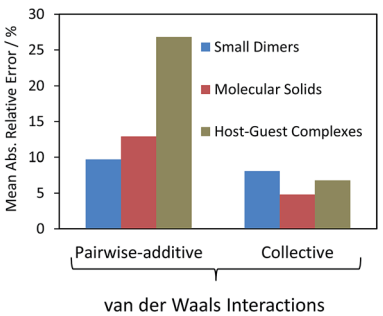
PERSPECTIVE



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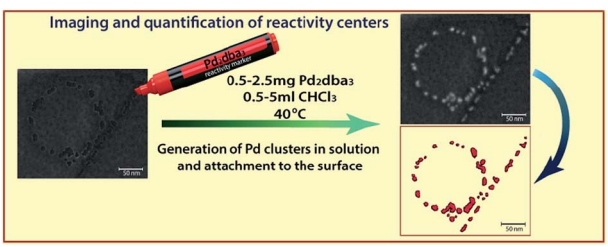

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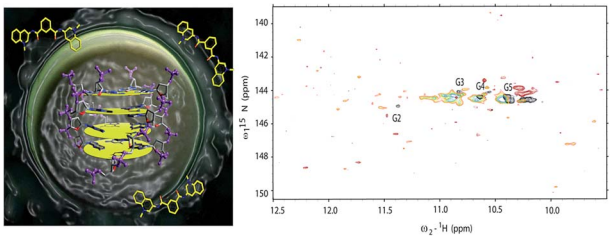

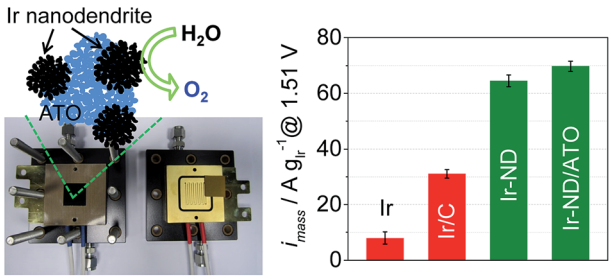

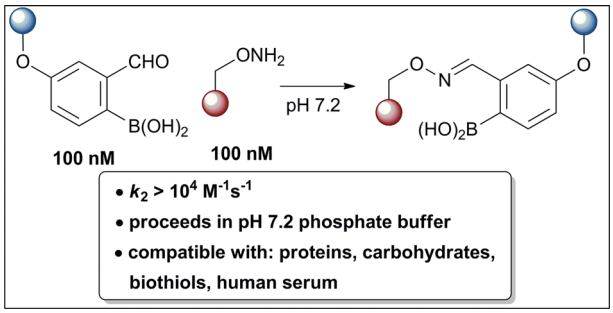

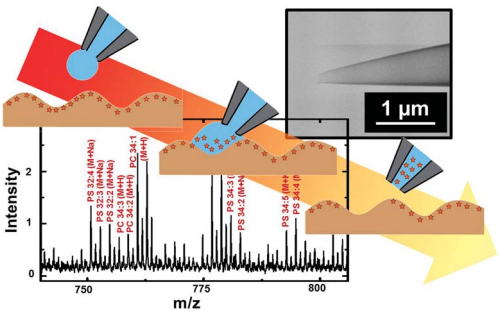

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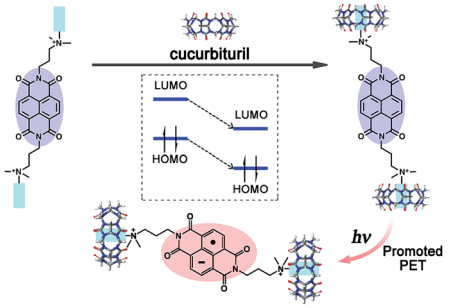
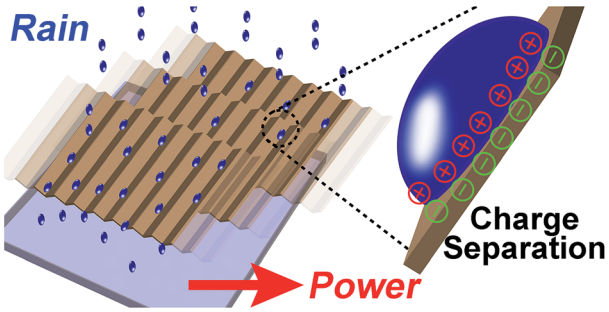


A supramolecular strategy for tuning the energy level of naphthalenediimide: Promoted formation of radical anions with extraordinary stability

Qiao Song, Fei Li, Zhiqiang Wang and Xi Zhang*

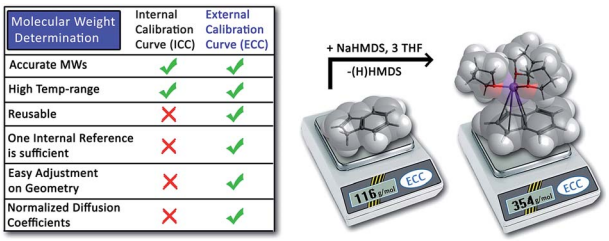
We report a supramolecular strategy to promote the formation of naphthalenediimide radical anions with extraordinary stability through tuning the energy level of naphthalenediimide.



Using the gravitational energy of water to generate power by separation of charge at interfaces

Yajuan Sun, Xu Huang and Siowling Soh*

When water droplets (*e.g.*, from rain) flow down a solid surface due to gravity, they can generate power.

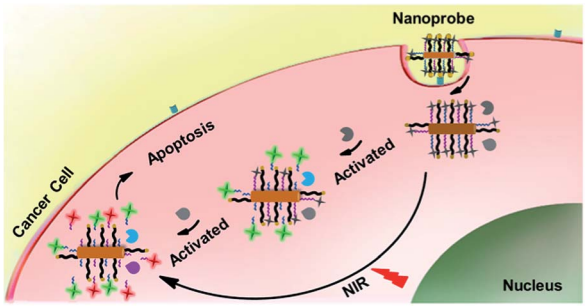


Molecular Weight Determination	Internal Calibration Curve (ICC)	External Calibration Curve (ECC)
Accurate MWs	✓	✓
High Temp-range	✓	✓
Reusable	✗	✓
One Internal Reference is sufficient	✗	✓
Easy Adjustment on Geometry	✗	✓
Normalized Diffusion Coefficients	✗	✓

Accurate molecular weight determination of small molecules *via* DOSY-NMR by using external calibration curves with normalized diffusion coefficients

Roman Neufeld and Dietmar Stalke*

We describe a novel development of MW-determination by using an external calibration curve approach with normalized diffusion coefficients.



In situ activation and monitoring of the evolution of the intracellular caspase family

Lei Zhang, Jianping Lei,* Jintong Liu, Fengjiao Ma and Huangxian Ju*

An intergrated nano-platform is designed to achieve *in situ* activation, monitoring and signal feedback of the caspase family evolution from upstream to downstream.

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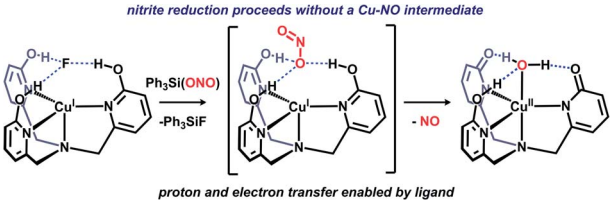

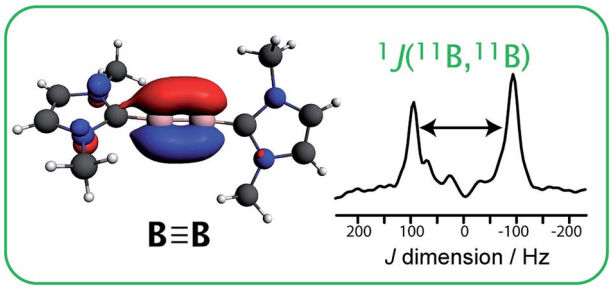

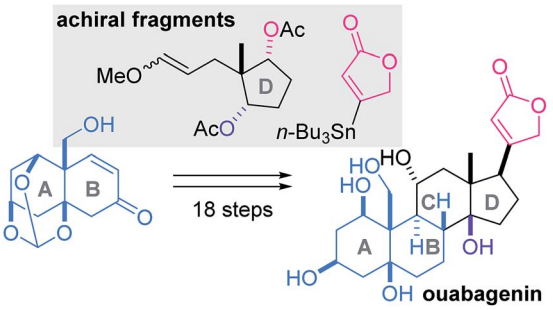

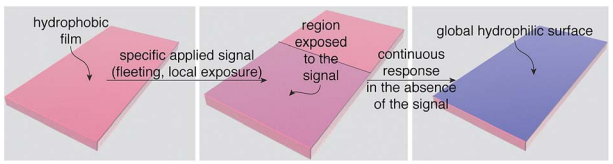

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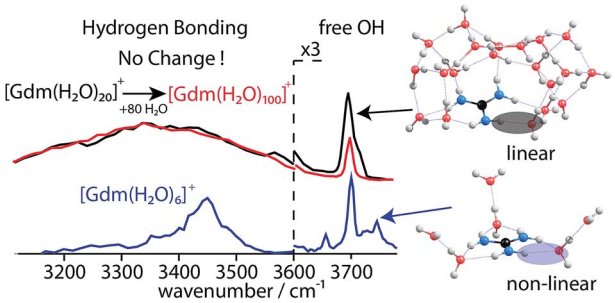

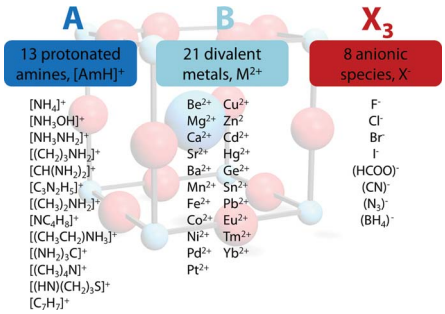

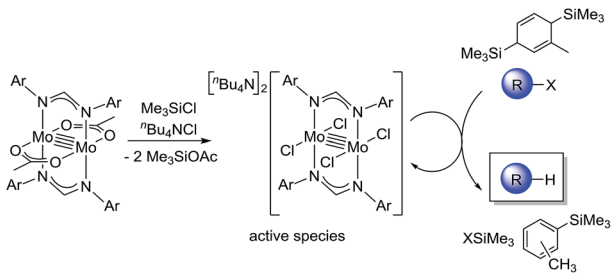

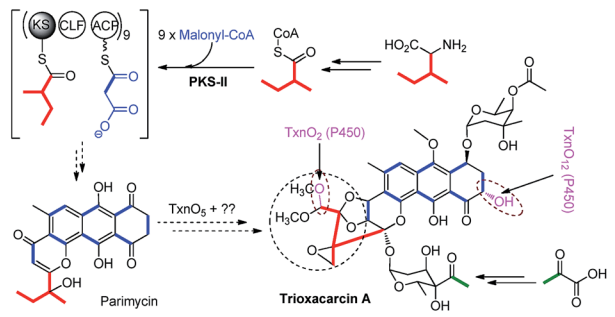

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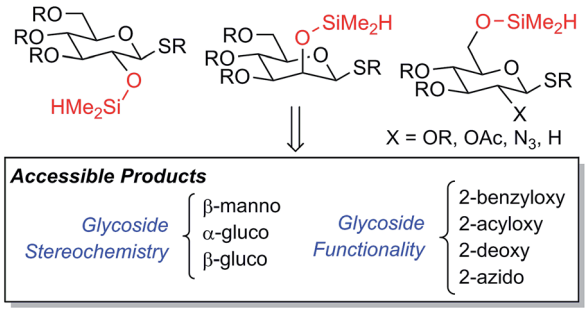
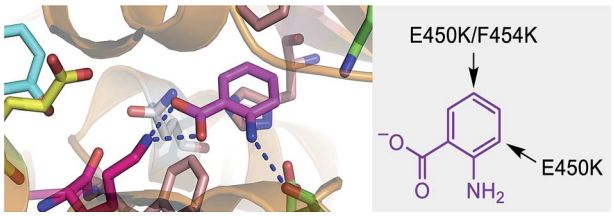


Sugar silanes: versatile reagents for stereocontrolled glycosylation *via* intramolecular aglycone delivery

Jordan T. Walk, Zachary A. Buchan and John Montgomery*

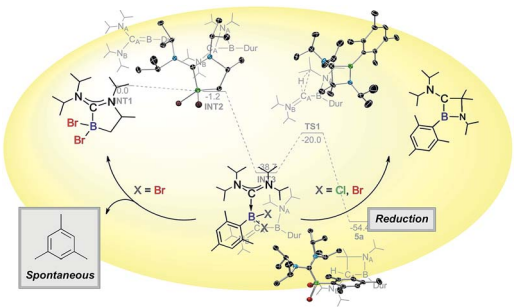
A new method for the intramolecular glycosylation of alcohols is described.



Extending the biocatalytic scope of regiocomplementary flavin-dependent halogenase enzymes

Sarah A. Shepherd, Chinnan Karthikeyan, Jonathan Latham, Anna-Winona Struck, Mark L. Thompson, Binuraj R. K. Menon, Matthew Q. Styles, Colin Levy, David Leys and Jason Micklefield*

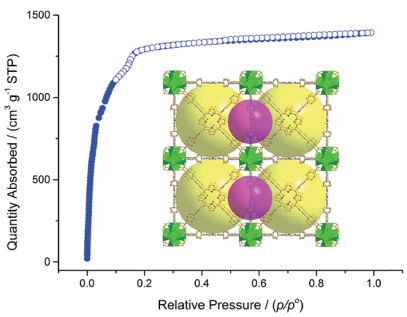
Targeted mutagenesis increases the activity and alters the regioselectivity of flavin-dependent halogenases.



Generation of 1,2-azaboretidines *via* reduction of ADC borane adducts

H. Braunschweig,* A. Gackstatter, T. Kupfer, T. Scheller, F. Hupp, A. Damme, N. Arnold and W. C. Ewing

ADC borane adducts $RBX_2 \cdot ADC$ (R = Mes, Dur; X = Cl, Br; ADC = $:C(NiPr_2)_2$) have been prepared and reduced by KC_8 to afford air stable 1,2-azaboretidines with high selectivity.



Stable porphyrin Zr and Hf metal–organic frameworks featuring 2.5 nm cages: high surface areas, SCSC transformations and catalyses

Jun Zheng, Mingyan Wu,* Feilong Jiang, Weiping Su* and Maochun Hong

Two isostructural porphyrin Zr and Hf metal–organic frameworks (**FJI-H6** and **FJI-H7**) are rationally synthesized, and are constructed from 2.5 nm cubic cages.

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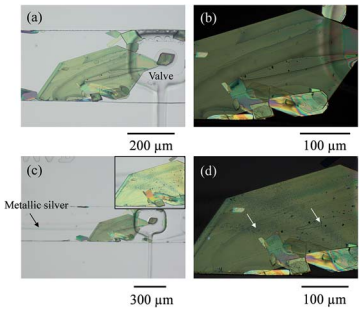
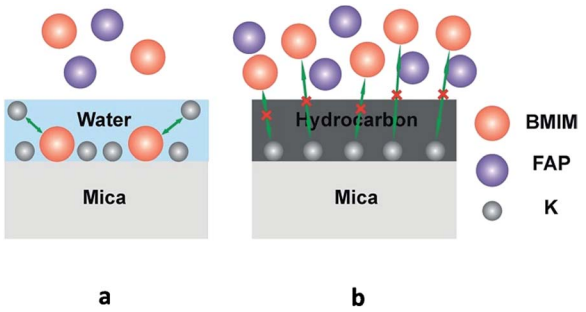
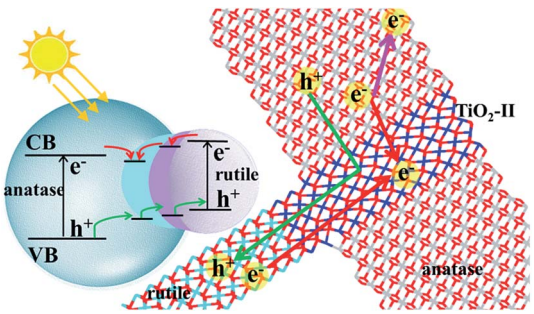
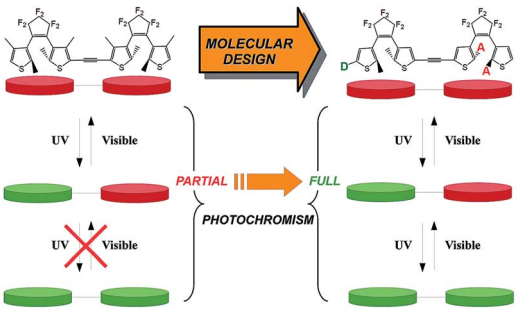
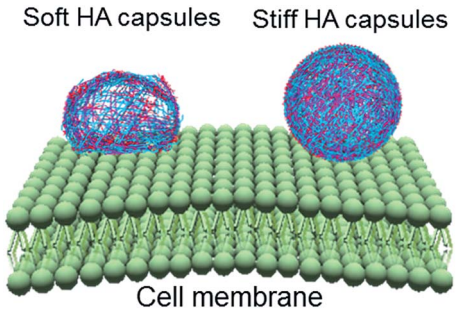






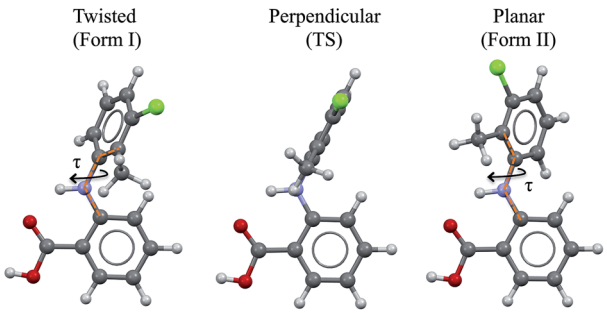




The role of capsule stiffness on cellular processing

Huanli Sun, Edgar H. H. Wong, Yan Yan, Jiwei Cui, Qiong Dai, Junling Guo, Greg G. Qiao* and Frank Caruso*

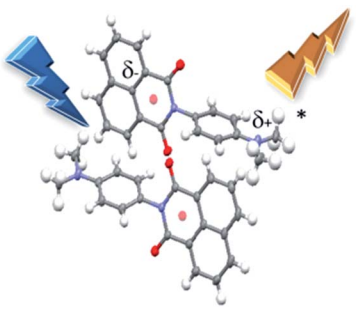
A systematic and quantitative study on the role of capsule stiffness in cellular processing was performed using hyaluronic acid capsules with tunable stiffness constructed *via* continuous assembly of polymers.



Can the study of self-assembly in solution lead to a good model for the nucleation pathway? The case of tolfenamic acid.

W. Du, A. J. Cruz-Cabeza, S. Woutersen, R. J. Davey* and Q. Yin

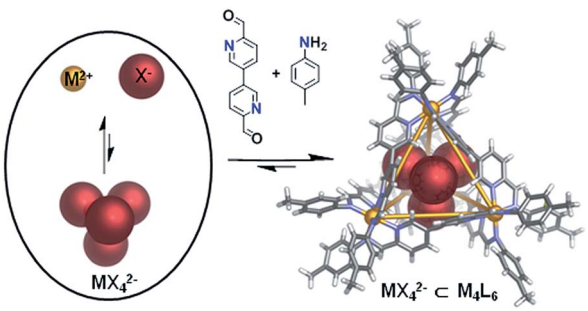
To further our understanding of the role of solution chemistry in directing nucleation processes new experimental and computational data are presented on the solution and crystallisation chemistry of tolfenamic acid (TA), a benchmark polymorphic compound.



Polymorph crystal packing effects on charge transfer emission in the solid state

Xiaoyan He, Andrew C. Benniston,* Hanna Saarenpää, Helge Lemmetyinen, Nikolia V. Tkachenko* and Ulrich Baisch

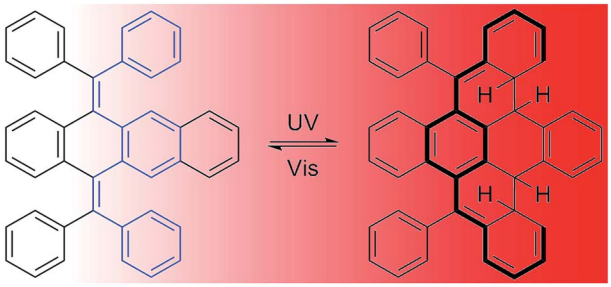
Condensation of 1,8-naphthalic anhydride with *N*,*N*-(dimethylamino)aniline produced the donor-acceptor compound **DMIM**, which crystallised from a chloroform–diethyl ether mixture to afford two different coloured crystal polymorphs.

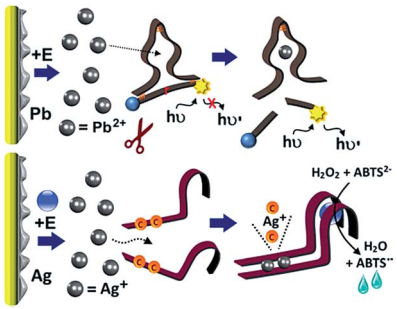


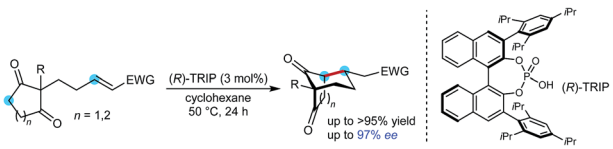
Mutual stabilisation between $M^{II}_4L_6$ tetrahedra and $M^{II}X_4^{2-}$ metallate guests

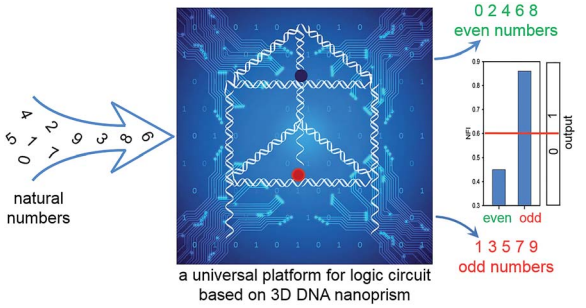
Imogen A. Riddell, Tanya K. Ronson and Jonathan R. Nitschke*

A series of $[M^{II}X_4]^{2-} \subset M^{II}_4L_6$ host–guest complexes are formed through the mutual stabilisation of the host and guest complexes; neither the host nor guest is stable in the absence of the other.









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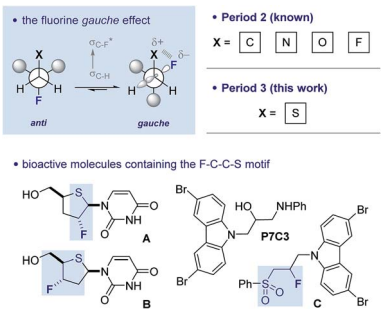
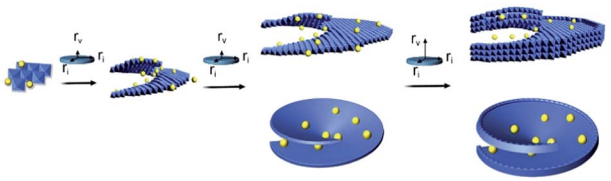


Can acyclic conformational control be achieved *via* a sulfur–fluorine *gauche* effect?

C. Thiehoff, M. C. Holland, C. Daniliuc, K. N. Houk* and R. Gilmour*

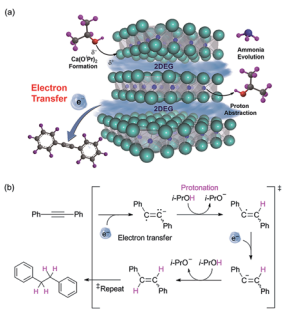
Herein detailed conformational analyses of β-fluorosulfides, -sulfoxides and -sulfones are disclosed, thus extending the scope of the fluorine *gauche* effect to the 3rd Period (X = SR, SOR, SO_2R; $\phi_{FCCS} \approx 60°$).



Edge overgrowth of spiral bimetallic hydroxides ultrathin-nanosheets for water oxidation

Bing Ni and Xun Wang*

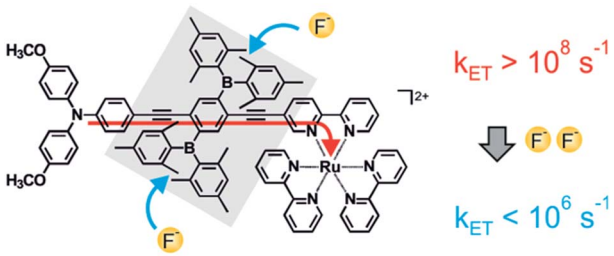
We have synthesized spiral ultrathin-nanosheets with overgrown edges of NiFe, CoNi and CoFe bimetallic hydroxides which show excellent performance for the OER.



Two dimensional inorganic electride-promoted electron transfer efficiency in transfer hydrogenation of alkynes and alkenes

Ye Ji Kim, Sun Min Kim, Eun Jin Cho, Hideo Hosono, Jung Woon Yang* and Sung Wng Kim*

A simple and highly efficient transfer hydrogenation of alkynes and alkenes by using a two-dimensional electride, dicalcium nitride ($[Ca_2N]^+ \cdot e^-$), as an electron transfer agent is disclosed.

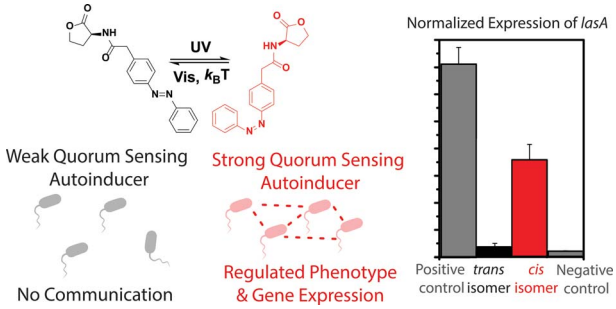


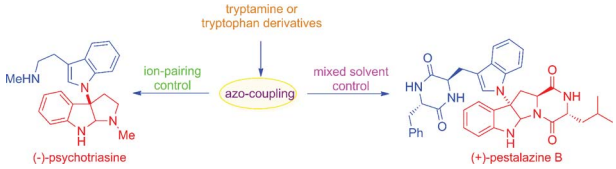
Fluoride binding to an organoboron wire controls photoinduced electron transfer

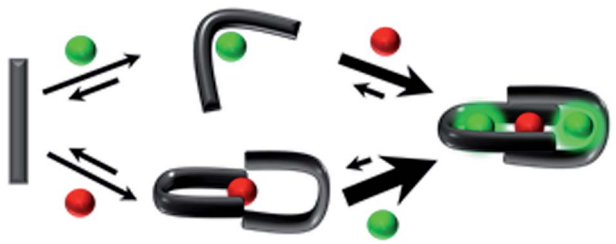
Jing Chen and Oliver S. Wenger*

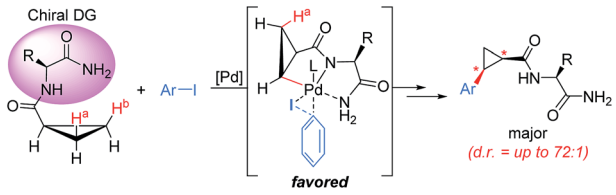
The efficiency of organoboron wires as mediators of long-range electron transfer can be controlled by anion binding.

EDGE ARTICLES









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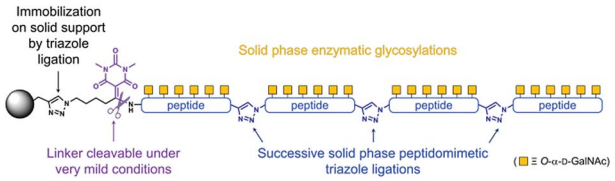
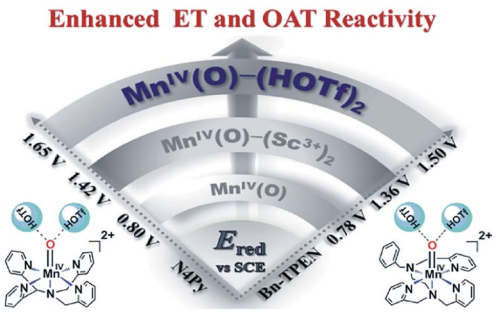


Combining triazole ligation and enzymatic glycosylation on solid phase simplifies the synthesis of very long glycoprotein analogues

Mathieu Galibert, Véronique Piller, Friedrich Piller, Vincent Aucagne* and Agnès F. Delmas

Solid phase chemical ligation followed by enzymatic glycosylation exploits the advantages of a solid support to minimize the purification steps, constituting a promising approach for the synthesis of complex glycoproteins.



Tuning the reactivity of mononuclear nonheme manganese(IV)-oxo complexes by triflic acid

Junying Chen, Heejung Yoon, Yong-Min Lee, Mi Sook Seo, Ritimukta Sarangi, Shunichi Fukuzumi* and Wonwoo Nam*

Binding of two HOTf molecules to $Mn^{IV}(O)$ species resulted in contrasting effects on the reactivities in oxygen atom transfer and H-atom transfer reactions.

CORRECTION

Correction: Cobalt co-catalysis for cross-electrophile coupling: diarylmethanes from benzyl mesylates and aryl halides

Laura K. G. Ackerman, Lukiana L. Anka-Lufford, Marina Naodovic and Daniel J. Weix*

RETRACTION

Retraction: Homonuclear bond activation using a stable *N*,*N*′-diamidocarbene

Kelly M. Wiggins, Jonathan P. Moerdyk and Christopher W. Bielawski*