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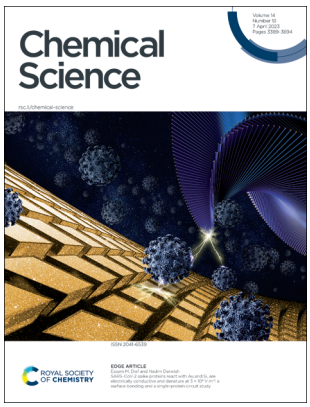

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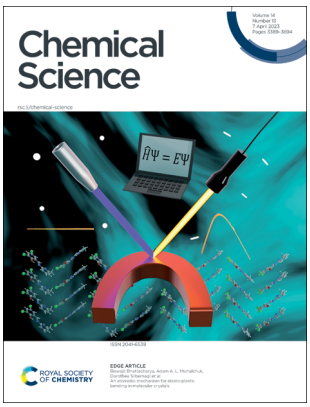

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See Biswajit Bhattacharya, Adam A. L. Michalchuk, Dorothee Silbernagl *et al.*, pp. 3441–3450. Image reproduced by permission of Biswajit Bhattacharya from *Chem. Sci.*, 2023, **14**, 3441.

PERSPECTIVES

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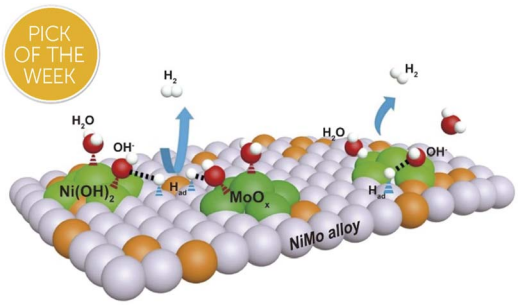
Insights into alloy/oxide or hydroxide interfaces in Ni–Mo-based electrocatalysts for hydrogen evolution under alkaline conditions

Min Luo, Jietian Yang, Xingang Li, Miharu Eguchi, Yusuke Yamauchi and Zhong-Li Wang*



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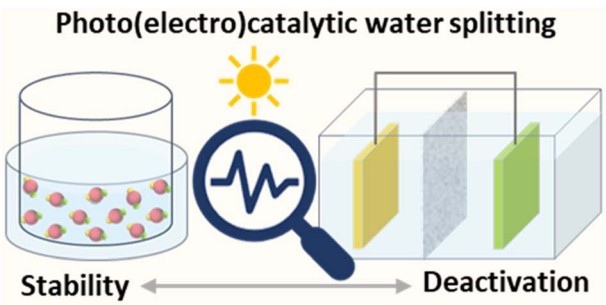
Addressing the stability challenge of photo(electro) catalysts towards solar water splitting

Mu Xiao, Zhiliang Wang, Kazuhiko Maeda, Gang Liu and Lianzhou Wang*



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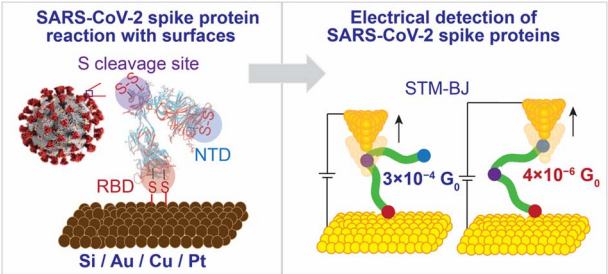
SARS-CoV-2 spike proteins react with Au and Si, are electrically conductive and denature at 3×10^8 V m^{-1}: a surface bonding and a single-protein circuit study

Essam M. Dief and Nadim Darwish*



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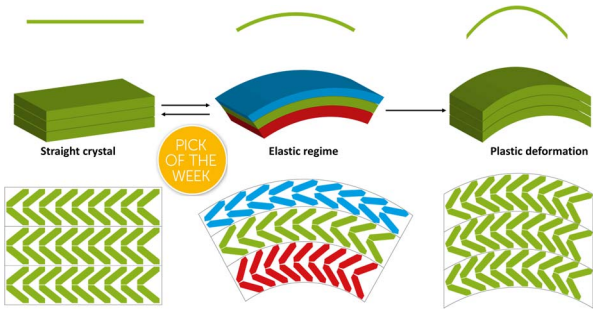
An atomistic mechanism for elasto-plastic bending in molecular crystals

Biswajit Bhattacharya,* Adam A. L. Michalchuk,* Dorothee Silbernagl,* Nobuhiro Yasuda, Torvid Feiler, Heinz Sturm and Franziska Emmerling



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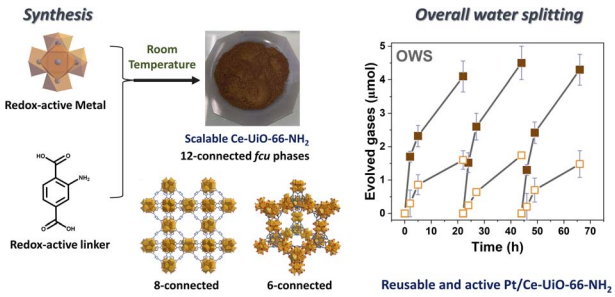
Room temperature design of Ce(IV)-MOFs: from photocatalytic HER and OER to overall water splitting under simulated sunlight irradiation

Shan Dai, Eva Montero-Lanzuela, Antoine Tissot,* Herme G. Baldoví, Hermenegildo García, Sergio Navalón* and Christian Serre*



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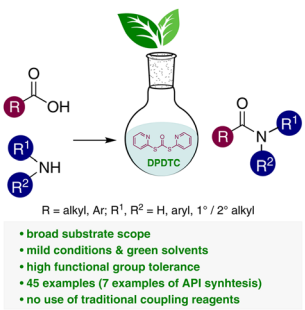
Direct formation of amide/peptide bonds from carboxylic acids: no traditional coupling reagents, 1-pot, and green

Kaitlyn M. Freiberg, Rahul D. Kavthe, Rohan M. Thomas, David M. Fialho, Paris Dee, Matthew Scurria and Bruce H. Lipshutz*



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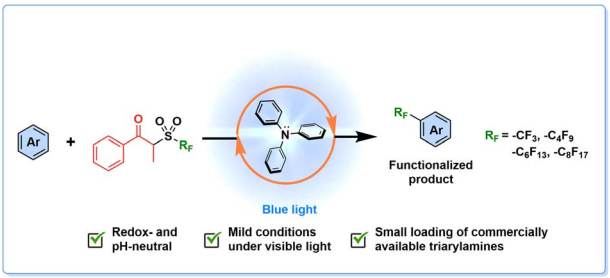

Triarylamines as catalytic donors in light-mediated electron donor–acceptor complexes

Durbis J. Castillo-Pazos, Juan D. Lasso, Ehsan Hamzehpoor, Jorge Ramos-Sánchez, Jan Michael Salgado, Gonzalo Cosa, Dmytro F. Perepichka and Chao-Jun Li*

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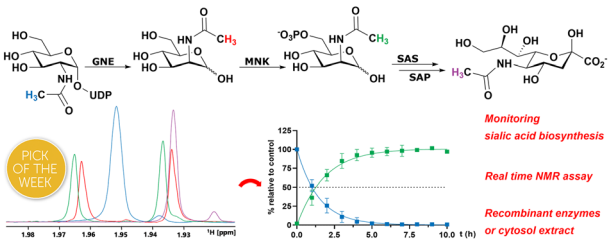

Real-time monitoring of the sialic acid biosynthesis pathway by NMR

Jacob L. Gorenflos López, Peter Schmieder, Kristin Kemnitz-Hassanin, Hatice Ceyda Asikoglu, Arif Celik, Christian E. Stieger, Dorothea Fiedler, Stephan Hinderlich* and Christian P. R. Hackenberger*

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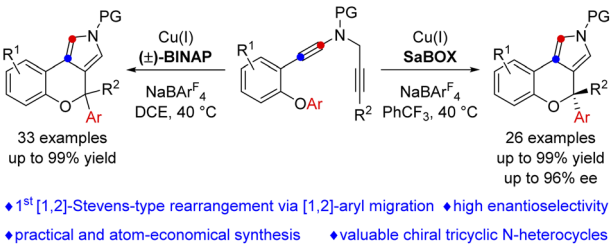
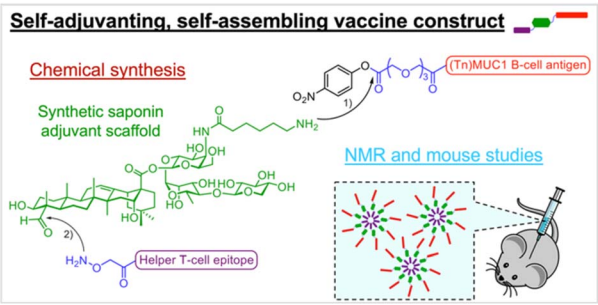


Copper-catalyzed enantioselective diyne cyclization *via* C(sp^2)–O bond cleavage

Ji-Jia Zhou, Ya-Nan Meng, Li-Gao Liu, Yi-Xi Liu, Zhou Xu,* Xin Lu,* Bo Zhou and Long-Wu Ye*

3501



Development of synthetic, self-adjuvanting, and self-assembling anticancer vaccines based on a minimal saponin adjuvant and the tumor-associated MUC1 antigen

Carlo Pifferi, Leire Aguinagalde, Ane Ruiz-de-Angulo, Nagore Sacristán, Priscila Tonon Baschirotto, Ana Poveda, Jesús Jiménez-Barbero, Juan Anguita* and Alberto Fernández-Tejada*

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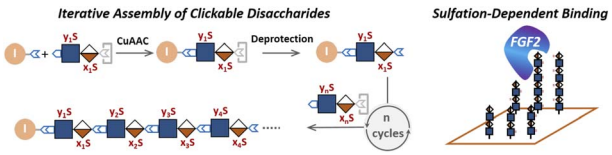
Heparan sulfate glycomimetics *via* iterative assembly of "clickable" disaccharides

Cangjie Yang, Yu Deng, Yang Wang, Chaoshuang Xia, Akul Y. Mehta, Kelly J. Baker, Anuj Samal, Putthipong Booneimsri, Chanthakarn Lertmaneedang, Seung Hwang, James P. Flynn, Muqing Cao, Chao Liu, Alec C. Zhu, Richard D. Cummings, Cheng Lin, Udayan Mohanty* and Jia Niu*



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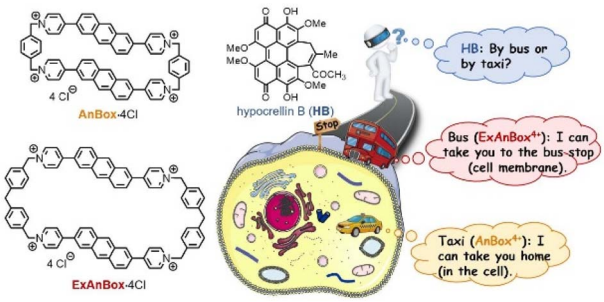
Supramolecular photosensitizers using extended macrocyclic hosts for photodynamic therapy with distinct cellular delivery

Xiuli Zheng, Sheng-Nan Lei, Zekun Gao, Xiangyu Dong, Hongyan Xiao, Weimin Liu,* Chen-Ho Tung, Li-Zhu Wu, Pengfei Wang* and Huan Cong*



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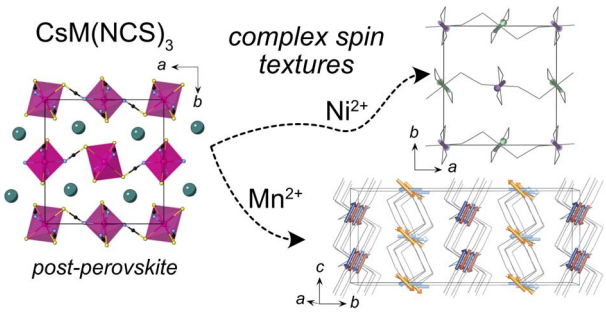
Non-collinear magnetism in the post-perovskite thiocyanate frameworks $CsM(NCS)_3$

Madeleine Geers, Jie Yie Lee, Sanliang Ling, Oscar Fabelo, Laura Cañadillas-Delgado and Matthew J. Cliffe*



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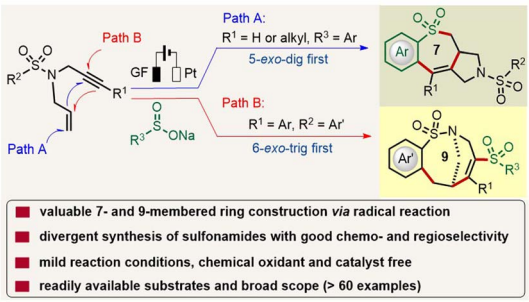
Electrosynthesis of bridged or fused sulfonamides through complex radical cascade reactions: divergence in medium-sized ring formation

Yan Zhang,* Zhenzhi Cai, Chunhang Zhao, Hanliang Zheng and Lutz Ackermann*



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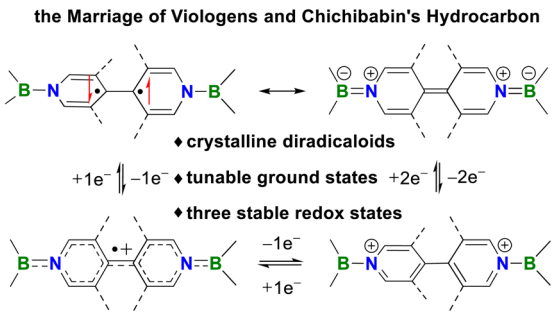

Multiple stable redox states and tunable ground states *via* the marriage of viologens and Chichibabin's hydrocarbon

Yuyang Dai, Zhuofeng Xie, Manling Bao, Chunmeng Liu and Yuanting Su*

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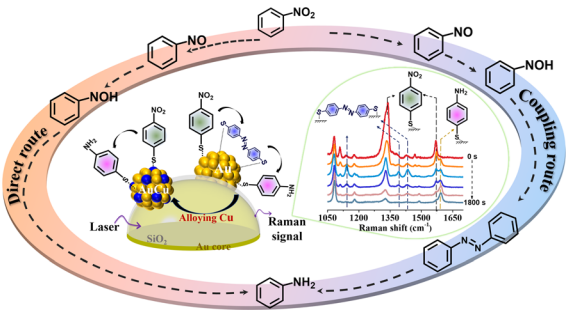

***In situ* SERS reveals the route regulation mechanism mediated by bimetallic alloy nanocatalysts for the catalytic hydrogenation reaction**

Xiaoxiao Li, Jinghua An, Ze Gao, Chang Xu, Yaoying Cheng, Simin Li, Lu Li* and Bo Tang*

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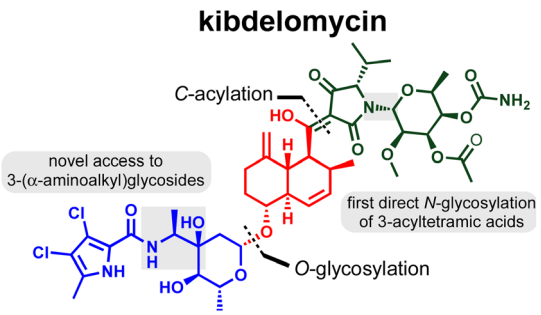

Formal synthesis of kibdelomycin and derivatisation of amycolose glycosides

Manuel G. Schriefer, Laura Treiber and Rainer Schobert*

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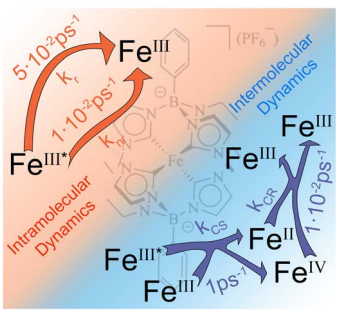

Competing dynamics of intramolecular deactivation and bimolecular charge transfer processes in luminescent Fe(III) N-heterocyclic carbene complexes

Nils W. Rosemann, Linnea Lindh, Iria Bolaño Losada, Simon Kaufhold, Om Prakash, Aleksandra Ilic, Jesper Schwarz, Kenneth Wärnmark, Pavel Chábera, Arkady Yartsev* and Petter Persson*

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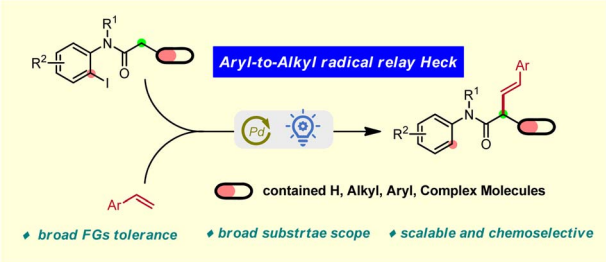
Aryl-to-alkyl radical relay Heck reaction of amides with vinyl arenes

Yu-jia Du, Xia-xin Sheng, Jun-hua Li, Jia-ming Chen, Sen Yang* and Ming Chen*



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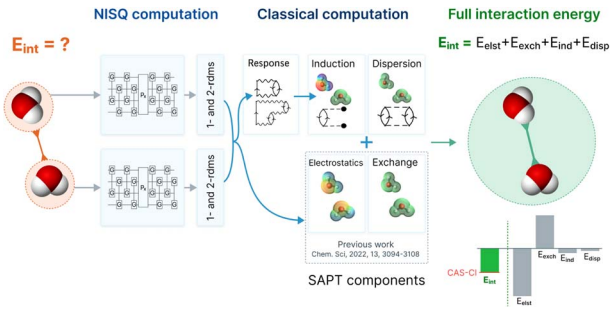
Accurate non-covalent interaction energies on noisy intermediate-scale quantum computers *via* second-order symmetry-adapted perturbation theory

Matthias Loipersberger, Fionn D. Malone, Alicia R. Welden, Robert M. Parrish,* Thomas Fox, Matthias Degroote, Elica Kyoseva, Nikolaj Moll,* Raffaele Santagati and Michael Streif



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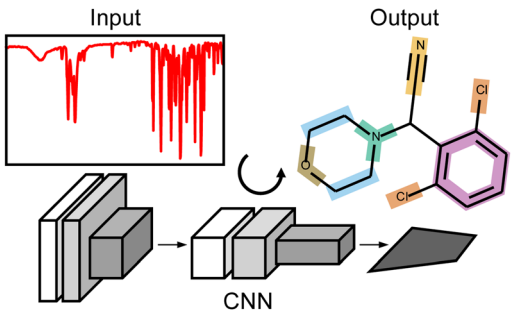
Automatic materials characterization from infrared spectra using convolutional neural networks

Guwon Jung, Son Gyo Jung and Jacqueline M. Cole*



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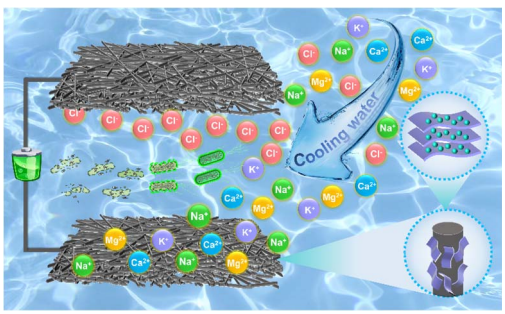
$Ti_3C_2T_x$ MXene/carbon nanofiber multifunctional electrode for electrode ionization with antifouling activity

Jingjing Lei, Fei Yu, Haijiao Xie and Jie Ma*



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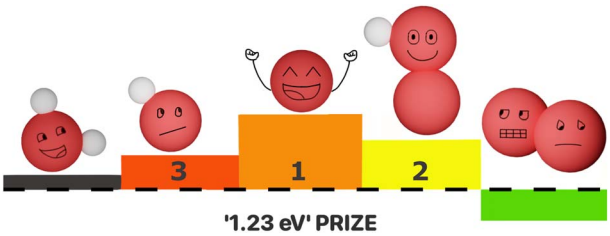


A general but still unknown characteristic of active oxygen evolution electrocatalysts

Eleonora Romeo, Francesc Illas* and Federico Calle-Vallejo*

3630

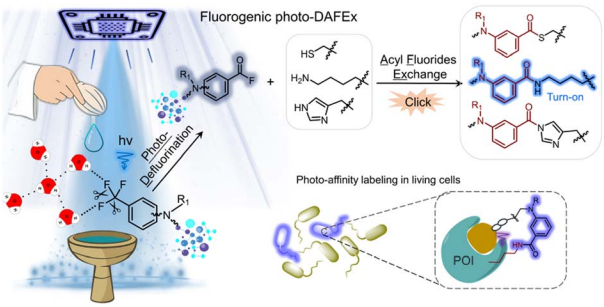
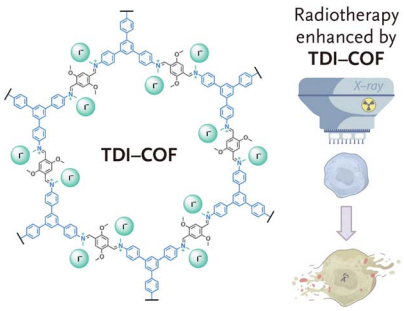


Photo-induced defluorination acyl fluoride exchange as a fluorogenic photo-click reaction for photo-affinity labeling

Lijun Deng, Cefei Zhang, Baolin Li, Jielin Fu, Zhong Zhang, Sitong Li, Xiaohu Zhao, Zhishan Su, Changwei Hu* and Zhipeng Yu*

3642



An iodide-containing covalent organic framework for enhanced radiotherapy

Le-Le Zhou, Qun Guan, Wei Zhou, Jing-Lan Kan and Yu-Bin Dong*

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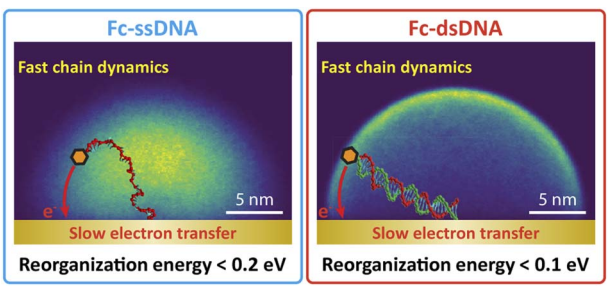

Electrochemical response of surface-attached redox DNA governed by low activation energy electron transfer kinetics

Zhiyong Zheng, Soo Hyeon Kim, Arnaud Chovin, Nicolas Clement* and Christophe Demaille*

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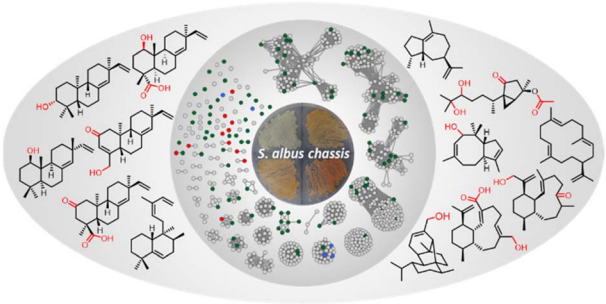
Building *Streptomyces albus* as a chassis for synthesis of bacterial terpenoids

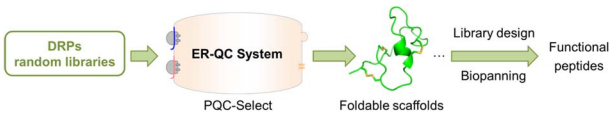
Yi Ling Hu, Qi Zhang, Shuang He Liu, Jia Li Sun, Fang Zhou Yin, Zi Ru Wang, Jing Shi, Rui Hua Jiao* and Hui Ming Ge*



3668

Selection and evolution of disulfide-rich peptides *via* cellular protein quality control

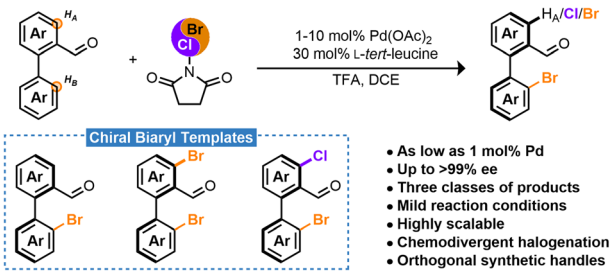
Xiaoting Meng, Chaoying Xu, Shihui Fan, Meng Dong, Jie Zhuang, Zengping Duan, Yibing Zhao and Chuanliu Wu*



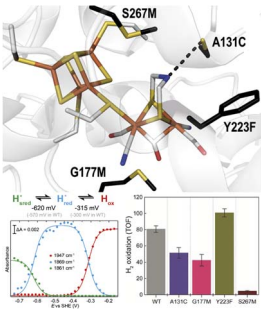
3676

Atroposelective brominations to access chiral biaryl scaffolds using high-valent Pd-catalysis

Sif T. Linde, Vasco Corti, Vibeke H. Lauridsen, Johannes N. Lamhauge, Karl Anker Jørgensen and Nomaan M. Rezayee*



3682

Redox tuning of the H-cluster by second coordination sphere amino acids in the sensory [FeFe] hydrogenase from *Thermotoga maritima*

Nipa Chongdar,* Patricia Rodríguez-Maciá, Edward J. Reijerse, Wolfgang Lubitz, Hideaki Ogata* and James A. Birrell*