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Cover

See Gregory P. Horne *et al.*, pp. 6881–6891.

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Inside cover

See Yann Sarazin *et al.*, pp. 6892–6905.

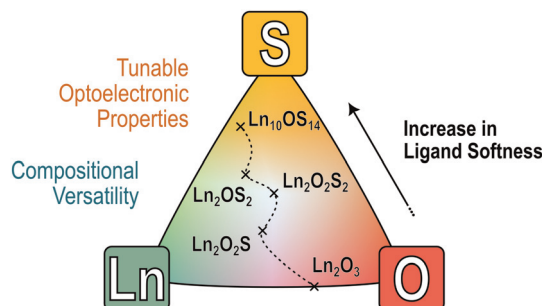
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6855

From $\text{Ln}_2\text{O}_2\text{S}$ to $\text{Ln}_{10}\text{OS}_{14}$: exploring the sulphur spectrum of trivalent lanthanoid oxysulphides

Brian A. Wuille Bille and Jesús M. Velázquez*

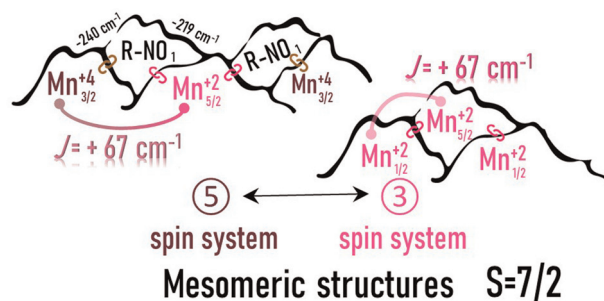


COMMUNICATIONS

6860

Field induced slow magnetic relaxation in a linear homotrinnuclear manganese heterospin coordination compound with $S = 7/2$ ground state and intriguing spin density distribution

Igor N. Shcherbakov,* Ilya I. Krotkii, Victoria I. Kazachkova, Sergey N. Lyubchenko, Nikolay N. Efimov, Arshak A. Tsaturyan and Vladimir A. Lazarenko



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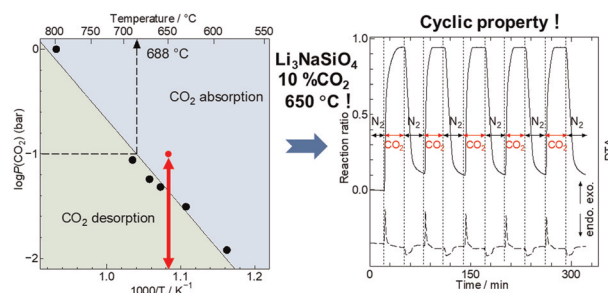


COMMUNICATIONS

6865

Cyclic CO₂ absorption/desorption property of Li₃NaSiO₄ under the partial pressure of CO₂ for practical applications

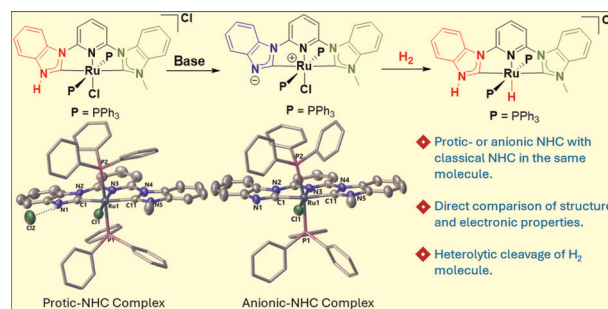
Shumpei Iwasaki, Kosuke Shido, Fumito Fujishiro and Takuya Hashimoto*



6870

Protic- or anionic-NHCs with a classical-NHC in a single [Ru(CNC)(PPh₃)₂Cl]Cl pincer complex: direct comparison of structure & electronic properties and heterolytic H₂ splitting

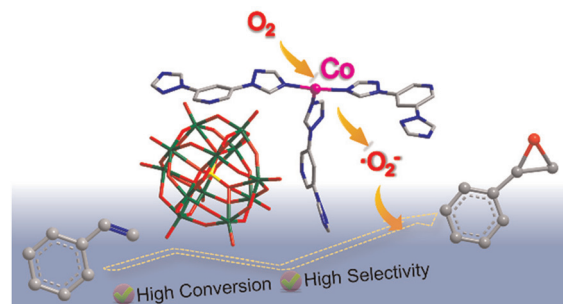
Navdeep Srivastava and Amrendra K. Singh*



6875

Effective oxygen activation on polyoxometalate-based hybrids for epoxidation of alkenes

Xue Bai, Maochun Zhu, Yifei Liu, Min Xing, Xiaoying Ji, Ange Zhang, Yanli Yang, Ying Lu and Shuxia Liu*

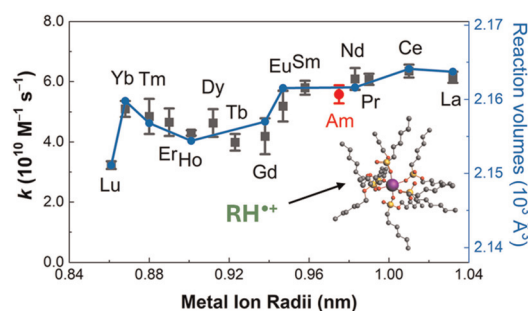


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6881

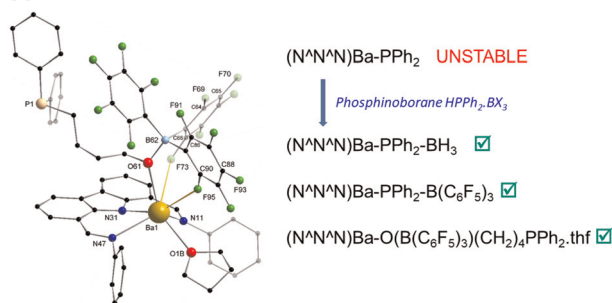
Effect of *f*-element complexation on the radiolysis of 2-ethylhexylphosphonic acid mono-2-ethylhexyl ester (HEH[EHP])

Stephen P. Mezyk,* Makayla Baxter, Cristian Celis-Barros, Travis S. Grimes, Peter R. Zalupski, Cathy Rae, Christopher A. Zarzana, Andrew R. Cook and Gregory P. Horne*



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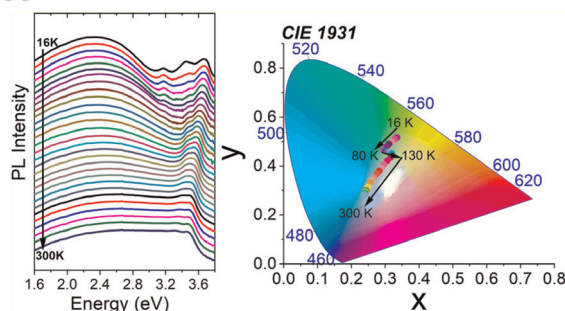
6892



Barium phosphidoboranes and related calcium complexes

Gabriel Duneş, Peter M. Chapple, Samia Kahlal, Thierry Roisnel, Jean-François Carpentier, Jean-Yves Saillard* and Yann Sarazin*

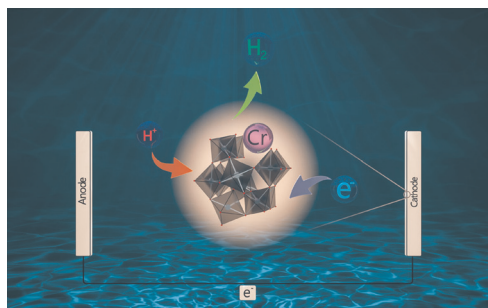
6906



Revisiting a (001)-oriented layered lead chloride templated by 1,2,4-triazolium: structural phase transitions, lattice dynamics and broadband photoluminescence

Miroław Mączka,* Szymon Sobczak, Maciej Ptak, Szymon Smółka, Katarzyna Fedoruk, Filip Dybała, Artur P. Herman, Waldeci Paraguassu, Jan K. Zaręba, Robert Kudrawiec, Adam Sieradzki and Andrzej Katrusiak*

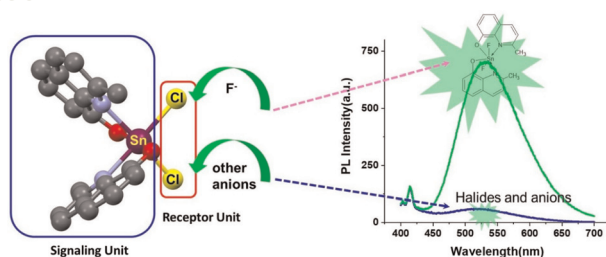
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Designing a hybrid nanomaterial based on Cr-containing polyoxometalate and graphene oxide as an electrocatalyst for the hydrogen evolution reaction

Maryam Khalaji-Verjani and Majid Masteri-Farahani*

6932



New type of tin(IV) complex based turn-on fluorescent chemosensor for fluoride ion recognition: elucidating the effect of molecular structure on sensing property

Andrew Wu, Patrick C. Hillesheim, Peter N. Nelson, Matthias Zeller, Gia Carignan, Jing Li and Daniel W. Ki*

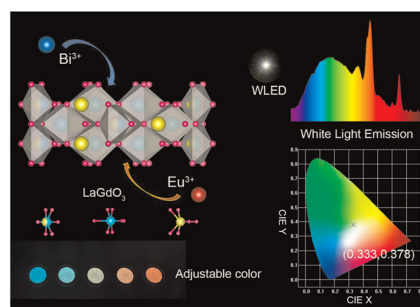


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Bright white light emission from lanthanide oxide LaGdO₃ for LED lighting by Bi³⁺ to Eu³⁺ energy transfer

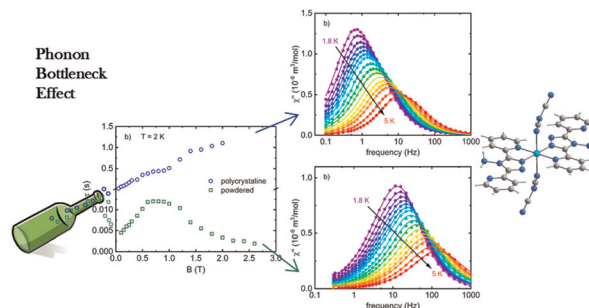
Zhangyan Yang, Zeyu Lyu,* Dashuai Sun, Sida Shen, Shuai Wei, Zheng Lu, Mingrui He, Zhuihao Huang and Hongpeng You*



6950

Influence of the phonon-bottleneck effect and low-energy vibrational modes on the slow spin-phonon relaxation in Kramers-ions-based Cu(II) and Co(II) complexes with 4-amino-3,5-bis-(pyridin-2-yl)-1,2,4-triazole and dicyanamide

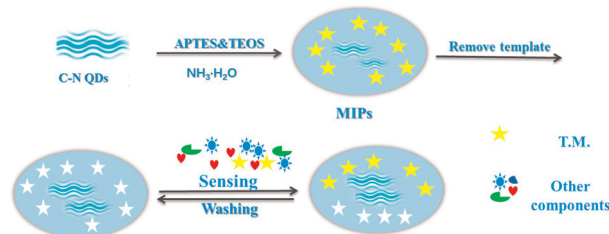
Ivan Potočník, Oleksandr Bukrynov, Andrii Kliuikov, Mariia Holub, Svitlana Vitushkina, Erika Samoľová, Erik Čižmár and Lucia Váhovská*



6965

N–C QDs coated with a molecularly imprinted polymer as a fluorescent probe for detection of penicillin

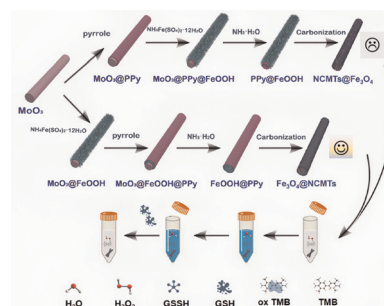
Shan Wang,* Zhihui Sun, Xuyang Zhao,* Kunhua Li, Yafei Wang and Xijing Zhang



6974

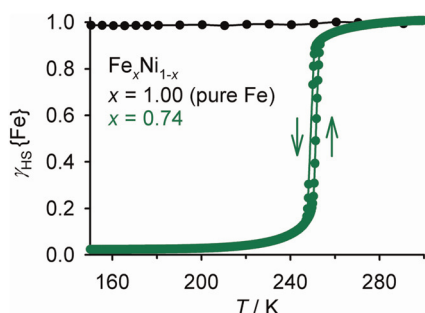
Fe₃O₄ nanoparticles entrapped in the inner surfaces of N-doped carbon microtubes with enhanced biomimetic activity

Huanhuan Li, Ziqi Jin, Na Lu,* Jianmin Pan, Jingli Xu, Xue-Bo Yin and Min Zhang*



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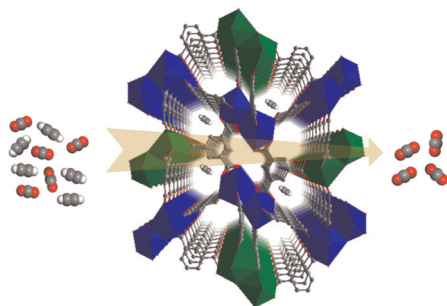
6983



Activating a high-spin iron(II) complex to thermal spin-crossover with an inert non-isomorphous molecular dopant

Malcolm A. Halcrow,* Hari Babu Vasili, Christopher M. Pask, Alexander N. Kulak and Oscar Cespedes

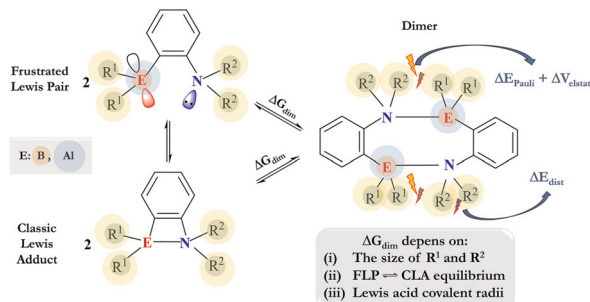
6993



A microporous bismuth-based MOF for efficient separation of acetylene from carbon dioxide

Bo Xing, Shan-Qing Yang, Qiang Zhang and Tong-Liang Hu*

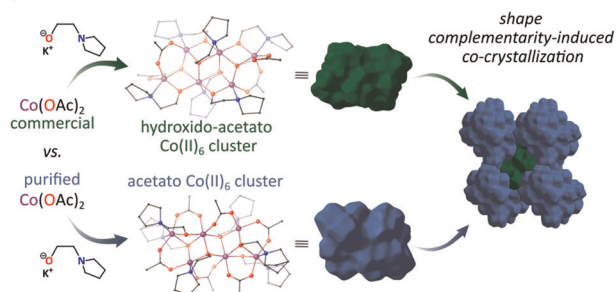
7000



Exploring the electronic and steric effects on the dimerization of intramolecular frustrated Lewis pairs: a comparison between aminoboranes and aminoalanes

César Barrales-Martínez,* Claudio Illanes-Solis, Rocío Durán and Julio Caballero

7012



Synthesis, polymorphism, and shape complementarity-induced co-crystallization of hexanuclear Co(II) clusters capped by a flexible heteroligand shell

Michał Terlecki,* Arkadiusz Kornowicz, Kornel Sacharczuk, Iwona Justyniak and Janusz Lewiński*

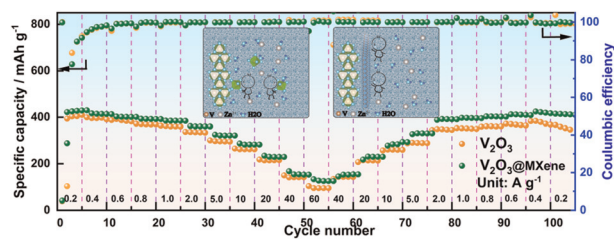


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7023

***In situ* electrochemically activated V_2O_3 @MXene cathode for a super high-rate and long-life Zn-ion battery**

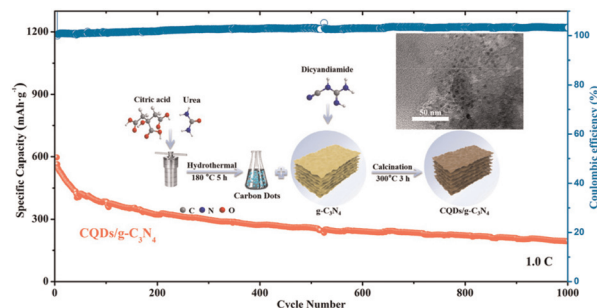
Yunlong Duan, Zhi Geng, Daohong Zhang* and Qiufan Wang*



7035

A carbon quantum dot-decorated g- C_3N_4 composite as a sulfur hosting material for lithium–sulfur batteries

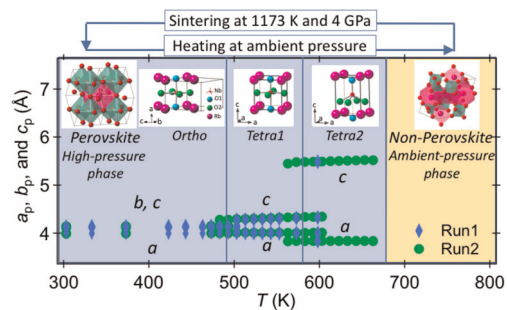
Yang Liu, Dandan Cai, Feng Zheng,* Ziwei Qin, Ying Li, Wenxian Li, Aijun Li, Yufeng Zhao* and Jiujun Zhang



7044

Crystal structure and properties of perovskite-type rubidium niobate, a high-pressure phase of RbNbO_3

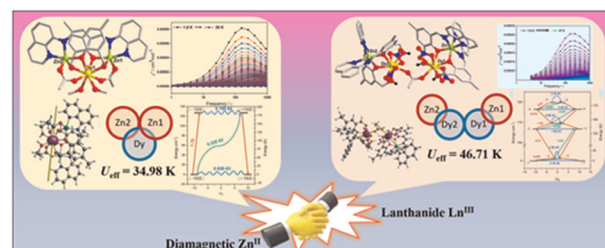
Ayako Yamamoto,* Kimitoshi Murase, Takeru Sato, Kazumasa Sugiyama, Toru Kawamata, Yoshiyuki Inaguma, Jun-ichi Yamaura, Kazuki Shitara, Rie Yokoi and Hiroki Moriwake



7053

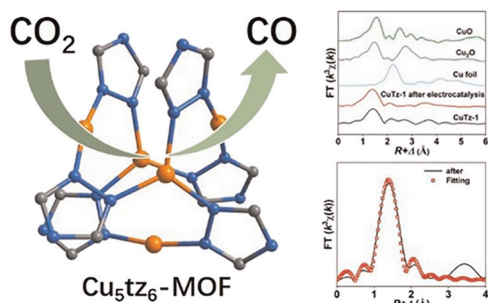
Effect of diamagnetic Zn(II) ions on the SMM properties of a series of trinuclear ZnDy_2 and tetranuclear Zn_2Dy_2 ($\text{Ln}^{\text{III}} = \text{Dy, Tb, Gd}$) complexes: combined experimental and theoretical studies

Pooja Shukla, Ibtesham Tarannum, Soumalya Roy, Amit Rajput, Prem Lama, Saurabh Kumar Singh,* Julia Ktak,* Junseong Lee* and Sourav Das*



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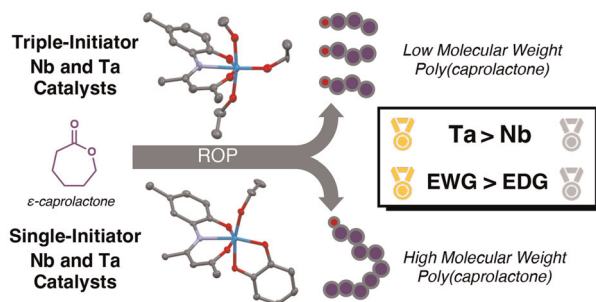
7067



Efficient electrochemical reduction of CO₂ to CO in a flow cell device by a pristine Cu₅tz₆-cluster-based metal–organic framework

Zijing Li, Yingtong Lv, Haoliang Huang, Zi-Jian Li,*
Tao Li,* Linjuan Zhang and Jian-Qiang Wang*

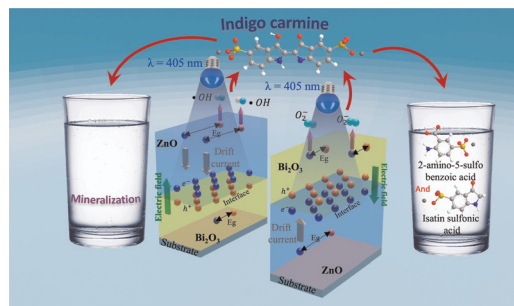
7073



Synthesis and catalytic activity of single-site group V alkoxide complexes for the ring-opening polymerization of ε-caprolactone

Frank Peprah, Grace E. Tarantola, Alyson S. Plaman,
Emily L. Vu, Alyssa B. Huynh and Christopher B. Durr*

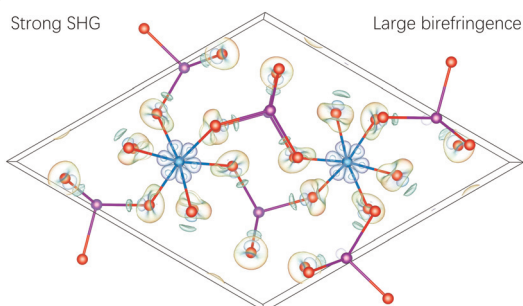
7081



Strong thickness dependence in thin film photocatalytic heterojunctions: the ZnO–Bi₂O₃ case study

Alberto Bernal-Díaz, Agileo Hernández-Gordillo,
Juan Carlos Alonso, Sandra E. Rodil and
Montserrat Bizarro*

7093



Chromium iodate: the structure and origin of optical second harmonic generation

Yang Chi* and Mei-Ling Xin

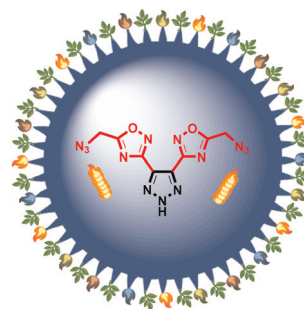


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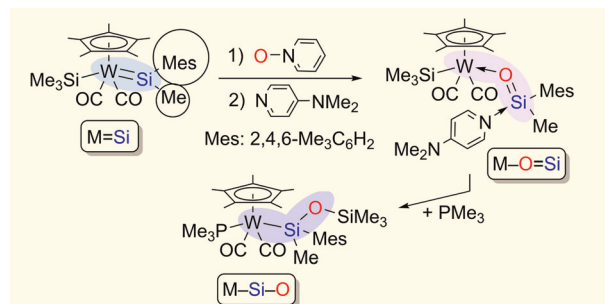
7100

Azidomethyl-bisoxadiazol-linked-1,2,3-triazole-
(ABT)-based potential liquid propellant and
energetic plasticizer

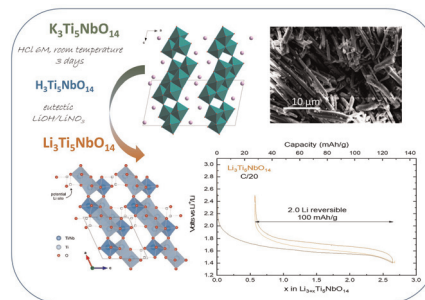
Sohan Lal, Richard J. Staples and Jean'ne M. Shreeve*



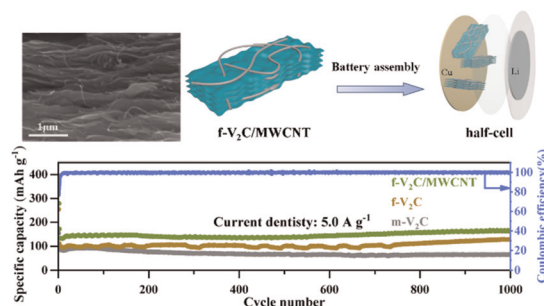
7105

Reactions of (mesityl)_n(methyl)_{2-n}silylene com-
plexes with pyridine-*N*-oxide (*n* = 1 and 0): for-
mation of silanone complexes and a disiloxanyloxy
complexTakako Muraoka,* Taichi Ishita, Kosuke Kawachi,
Takuya Nishio, Hiroto Ishihara and Keiji Ueno

7115

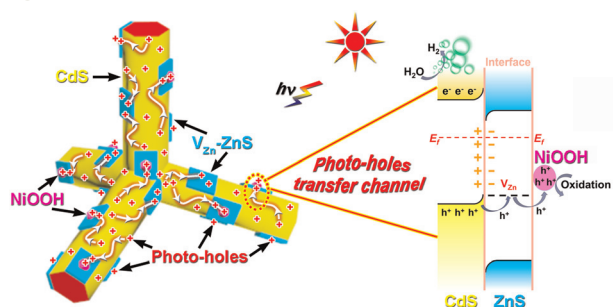
A₃Ti₅NbO₁₄ (A = H, Li and K) family: ionic exchange,
physical and electrochemical propertiesAudric Neveu, Justine Jean, Philippe Boullay,
Vadim M. Kovrugin, Armance Sagot, Hari Raj and
Valerie Pralong*

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Few-layer V₂C/MWCNT with high ionic accessibility
for lithium-ion storageShouchao Fu, Xunpeng Zhang, Bingxian Wu,
Zhiguo Zhang, Hong Gao* and Lu Li*

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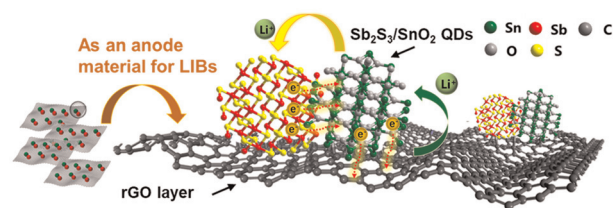
7131



Spatially ordered NiOOH-ZnS/CdS heterostructures with an efficient photo-carrier transmission channel for markedly improved H₂ production

Xinxin Xin, Yuanxin Qiu, Chuan Jiang, Yanyan Li,* Hui Wang, Jixiang Xu, Haifeng Lin,* Lei Wang and Volodymyr Turkevych

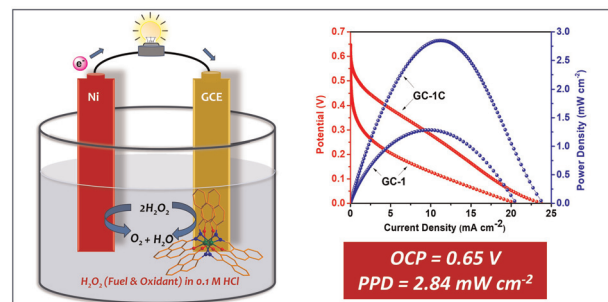
7142



p-n heterogeneous Sb₂S₃/SnO₂ quantum dot anchored reduced graphene oxide nanosheets for high-performance lithium-ion batteries

Haiyan Yin, Guanghao Zhan, Ruibo Yan, Xiaohui Wu, Qianqian Hu* and Xiaoying Huang

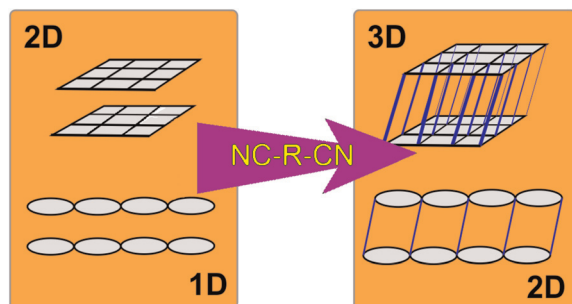
7152



Designing one-compartment H₂O₂ fuel cell using electroactive phenalenyl-based [Fe₂(hnmh-PLY)₃] complex as the cathode material

Nisha Kamboj, Ayan Dey, Sunita Birara, Moumita Majumder,* Srijan Sengupta* and Ramesh K. Metre*

7163



Expanding the dimensionality of bis(tetrazolyl) alkane-based Fe(II) coordination polymers by the application of dinitrile coligands

Aleksandra Totoczko, Marcin Kaźmierczak, Maria Książek, Marek Weselski, Miłosz Siczek, Joachim Kusz and Robert Bronisz*

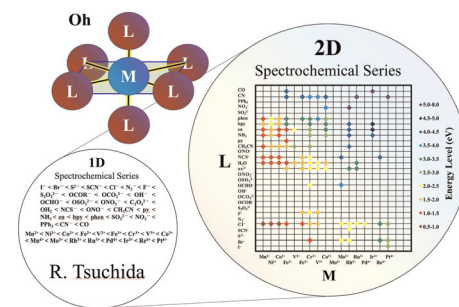


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Exploring spin states and ligand field splitting in metal complexes: a theoretical analysis of spin–orbital interactions and magnetic properties

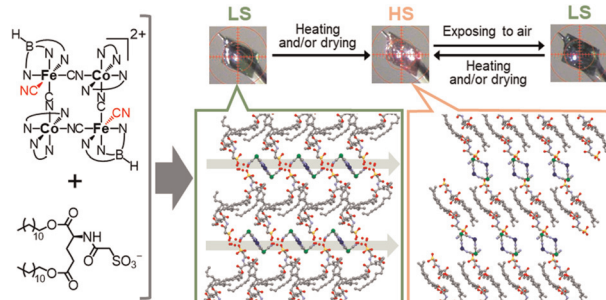
Tomohiko Ishii,* Kazuyoshi Ogasawara and Genta Sakane



7190

Reversible structural change of $[\text{Co}_2\text{Fe}_2]$ complexes between diamagnetic hydrogen-bonded 1D chains and paramagnetic complexes within a layered structure of amphiphilic anions

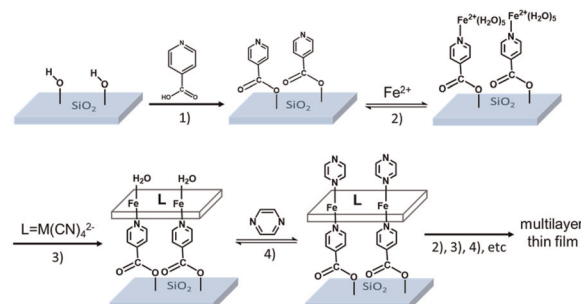
Nozomi Mihara, Soyoka Iitsuka, Takuya Shiga and Masayuki Nihei*



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Spin crossover in $\{\text{Fe}(\text{pyrazine})[\text{M}(\text{CN})_4]\}$ ($\text{M} = \text{Ni}, \text{Pt}$) thin films assembled on fused silica substrates

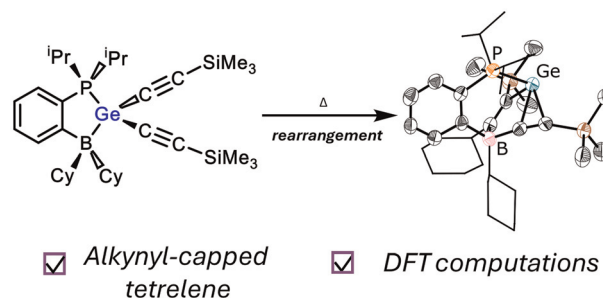
Fayan Lai, Gábor Molnár,* Saioa Cobo* and Azzedine Bousseksou*



7206

Frustrated Lewis pair adducts of alkynyl-capped tetrelenes

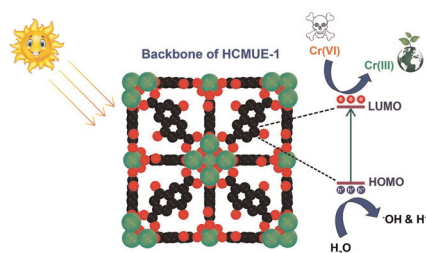
Abhishek V. Muralidharan, Brandon L. Frenette, Julius Wicke, Alvaro A. Omaña, Michael J. Ferguson and Eric Rivard*



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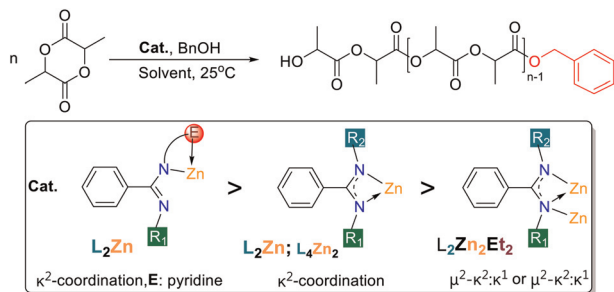
Graphical Abstract Figure



Enhanced photoreduction efficiency of Cr(VI) driven by visible light in a new Zr-based metal–organic framework modified by hydroxyl groups

Duc T. Nguyen, Khang M. V. Nguyen, Huy K. Duong, Binh T. Nguyen, Mai D. K. Nguyen, Dang B. Tran, Quang-Hieu Tran, Tan L. H. Doan and My V. Nguyen*

7229



Tunable zinc benzamidinate complexes: coordination modes and catalytic activity in the ring-opening polymerization of L-lactide

Chen-Chieh Chang, Ming-Tsz Chen,* Tzu-Lun Huang and Chi-Tien Chen*

CORRECTION

7239

Correction: Predicting the dye-sensitized solar cell performance of novel linear carbon chain-based dyes: insights from DFT simulations

Giuseppe Consiglio, Adam Gorczyński, Salvatore Petralia and Giuseppe Forte*

