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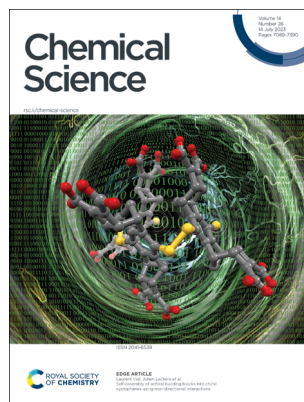
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ISSN 2041-6539 CODEN CSHCBM 14(26) 7089–7396 (2023)



Cover
See Wei Han, King Lun Yeung *et al.*, pp. 7114–7125.
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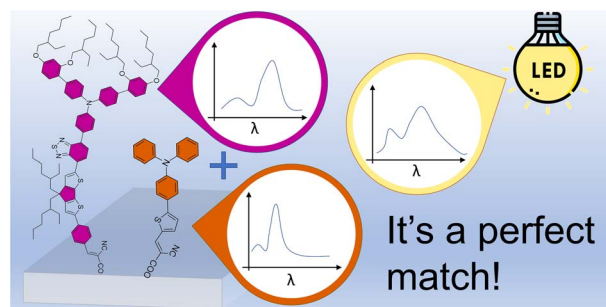
Inside cover
See Laurent Vial, Julien Leclaire *et al.*, pp. 7126–7135.
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COMMENTARY

7101

A focus on sustainable energy management for self-powered IoT devices via indoor photovoltaics

Pablo Docampo*



PERSPECTIVE

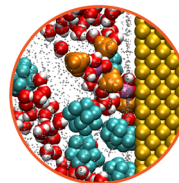
7103

Fine tuning of electrosynthesis pathways by modulation of the electrolyte solvation structure

Florian Dorchies and Alexis Grimaud*

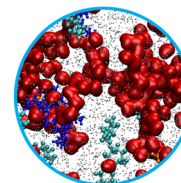
Electrochemical Interface

Double layer
Hydrophilicity/hydrophobicity
Substrate/product adsorptions



Bulk Electrolyte

Substrate/product solvations
Hydrogen bonding
Nanostructuring



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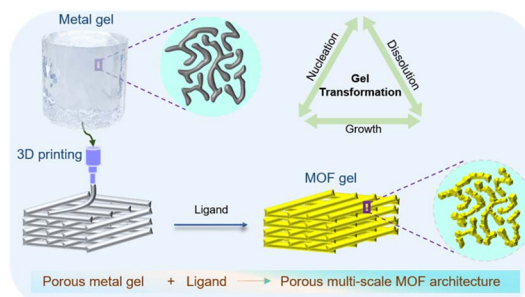
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7114

Gel transformation as a general strategy for fabrication of highly porous multiscale MOF architectures

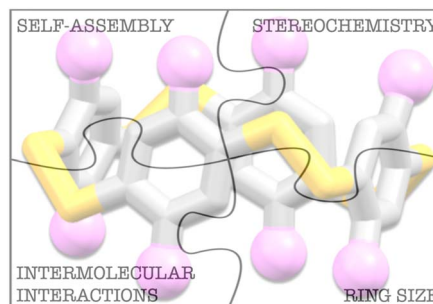
Zhang Liu, Javier Lopez Navas, Wei Han,*
Manuel Ricardo Ibarra, Joseph Kai Cho Kwan and
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Self-assembly of achiral building blocks into chiral cyclophanes using non-directional interactions

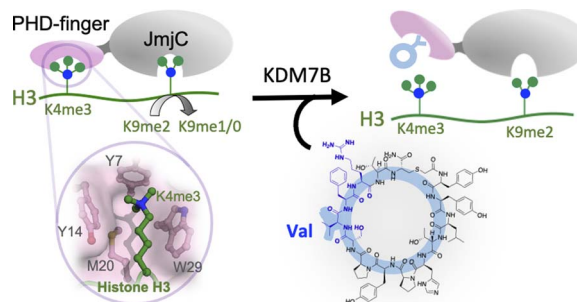
Yuan Zhang, Benjamin Ourri, Pierre-Thomas Skowron,
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Ana M. Belenguer, Nicolas Vanthuynne, Olivier Cala,
Elise Dumont, Pradeep K. Mandal, Ivan Huc, Florent Perret,
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Cyclic peptides target the aromatic cage of a PHD-finger reader domain to modulate epigenetic protein function

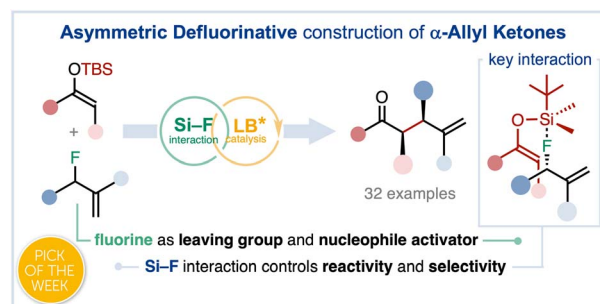
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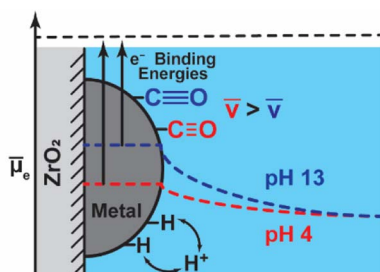
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Catalytic asymmetric defluorinative allylation of silyl enol ethers

Jordi Duran, Javier Mateos, Albert Moyano
and Xavier Companyó*



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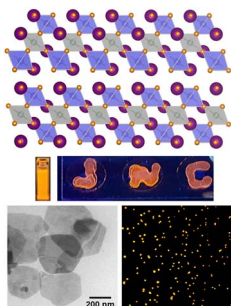


IR & AP-XPS Reveal Spontaneous Polarization

Metal nanoparticles supported on a nonconductive oxide undergo pH-dependent spontaneous polarization

Thejas S. Wesley, Max J. Hülsey, Karl S. Westendorff, Noah B. Lewis, Ethan J. Crumlin,* Yuriy Román-Leshkov* and Yogesh Surendranath*

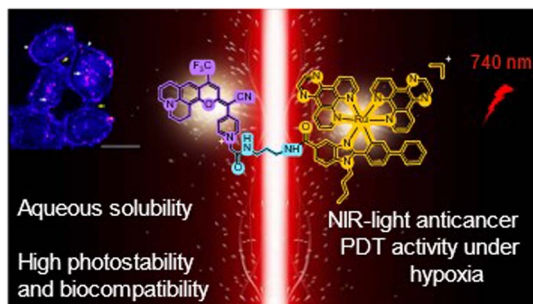
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2D nanosheets of layered double perovskites: synthesis, photostable bright orange emission and photoluminescence blinking

Aditya Bhardwaj, Kaushik Kundu, Ranjan Sasmal, Paribesh Acharyya, Jayita Pradhan, Simanta Kalita, Sarit S. Agasti* and Kanishka Biswas*

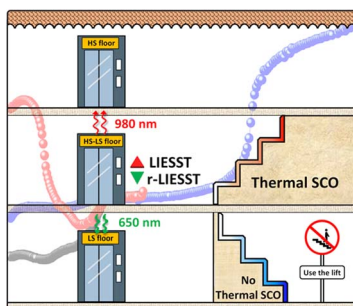
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A near-infrared light-activatable Ru(II)-coumarin photosensitizer active under hypoxic conditions

Enrique Ortega-Forte, Anna Rovira, Marta López-Corrales, Alba Hernández-García, Francisco José Ballester, Eduardo Izquierdo-García, Mireia Jordà-Redondo, Manel Bosch, Santi Nonell, María Dolores Santana, José Ruiz,* Vicente Marchán* and Gilles Gasser*

7185



Bidirectional photoswitchability in an iron(III) spin crossover complex: symmetry-breaking and solvent effects

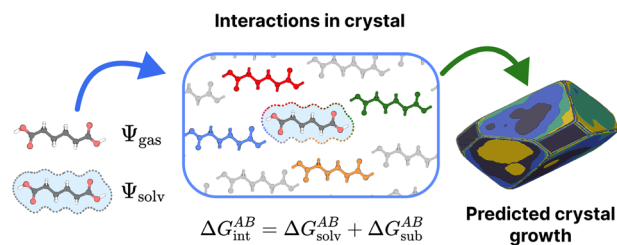
Raúl Díaz-Torres, Guillaume Chastanet, Eric Collet, Elzbieta Trzop, Phimpaka Harding* and David J. Harding*



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CrystalClear: an open, modular protocol for predicting molecular crystal growth from solution

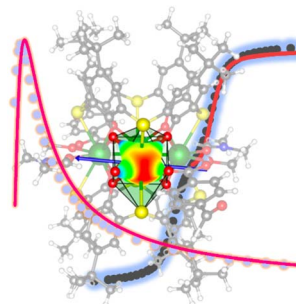
Peter R. Spackman,* Alvin J. Walisinghe,
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Toroidal moment and dynamical control in luminescent 1D and 3D terbium calixarene compounds

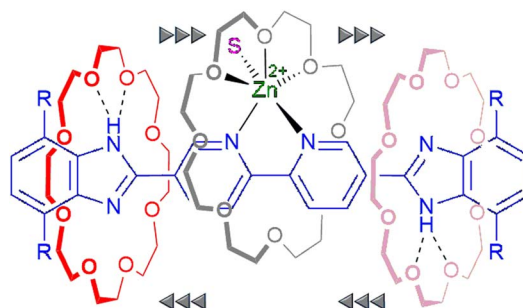
Hao Wang, Zhenhua Zhu, Léo La Droitte, Wuping Liao,*
Olivier Cador, Boris Le Guennic* and Jinkui Tang*



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A translationally active ligand based on a [2]rotaxane molecular shuttle with a 2,2'-bipyridyl core

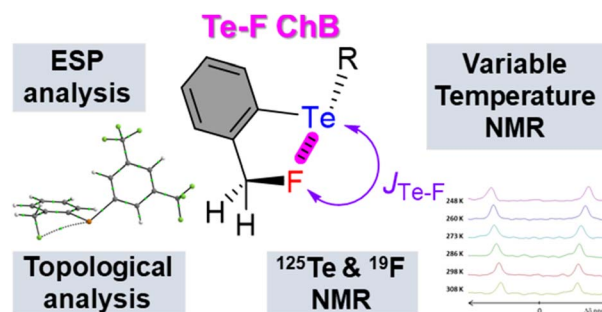
Ayan Dhara, Anton Dmitrienko, Rahaf N. Hussein,
Ariel Sotomayor, Benjamin H. Wilson and
Stephen J. Loeb*



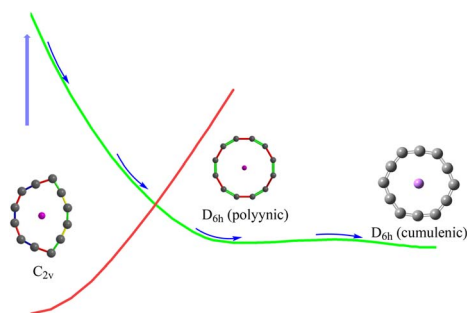
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Evidence for and evaluation of fluorine–tellurium chalcogen bonding

Robin Weiss, Emmanuel Aubert, Loic Gros Lambert,
Patrick Pale* and Victor Mamane*



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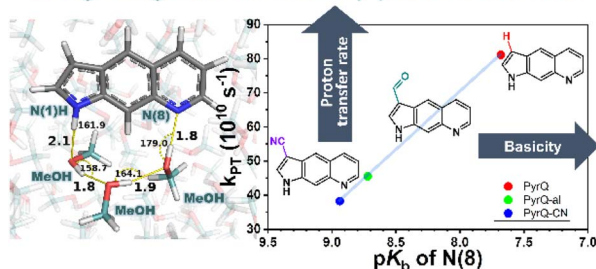


Can anions possess bound doubly-excited electronic states?

Shi-Jie Hou, Yi-Fan Yang,* Zhong-hua Cui* and Lorenz S. Cederbaum*

7237

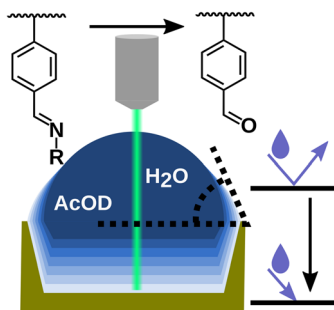
Long range solvent relay proton transfer



Long-range hydrogen-bond relay catalyses the excited-state proton transfer reaction

Kai-Hsin Chang, Yu-Chiang Peng, Kuan-Hsuan Su, Yi-Hsien Lin, Jiun-Chi Liu, Ying-Hsuan Liu, Chao-Hsien Hsu, Hsiao-Ching Yang* and Pi-Tai Chou*

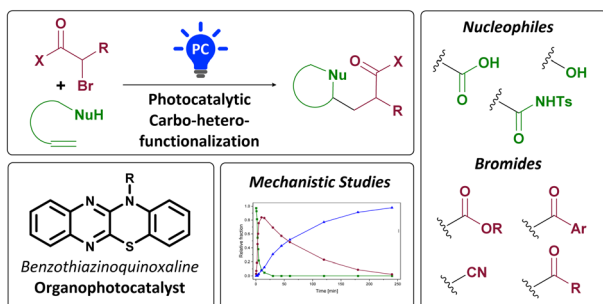
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Molecular *in situ* monitoring of the pH-triggered response in adaptive polymers by two-dimensional Raman micro-correlation-spectroscopy

Julian Hniopek, Josefine Meurer, Stefan Zechel, Michael Schmitt, Martin D. Hager* and Jürgen Popp*

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Organophotocatalytic carbo-heterofunctionalization of unactivated olefins with pendant nucleophiles

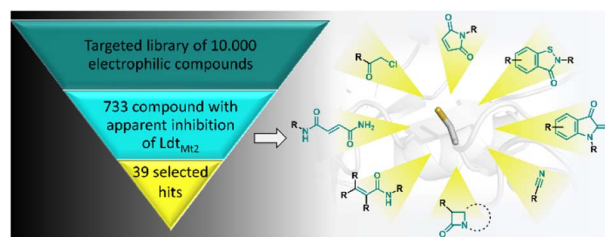
David M. Fischer, Manuel Freis, Willi M. Amberg, Henry Lindner and Erick M. Carreira*



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High-throughput screen with the L,D-transpeptidase Ldt_{Mt2} of *Mycobacterium tuberculosis* reveals novel classes of covalently reacting inhibitors

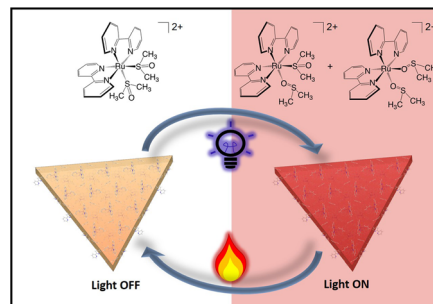
Mariska de Munnik, Pauline A. Lang, Francisco De Dios Anton, Mónica Cacho, Robert H. Bates, Jürgen Brem, Beatriz Rodríguez Miquel* and Christopher J. Schofield*



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Photocrystallography of [Ru(bpy)₂(dmsO)₂]²⁺ reveals an O-bonded metastable state

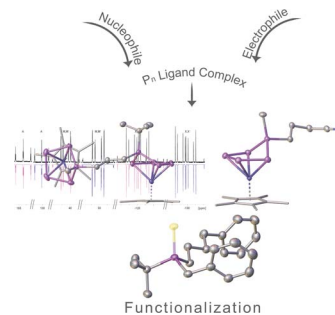
Zoe Y. Marr, Rajani Thapa Magar, Bertrand Fournier, Jason B. Benedict* and Jeffrey J. Rack*



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Controlled introduction of functional groups at one P atom in [Cp*Fe(η⁵-P₅)] and release of functionalised phosphines

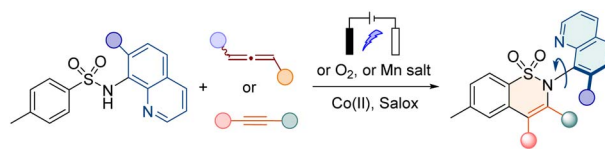
Stephan Reichl, Felix Riedlberger, Martin Piesch, Gábor Balázs, Michael Seidl and Manfred Scheer*



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Cobalt-catalyzed enantioselective C–H/N–H annulation of aryl sulfonamides with allenes or alkynes: facile access to C–N axially chiral sultams

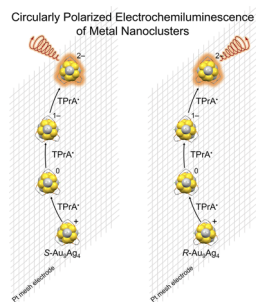
Xiao-Ju Si, Xiaofang Zhao, Jianli Wang, Xinhai Wang, Yuanshuo Zhang, Dandan Yang,* Mao-Ping Song and Jun-Long Niu*



- ◆ simple Co^{II}/Salox system
- ◆ electrochemistry
- ◆ C-H activation of sulfonamides
- ◆ compatibility of allenes and alkynes
- ◆ 121 examples
- ◆ up to >99% ee



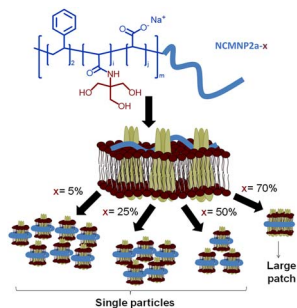
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Bright near-infrared circularly polarized electrochemiluminescence from Au₉Ag₄ nanoclusters

Lirong Jiang, Mengmeng Jing, Bing Yin, Wenjun Du, Xiaojian Wang, Ying Liu, Shuang Chen* and Manzhou Zhu*

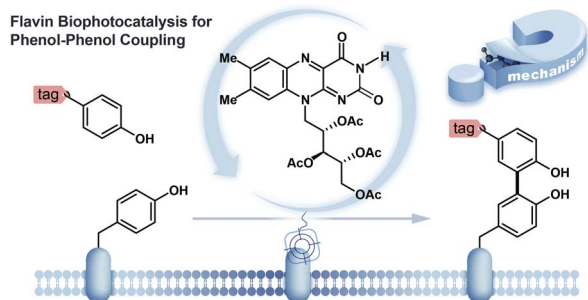
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pH-tunable membrane-active polymers, NCMNP2a-x, and their potential membrane protein applications

Thi Kim Hoang Trinh, Andres Jorge Cabezas, Soumil Joshi, Claudio Catalano, Abu Bakkar Siddique, Weihua Qiu, Sanket Deshmukh, Amedee des Georges and Youzhong Guo*

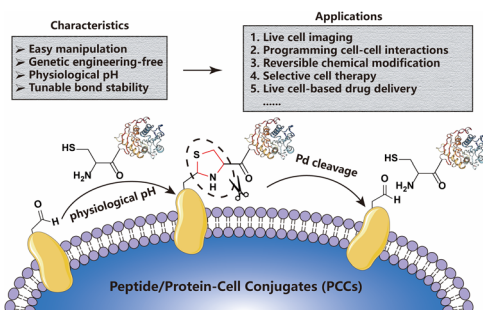
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Targeted proximity-labelling of protein tyrosines via flavin-dependent photoredox catalysis with mechanistic evidence for a radical-radical recombination pathway

Taylor O. Hope, Tamara Reyes-Robles, Keun Ah Ryu, Steven Mauries, Nicole Removski, Jacinthe Maisonneuve, Rob C. Oslund,* Olugbeminiyi O. Fadeyi* and Mathieu Frenette*

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Catalyst-free thiazolidine formation chemistry enables the facile construction of peptide/protein-cell conjugates (PCCs) at physiological pH

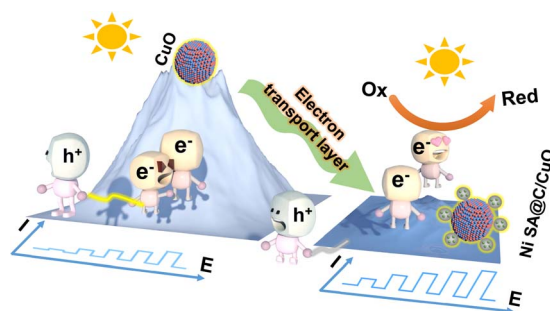
Xiangquan Liu, Youyu Wang, Bangce Ye* and Xiaobao Bi*



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Engineering the microenvironment of electron transport layers with nickle single-atom sites for boosting photoelectrochemical performance

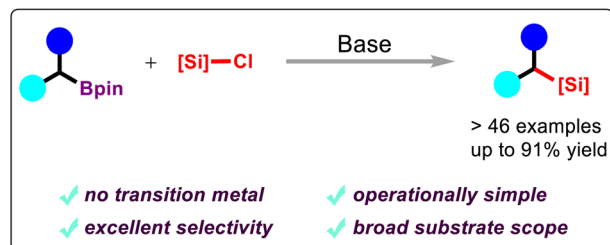
Ying Qin, Rong Tan, Jing Wen, Qikang Huang, Hengjia Wang, Mingwang Liu, Jinli Li, Canglong Wang, Yan Shen, Liuyong Hu,* Wenling Gu* and Chengzhou Zhu*



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Facile preparation of organosilanes from benzylboronates and gem-diborylalkanes mediated by KO^tBu

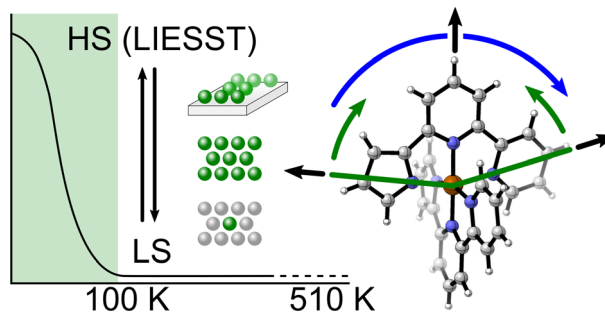
Man Tang, Wenyan Zhu, Huaxing Sun, Jing Wang, Su Jing,* Minyan Wang,* Zhuangzhi Shi and Jiefeng Hu*



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Defying the inverse energy gap law: a vacuum-evaporable Fe(II) low-spin complex with a long-lived LIESST state

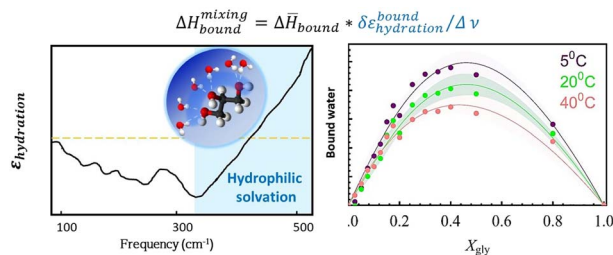
Jan Grunwald, Jorge Torres, Axel Buchholz, Christian Näther, Lea Kämmerer, Manuel Gruber, Sebastian Rohlf, Sangeeta Thakur, Heiko Wende, Winfried Plass, Wolfgang Kuch* and Felix Tuczek*



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Local solvation structures govern the mixing thermodynamics of glycerol–water solutions

Debasish Das Mahanta, Dennis Robinson Brown, Simone Pezzotti, Songi Han, Gerhard Schwaab, M. Scott Shell* and Martina Havenith*



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Correction: The influence of chirality on the behavior of oligonucleotides inside cells: revealing the potent cytotoxicity of G-rich L-RNA

Chen-Hsu Yu and Jonathan T. Szcepanski*

