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IN THIS ISSUE

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Cover

See Scott J. Dalgarno and Euan K. Brechin, pp. 16643–16659.

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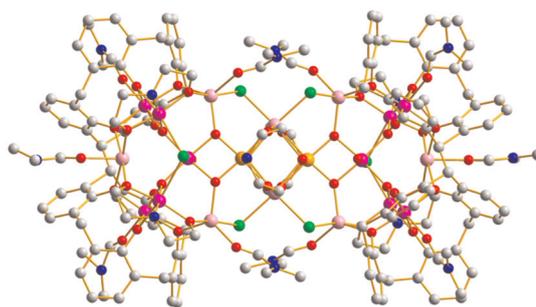
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PERSPECTIVE

16643

The coordination chemistry of 2,2'-bis-*p*-^tBu-calix[4]arene

Scott J. Dalgarno* and Euan K. Brechin*

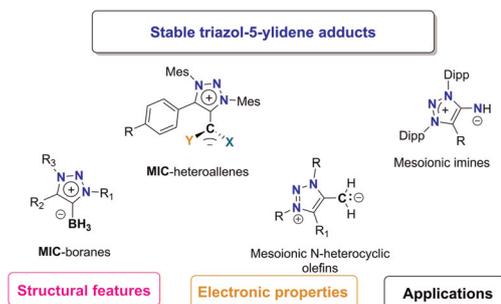


FRONTIER

16660

Recent advances and application of triazol-5-ylidene (MIC) adducts of the type MIC-E (E = BR₃, CS₂, CO₂, and CSN) and related mesoionic MIC=X (X = CR₂ and NR) species

María G. Torres-Salazar, Emmanuel Campos-Dominguez, Alejandro Álvarez-Hernández and Daniel Mendoza-Espinosa*



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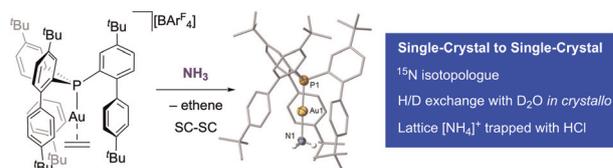
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COMMUNICATIONS

16673

Single-crystal to single-crystal synthesis of a gold(i)-ammonia complex and H/D exchange *in crystallo* with D₂O

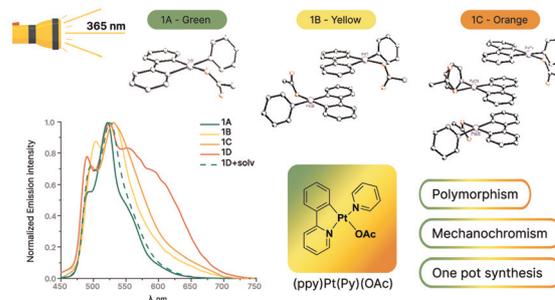
Chloe L. Johnson, Kristof M. Altus, Miquel Navarro, Jesús Campos, Simon B. Duckett* and Andrew S. Weller*



16677

One-pot straightforward access to a cyclometalated acetate platinum(II) complex exhibiting mechanochromic luminescence

Egor A. Sosunov,* Sergei V. Tatarin, Ivan V. Skabitsky, Maria V. Panina, Alexandra G. Son and Ilya A. Yakushev

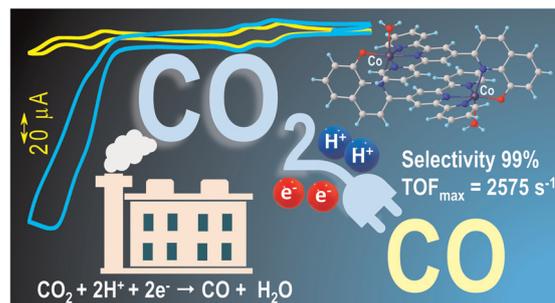


PAPERS

16682

Selective electrochemical CO₂ reduction to CO by a Co(II) dimer catalyst by metal–ligand cooperativity

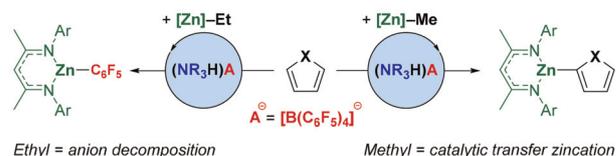
Sk Samim Akhter, Koushik Makhal, Dev Raj, Manaswini Raj, Thillai Natarajan M, Bhabani S. Mallik, Prabhakar Bhardwaj, Pankaj Kumar, Ebbe Nordlander and Sumanta Kumar Padhi*



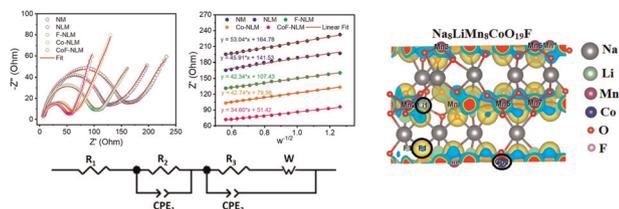
16697

Catalytic transfer zincation using ammonium cations

Justyna Łosiewicz, Milan Kumar Bisai, Gary S. Nichol, Stuart A. Macgregor* and Michael J. Ingleson*



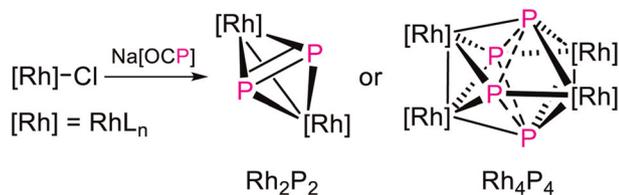
16704



Unraveling the electronic mechanisms of transition metal and fluorine co-doping for enhanced electrochemical performance in sodium lithium manganese oxide cathodes

Duong Trong Nhan, Nguyen Vo Anh Duy, Nguyen Chi Ben, Duy Khanh Nguyen, Yohandys A. Zulueta, Nguyen To Van, Viet Bac Thi Phung, Nguyen Van Nghia, Minh Tho Nguyen and Minh Triet Dang*

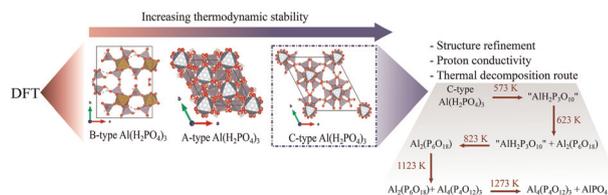
16718



Sodium phosphoethynolate as P-source for the synthesis of molecular rhodium phosphides: an exploratory study

Zhongshu Li,* Jaap E. Borger, Thomas L. Gianetti, Fabian Müller, Bruno Pribanic, Peter Coburger* and Hansjörg Grützmacher*

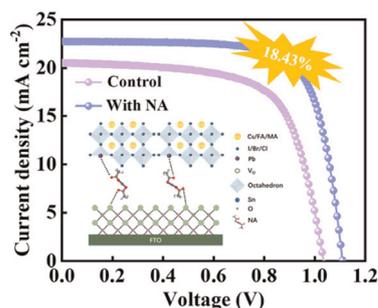
16727



Stability, structure, dynamics and thermal properties of C-type aluminium tris-dihydrogen phosphate

Sheyi C. Adediwura, Jan K. Wied, Christian F. Litterscheid and Jörn Schmedt auf der Günne*

16737



Dynamic self-regulating interfaces enable crystallization control and lead sequestration in perovskite photovoltaics

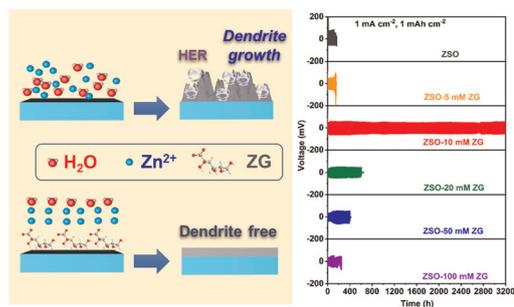
Wenhui Meng, Haojie Sui, Zan Li, Xinjing Chen, Yongjia Li, Shufang Zhang,* Hai Zhong, Qi Zhang and Changlin Yao*



16745

Zinc gluconate as a multifunctional electrolyte additive for dendrite-free and long-life zinc ion batteries

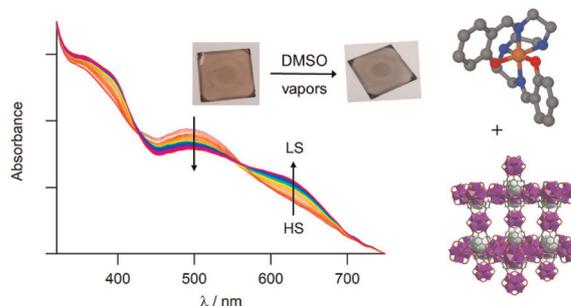
Yaling Ji, Ronghan Jiang, Xiqing Mai, Xueqin Zhang, Song Lu, Xusheng Wang, Min Guo, Jiadi Ying, Qi Shen, Yeqing Wang, Zhixin Yu and Tiancun Liu*



16754

A spin-state switchable MOF-based film for visual DMSO vapor sensing

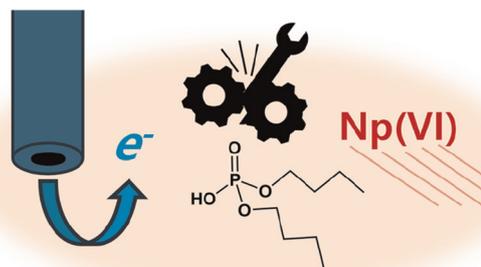
Yuwei Shen, Soraya Bouras, Latévi Max Lawson Daku, Christian Serre and Antoine Tissot*



16760

The electrochemistry of neptunium in tri-*n*-butyl phosphate

Joshua R. Dunbar and Mark P. Jensen*



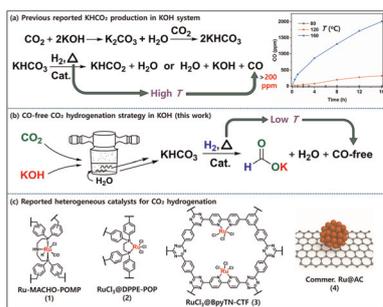
16772

Investigation and preparation of a TREN-based bifunctional chelator for ⁸⁹Zr

Melissa Y. Lucero, A. Paden King, Woonghee Lee, Kwamena E. Baidoo, Joseph Ivanic, Martin J. Schnermann* and Freddy E. Escorcia*



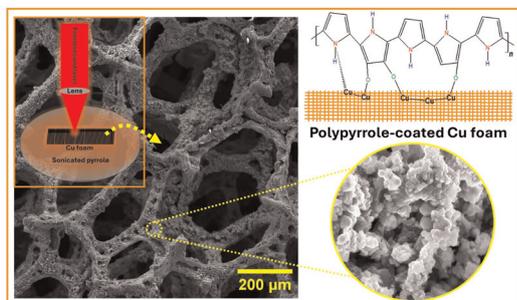
16781



CO-free selective hydrogenation of CO_2 to value-added formate under low-temperature aqueous conditions using a heterogenized Ru-PNP catalyst

Hongjin Park, Minkyong Go and Sungho Yoon*

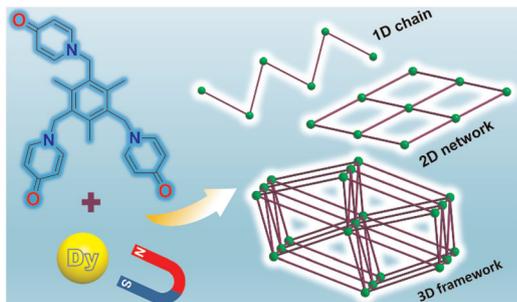
16792



In situ polypyrrole coating on copper foam via femtosecond laser-irradiation for supercapacitor applications

Muhammad Faheem Maqsood,* Faisal Ghafoor, Syed Muhammad Zain Mehdi and Iqra Rabani*

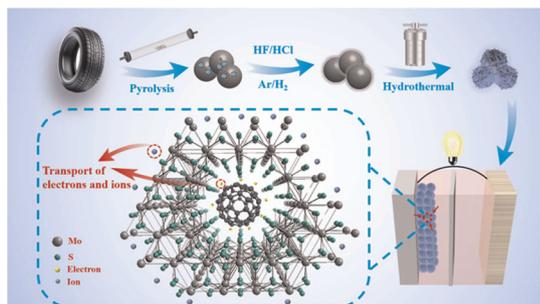
16805



From 1D to 3D: dimensional control of low-coordinate lanthanide coordination polymers with SMM behavior and white-light emission

Xiang-Tao Dong, Ting Zhu, Rong-Yan Zhang, Guo Peng,* Lijun Fu and Xiao-Ming Ren

16814



From waste to power: transforming waste tires into high-performance sodium-ion battery anodes via carbon/ MoS_2 composites

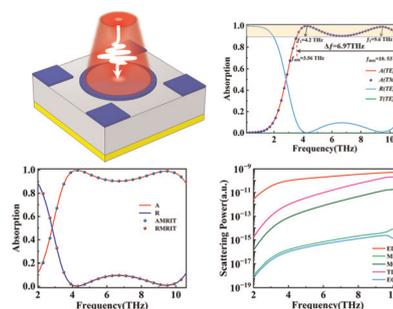
Shuai Yang, Ziyi Zhou, Yuchen Yang, Lijun Feng, Jiyan Xiao, Jisheng Wang, Li Lili and Guorui Yang*



16826

A quadrupolar-symmetric VO₂ metasurface with edge-plasmonic dipoles for ultrabroadband and polarization-insensitive terahertz absorption

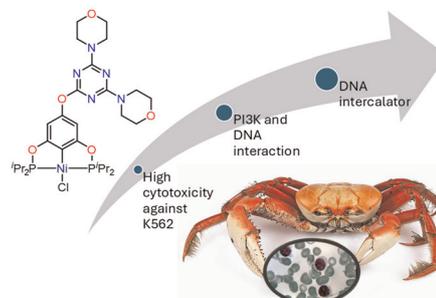
Zhihan Chen, Shengyuan Wang, Xinyao Wu, Shenglan Pu, Dingcier Lu and Hao Chen*



16836

Synthesis and cytotoxic activity of morpholino-s-triazine derivatives of POCOP-Ni(II) pincers

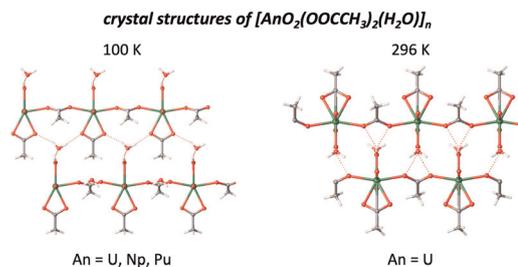
Juan S. Serrano-García, Andrés Amaya-Flórez, Antonino Arenaza-Corona, María Teresa Ramírez-Apan, Adrián L. Orjuela, Jorge Alí-Torres, Marcos Flores-Alamo, Simón Hernandez-Ortega, Patricia Cano-Sanchez and David Morales-Morales*



16848

Crystallography, DFT study and nature of the bonding in the series of AnO₂²⁺ acetates (An = U, Np, Pu)

Anna D. Krot,* Mikhail S. Grigoriev, Ilia A. Pankin, Alexander A. Guda and Alexander M. Fedoseev

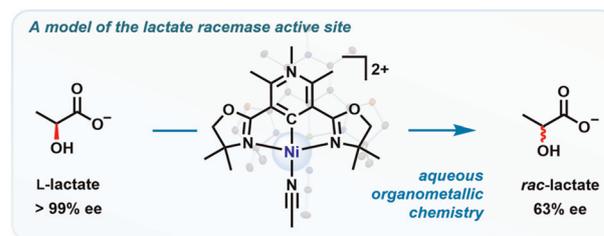


Bonding analysis: crystallography, DFT, QTAIM

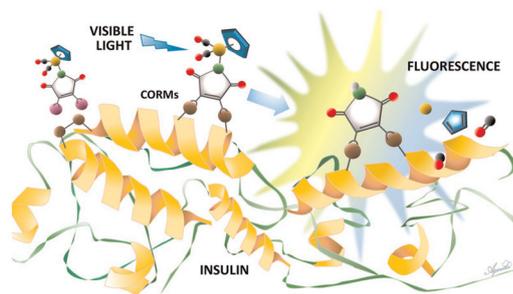
16857

Organometallic nickel NCN pincer complex promotes L-lactate racemization in water

Thomas D. Dow, Derek R. Kuno-Williams, Toby J. Woods and Yu Zhang*



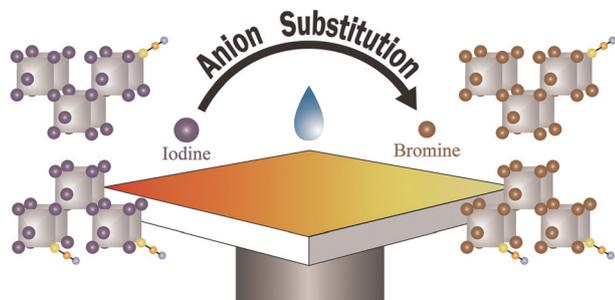
16864



Metallobromomaleimide derivatives for thiol bioconjugation and disulfide bridging: spectroscopic and biological properties

Karolina Koprowska, Nathalie Fischer-Durand, Sylwia Michlewska, Magdalena Gapińska, Marika Grodzicka, Anna Makal, Joanna Krzeszczakowska, Anna Wrona-Piotrowicz, Laurent Lignières, Michèle Salmain and Bogna Rudolf*

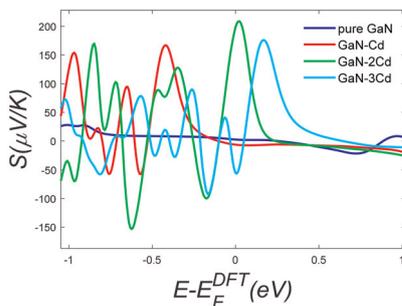
16876



Tunable optical properties in the (110)_p-oriented layered halide perovskite FA₄Pb₂I_{7.5}(SCN)_{0.5} by Br substitution

Koki Matsushima, Takuya Ohmi, Wataru Taniguchi, Shoya Nagano, Tomoya Fukui, Takanori Fukushima, Muhammad Awais, Makhud Saidaminov, Masaki Azuma and Takafumi Yamamoto*

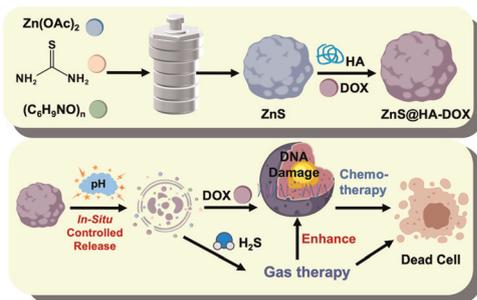
16882



Thermoelectric performance enhancement in cadmium-combined GaN nanosheets

Sameer Nawaf,* Alaa A. Al-Jobory, Anhar A. Ouda and Ruqayah A. Najm

16892



An *in situ* gas nanogenerator for pH-responsive controlled release and H₂S-chemo combined therapy *in vitro*

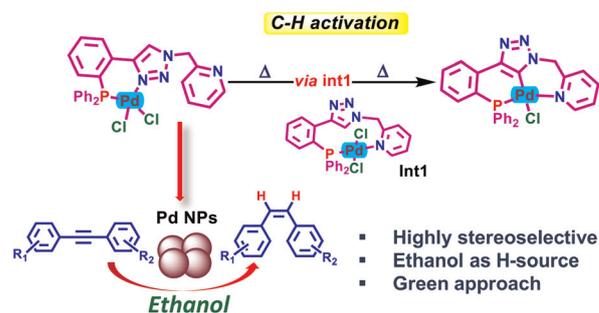
Lihua Wang, Xionghongcan Zhou, Zengyu Ye, Sha Li, Yayang Wu, Kaiyue Song,* Feng Zhao* and Xianglong Li*



16900

Triazolyl–phosphine with pyridyl functionality: Pd^{II}/Pt^{II} complexes and selective transfer semi-hydrogenation of alkynes using ethanol as a hydrogen source

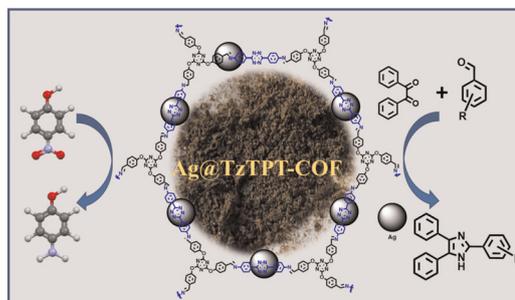
Bhupinder Kaur, Dipannita Saha and Maravanji S. Balakrishna*



16911

Intriguing catalytic activity of a silver-functionalized COF in the reduction of nitroaromatics and synthesis of biologically relevant imidazoles

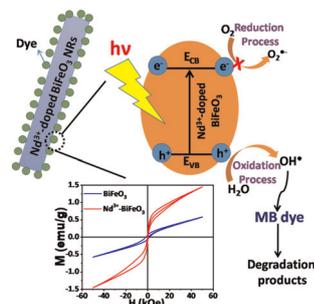
Shubham Kumar, Bharatkumar Z. Dholakiya and Ritambhara Jangir*



16924

Structural and functional enhancements in BiFeO₃ nanorods: the effect of Nd³⁺ doping on R3c–Pnma phase transition, magnetism, and photocatalysis

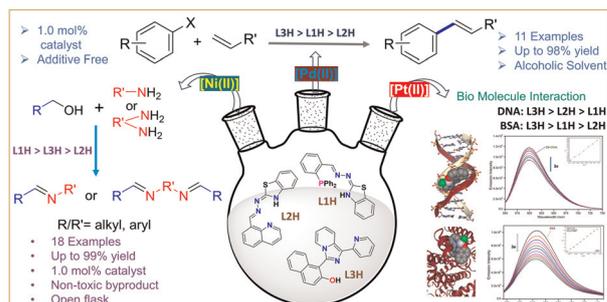
Sandeep Kumar Singh Patel,* Amit Kumar and Sandeep Kumar Chauhan



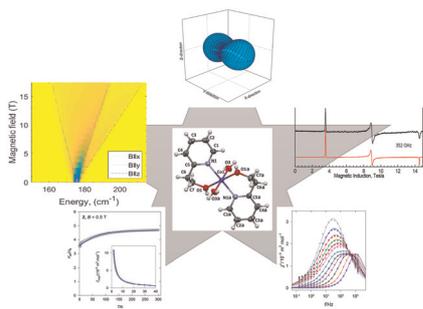
16939

Group 10 complexes of benzothiazolehydrazone- and imidazo[1,5-a]pyridine-based ligands: structural artistry, biophysical study, and catalytic activity

Amlan Ranjan Rayasingh and Vadivelu Manivannan*



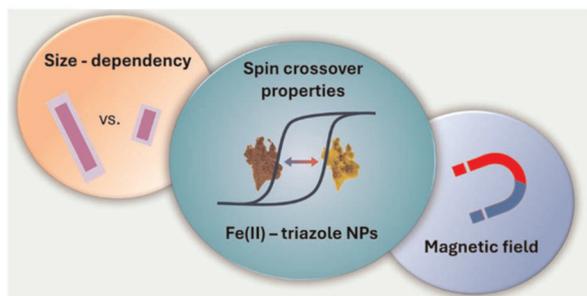
16955



Effect of the counter anion to slow magnetic relaxation of hexacoordinate Co(II) complexes

Magdalena Malik,* Alina Bieńko,* Roman Boča, Ján Titiš, Cyril Rajnák,* Anna Świtlicka, Dariusz C. Bieńko, Mykhaylo Ozerov and Andrew Ozarowski

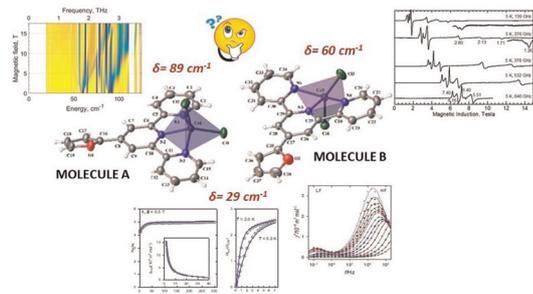
16966



Exploring the impact of magnetic field and nanoparticle size on the magnetic properties of Fe(II)-triazole spin-crossover nanoparticles

A. Pacanowska,* A. Regueiro, P. Czaja, A. Deptuch, M. Fitta and P. Konieczny*

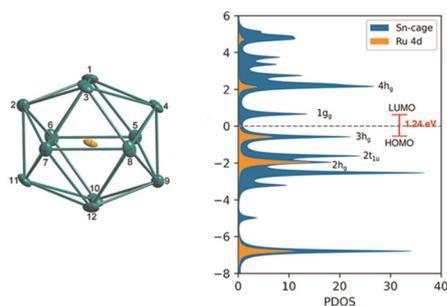
16973



Further insights into controlling the anisotropy of pentacoordinate Co(II) field-supported single-molecule magnets

Katarzyna Choroba, Barbara Machura,* Alina Bieńko,* Jacek Sawka, Dariusz C. Bieńko, Cyril Rajnák, Ján Titiš, Roman Boča, Mykhaylo Ozerov and Andrew Ozarowski

16986



Degrees of distortion: synthesis, structure and bonding in approximately icosahedral [Ru@Sn₁₂]⁴⁻

Sourav Mondal, Ya-Shan Huang, Zhong-Ming Sun* and John E. McGrady*

