

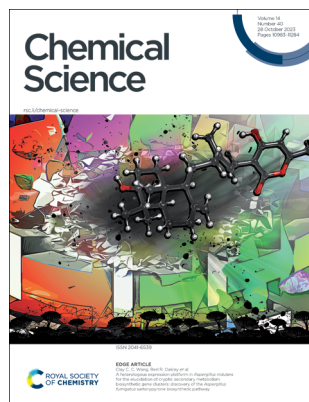
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Inside cover
See Tsung-Che Chang, Katsunori Tanaka *et al.*, pp. 11033–11039. Image reproduced by permission of Katsunori Tanaka from *Chem. Sci.*, 2023, **14**, 11033.

COMMENTARY

10994

A focus on computer vision for non-contact monitoring of catalyst degradation and product formation kinetics

Niklaas J. Buurma and Scott W. Bagley

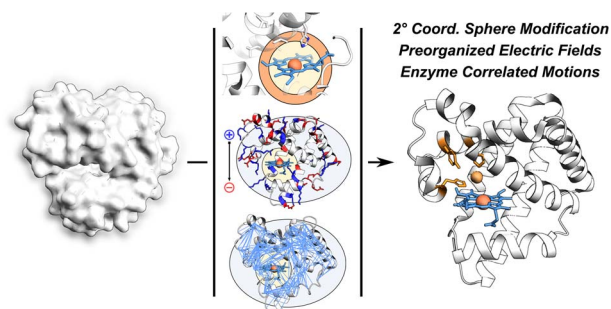


PERSPECTIVE

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From random to rational: improving enzyme design through electric fields, second coordination sphere interactions, and conformational dynamics

Shobhit S. Chaturvedi, Daniel Bim, Christo Z. Christov and Anastassia N. Alexandrova*



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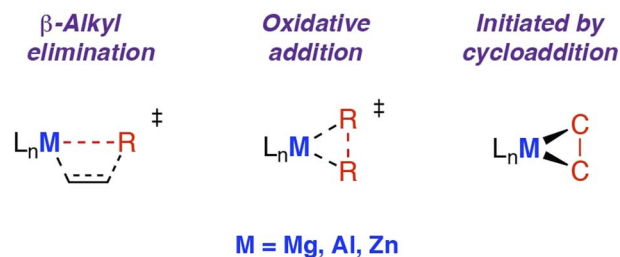


REVIEW

11012

Carbon–carbon bond activation by Mg, Al, and Zn complexes

Joseph M. Parr and Mark R. Crimmin*

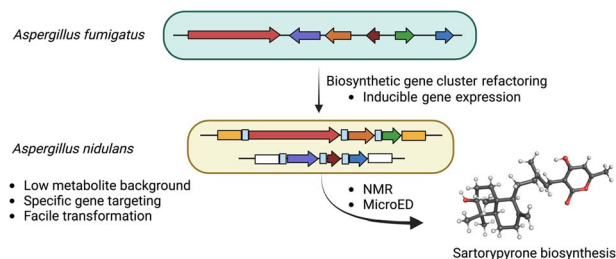


EDGE ARTICLES

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A heterologous expression platform in *Aspergillus nidulans* for the elucidation of cryptic secondary metabolism biosynthetic gene clusters: discovery of the *Aspergillus fumigatus* sartorypyrone biosynthetic pathway

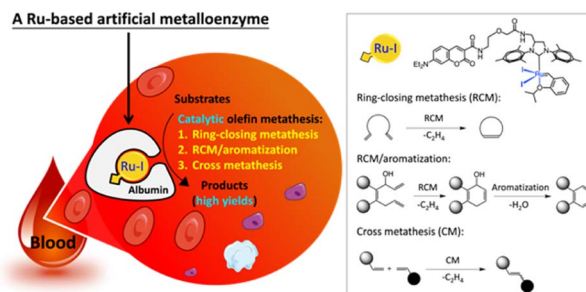
Shu-Yi Lin, C. Elizabeth Oakley, Cory B. Jenkinson, Yi-Ming Chiang, Ching-Kuo Lee, Christopher G. Jones, Paul M. Seidler, Hosea M. Nelson, Richard B. Todd, Clay C. Wang* and Berl R. Oakley*



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Catalytic olefin metathesis in blood

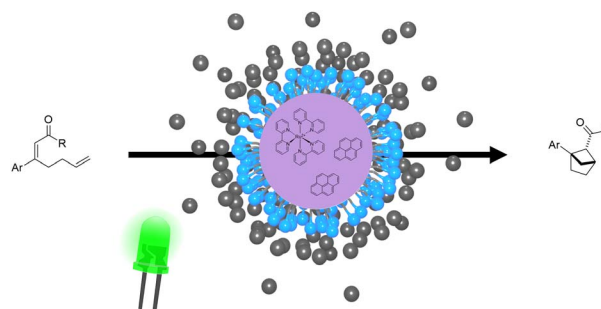
Igor Nasibullin, Hiromasa Yoshioka, Akari Mukaimine, Akiko Nakamura, Yuriko Kusakari, Tsung-Che Chang* and Katsunori Tanaka*



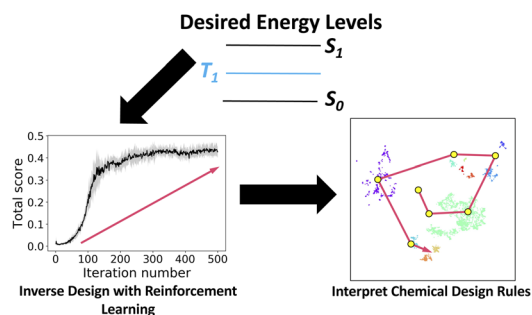
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Photocyclization by a triplet–triplet annihilation upconversion pair in water – avoiding UV-light and oxygen removal

R. Jeyaseelan, M. Utikal, C. G. Daniliuc and L. Næsberg*



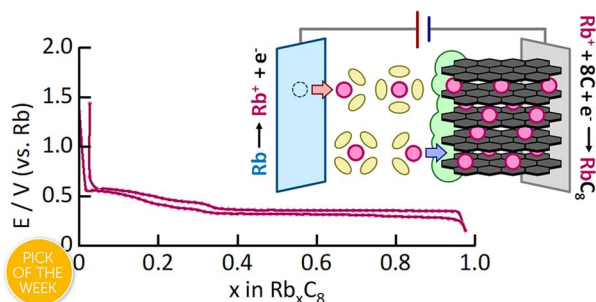
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Generative organic electronic molecular design informed by quantum chemistry

Cheng-Han Li and Daniel P. Tabor*

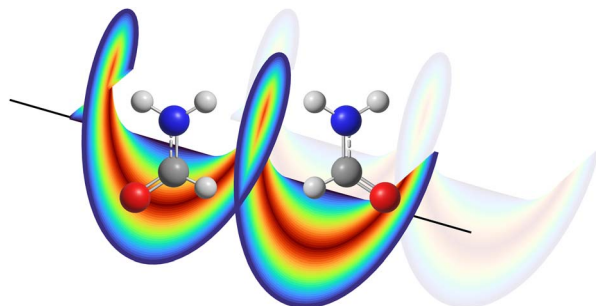
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Electrochemical intercalation of rubidium into graphite, hard carbon, and soft carbon

Daisuke Igarashi, Ryoichi Tatara, Ryusei Fujimoto, Tomooki Hosaka and Shinichi Komaba*

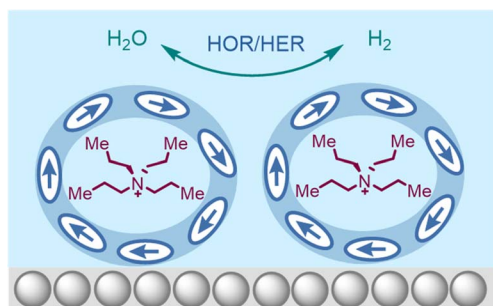
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Time-resolved enantiomer-exchange probed by using the orbital angular momentum of X-ray light

Xiang Jiang,* Yeonsig Nam, Jérémy R. Rouxel, Haiwang Yong and Shaul Mukamel*

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Action at a distance: organic cation induced long range organization of interfacial water enhances hydrogen evolution and oxidation kinetics

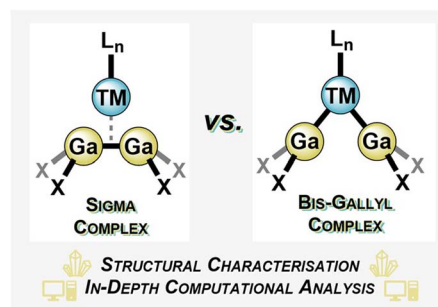
Kaiyue Zhao, Hao Yu, Haocheng Xiong, Qi Lu, Yi Qin Gao and Bingjun Xu*



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On the σ -complex character of bis(gallyl)/digallane transition metal species

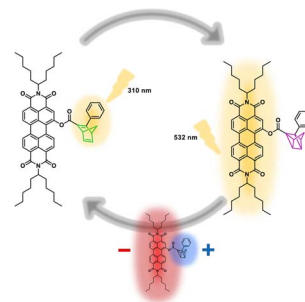
Till L. Kalkuhl, Lei Qin, Lili Zhao,* Gernot Frenking* and Terrance J. Hadlington*



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Driving the quadricyclane-to-norbornadiene isomerization by charge separation with perylenediimide as electron acceptor

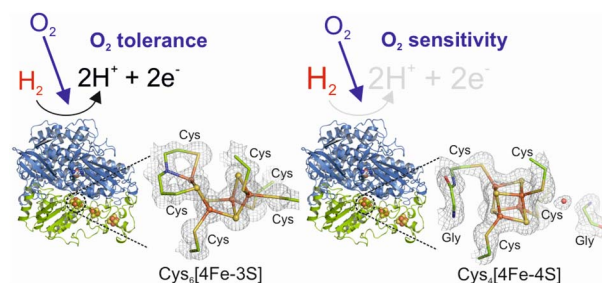
Wiebke Zika, Andreas Leng, René Weiß, Simone Pintér, Christoph M. Schüßlbauer, Timothy Clark, Andreas Hirsch and Dirk M. Guldi*



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Stepwise conversion of the Cys₆[4Fe–3S] to a Cys₄[4Fe–4S] cluster and its impact on the oxygen tolerance of [NiFe]-hydrogenase

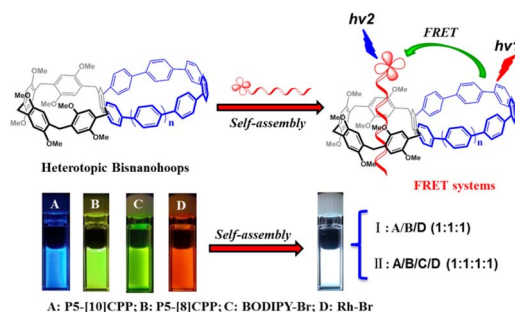
Andrea Schmidt, Jacqueline Kalms, Christian Lorent, Sagie Katz, Stefan Frielingsdorf, Rhiannon M. Evans, Johannes Fritsch, Elisabeth Siebert, Christian Teutloff, Fraser A. Armstrong, Ingo Zebger,* Oliver Lenz* and Patrick Scheerer*



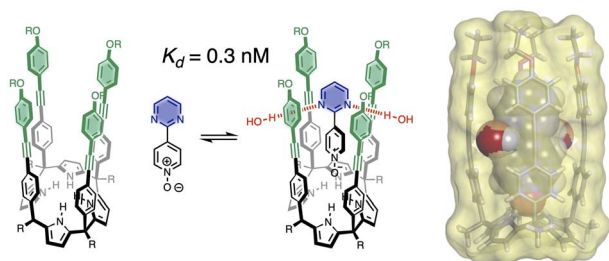
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Efficient manipulation of Förster resonance energy transfer through host–guest interaction enables tunable white-light emission and devices in heterotopic bisnanohoops

Yanqing Fan, Shimin Fan, Lin Liu, Shengzhu Guo, Jing He, Xiaonan Li, Zhe Lian, Weijie Guo, Xuebo Chen, Ying Wang and Hua Jiang*



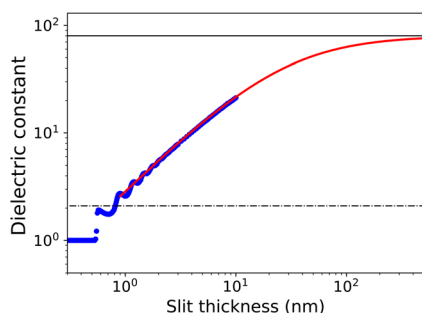
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Aromatic interactions with heterocycles in water

Gloria Tobajas-Curiel, Qingqing Sun, Jeremy K. M. Sanders, Pablo Ballester* and Christopher A. Hunter*

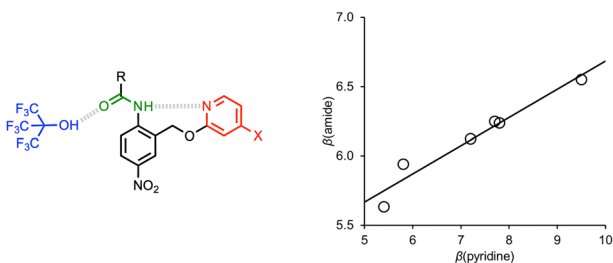
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Dielectric response of confined water films from a classical density functional theory perspective

Daniel Borgis,* Damien Laage, Luc Belloni and Guillaume Jeanmairet

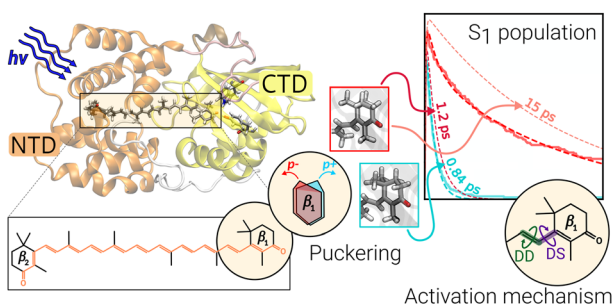
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Polarisation effects on the H-bond acceptor properties of secondary amides

Fergal E. Hanna, Alexander J. Root and Christopher A. Hunter*

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How orange carotenoid protein controls the excited state dynamics of canthaxanthin

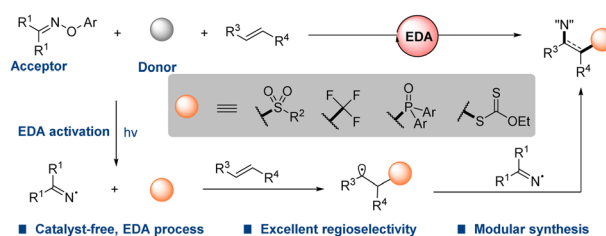
Amanda Arcidiacono, Davide Accomasso, Lorenzo Cupellini and Benedetta Mennucci*



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Photo-induced imino functionalizations of alkenes via intermolecular charge transfer

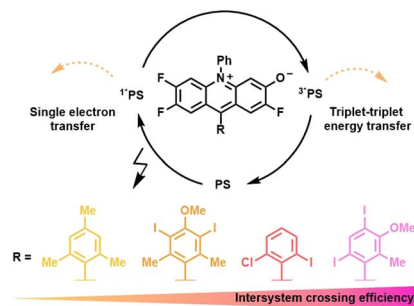
Xiang-Xin Zhang, Hao Zheng, Yong-Kang Mei, Yan Liu, Ying-Ying Liu, Ding-Wei Ji, Boshun Wan and Qing-An Chen*



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Isoacridone dyes with parallel reactivity from both singlet and triplet excited states for biphotonic catalysis and upconversion

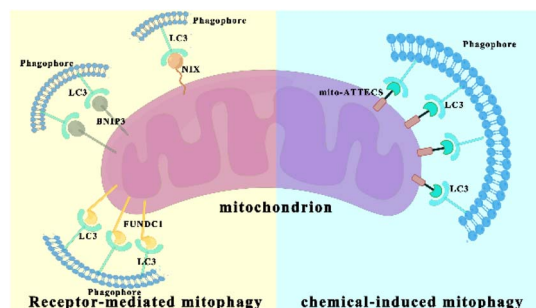
Björn Pfund, Valeriia Hutskalova, Christof Sparr* and Oliver S. Wenger*



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Targeting mitochondrial degradation by chimeric autophagy-tethering compounds

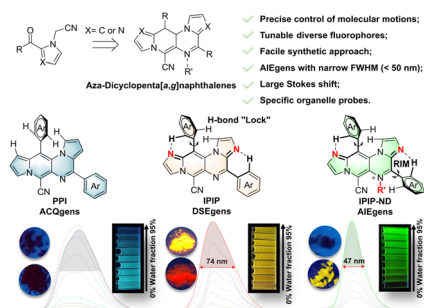
Zhenqi Liu, Geng Qin, Jie Yang, Wenjie Wang, Wenting Zhang, Boxun Lu,* Jinsong Ren and Xiaogang Qu*



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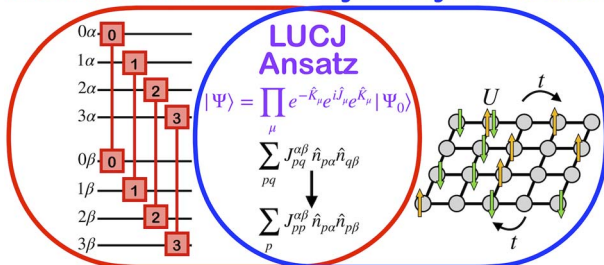
Aza-dicyclopenta[*a,g*]naphthalenes: controllable seesaw-like emissive behavior and narrowband AIEgens

Jinbiao Li, Jiabin Lao and Hongbin Zou*



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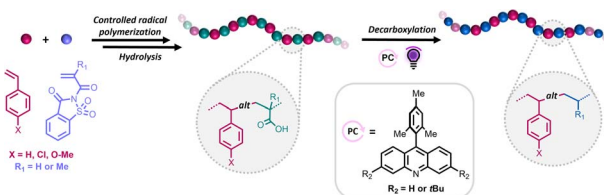
Hardware-efficient Physically-motivated



Bridging physical intuition and hardware efficiency for correlated electronic states: the local unitary cluster Jastrow ansatz for electronic structure

Mario Motta,* Kevin J. Sung, K. Birgitta Whaley, Martin Head-Gordon and James Shee*

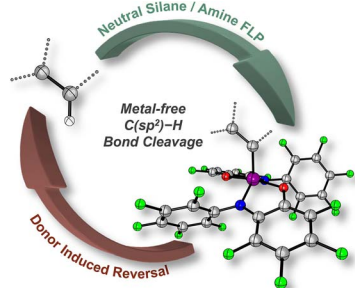
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Alternating styrene-propylene and styrene-ethylene copolymers prepared by photocatalytic decarboxylation

Emmanuelle Schu e, Dillon R. L. Rickertsen, Angie B. Korpusik, Alafate Adili, Daniel Seidel* and Brent S. Sumerlin*

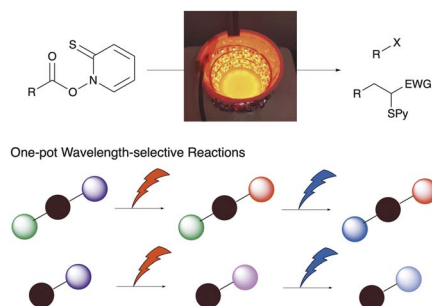
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Reversible C–H bond silylation with a neutral silicon Lewis acid

Thadd us Thorwart and Lutz Greb*

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Red-light-mediated Barton decarboxylation reaction and one-pot wavelength-selective transformations

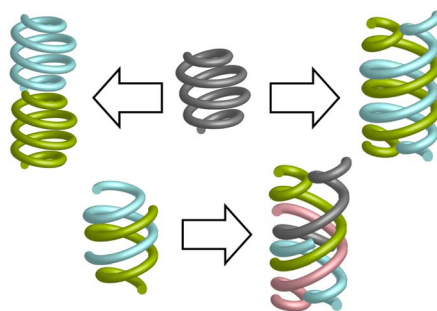
Hiroki Yamamoto, Kohei Yamaoka, Ann Shinohara, Kouhei Shibata, Ken-ichi Takao* and Akihiro Ogura*



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Controlling aromatic helix dimerization in water by tuning charge repulsions

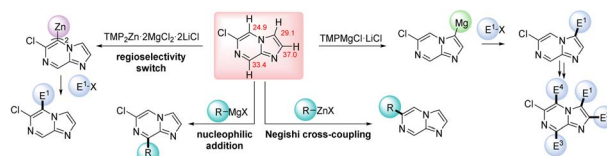
Binhao Teng, Pradeep K. Mandal, Lars Allmendinger, Céline Douat, Yann Ferrand and Ivan Huc*



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Calculation-assisted regioselective functionalization of the imidazo[1,2-a]pyrazine scaffold via zinc and magnesium organometallic intermediates

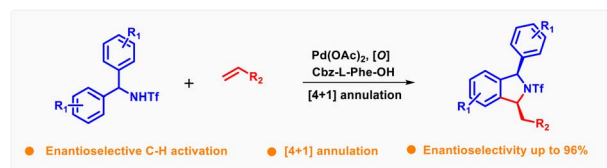
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A palladium catalyzed asymmetric desymmetrization approach to enantioenriched 1,3-disubstituted isoindolines

Dattatraya H. Dethe,* Vimlesh Kumar and Manmohan Shukla



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Water-soluble polyphosphonate-based bottlebrush copolymers via aqueous ring-opening metathesis polymerization

Diego A. Resendiz-Lara, Suna Azhdari, Hubert Gojzewski, Andre H. Gröschel and Frederik R. Wurm*

