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#### Cover

See Udo Radius, Maik Finze et al., pp. 9553-9561.

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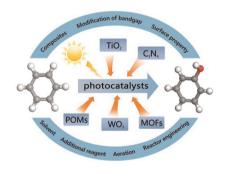


# **PERSPECTIVE**

9525

Recent trends in phenol synthesis by photocatalytic oxidation of benzene

Ziru Wang and Einaga Hisahiro\*

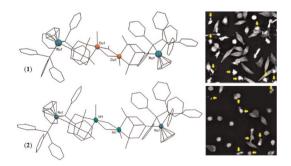


## **COMMUNICATIONS**

9541

# Tetranuclear Ru<sub>2</sub>Cu<sub>2</sub> and Ru<sub>2</sub>Ni<sub>2</sub> complexes with nanomolar anticancer activity

Andrés Alguacil, Franco Scalambra, Pablo Lorenzo-Luis, Adrián Puerta, Aday González-Bakker, Zenaida Mendoza, José M. Padrón and Antonio Romerosa\*



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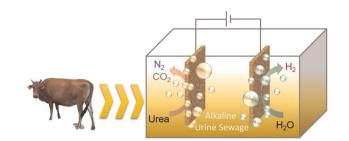


# COMMUNICATIONS

#### 9546

Amorphous vanadium-doped cobalt oxyborate as an efficient electrocatalyst for urea-assisted H<sub>2</sub> production from urine sewage

Tanbir Ahmed, Sukanya Bhattacharjee and Poulomi Roy\*

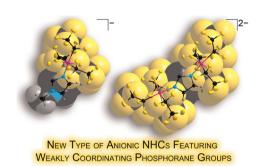


## **PAPERS**

#### 9553

Anionic N-heterocyclic carbenes featuring weakly coordinating perfluoroalkylphosphorane moieties

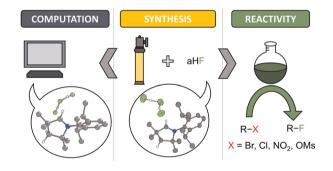
Ludwig Zapf, Udo Radius\* and Maik Finze\*



#### 9562

From cyclic (alkyl)(amino)carbene (CAAC) precursors to fluorinating reagents. Experimental and theoretical study

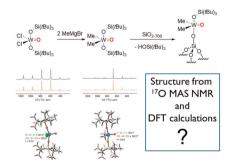
Evelin Gruden, Griša Grigorij Prinčič, Jan Hočevar, Jernej Iskra, Jaroslav Kvíčala and Gašper Tavčar\*

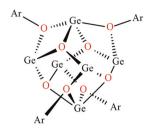


### 9573

On the use of <sup>17</sup>O NMR for understanding molecular and silica-grafted tungsten oxo siloxide complexes

Y. Bouhoute, D. Grekov, N. Merle, K. C. Szeto, C. Larabi, I. Del Rosal, L. Maron, L. Delevoye, R. M. Gauvin and M. Taoufik\*

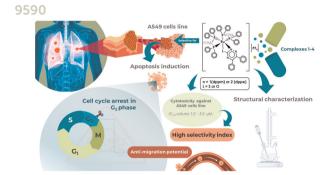




 $Ar = -C_6H_2 - 2,4,6 - Cy_3$  (Cy=Cyclohexyl)

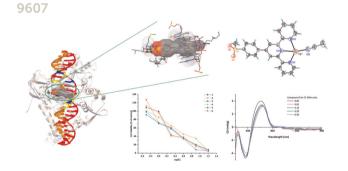
Rearrangement of a Ge(II) aryloxide to yield a new Ge(II) oxo-cluster [Ge<sub>6</sub>( $\mu_3$ -O)<sub>4</sub>( $\mu_2$ -OC<sub>6</sub>H<sub>2</sub>-2,4,6-Cy<sub>3</sub>)<sub>4</sub>] (NH<sub>3</sub>)<sub>0.5</sub>: main group aryloxides of Ge(II), Sn(II), and Pb(II)  $[M(OC_6H_2-2,4,6-Cy_3)_2]_2$  (Cy = cyclohexyl)

Connor P. McLoughlin, Derrick C. Kaseman, James C. Fettinger and Philip P. Power\*



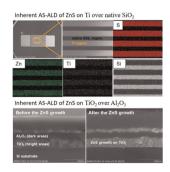
New ruthenium(II) complexes with cyclic thio- and semicarbazone: evaluation of cytotoxicity and effects on cell migration and apoptosis of lung cancer cells

Y. G. Gonçalves, A. B. Becceneri, A. E. Graminha, V. M. Miranda, R. R. Rios, F. Rinaldi-Neto, M. S. Costa, A. C. R. Gonçalves, V. M. Deflon, K. A. G. Yoneyama, P. I. S. Maia, E. F. Franca, M. R. Cominetti, R. S. Silva and G Von Poelhsitz\*



Silver complexes with substituted terpyridines as promising anticancer metallodrugs and their crystal structure, photoluminescence, and DNA interactions

Jiahe Li, Zhiyuan Wang, Zhongting Chen, Xingyong Xue, Kejuan Lin, Hailan Chen, Lixia Pan, Yulin Yuan\* and Zhen Ma\*



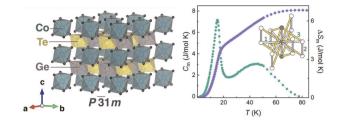
# Inherent area-selective atomic layer deposition of ZnS

Chao Zhang,\* Marko Vehkamäki, Markku Leskelä and Mikko Ritala

#### 9631

Successive short- and long-range magnetic ordering in rosiaite-type CoGeTeO<sub>6</sub> prepared by ion-exchange reaction

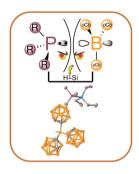
Roman V. Bazhan, Vladimir B. Nalbandyan, Tatyana M. Vasilchikova, Hyun-Joo Koo, Myung-Hwan Whangbo and Alexander N. Vasiliev\*



## 9639

Examining the reactivity of tris(ortho-carboranyl) borane with Lewis bases and application in frustrated Lewis pair Si-H bond cleavage

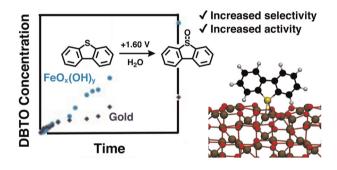
Kanika Vashisth, Sanjay Dutta, Manjur O. Akram and Caleb D. Martin\*



### 9646

Controlling product selectivity in oxidative desulfurization using an electrodeposited iron oxide film

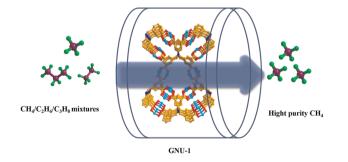
Victoria Kompanijec, Gil M. Repa, Lisa A. Fredin\* and John R. Swierk\*



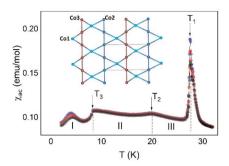
#### 9655

A linker conformation induced metal—organic framework with high stability and efficient upgrading of natural gas

Shi-Ming Li, Hong-Chan Jiang, Qing-Ling Ni, Liu-Cheng Gui\* and Xiu-Jian Wang\*



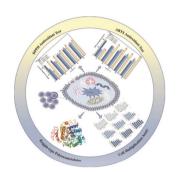
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A cascade of magnetic phase transitions and a 1/3-magnetization plateau in selenite—selenate  $Co_3(SeO_3)(SeO_4)(OH)_2$  with kagomé-like  $Co^{2+}$  ion layer arrangements: the importance of identifying a correct spin lattice

A. F. Murtazoev, P. S. Berdonosov, K. A. Lyssenko, V. A. Dolgikh, M. Y. Geidorf, O. S. Volkova, H.-J. Koo, M.-H. Whangbo and A. N. Vasiliev

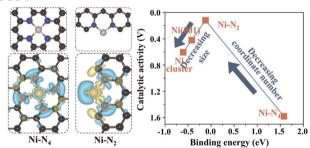
#### 9673



# A study of the antioxidant properties of Keggin-type polyoxometalates

Shan Lei, Han Yang, Jiaxin Li, Yao Li, Li Wang,\* Bingnian Chen\* and Jian Li\*

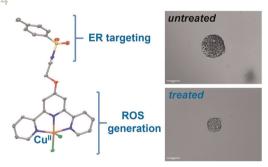
#### 9684



# High-density low-coordination Ni single atoms anchored on Ni-embedded nanoporous carbon nanotubes for boosted alkaline hydrogen evolution

Liangliang Feng,\* Changle Fu, Dongming Li, Xuan Ai,\* Hongyan Yin, Yuhang Li, Xiaoyi Li, Liyun Cao and Jianfeng Huang\*

#### 0604



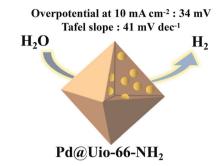
# Cancer stem cell activity of copper(II)-terpyridine complexes with aryl sulfonamide groups

Karampal Singh, Joshua Northcote-Smith, Kuldip Singh and Kogularamanan Suntharalingam\*

#### 9705

Palladium nanoparticles confined in uncoordinated amine groups of metal—organic frameworks as efficient hydrogen evolution electrocatalysts

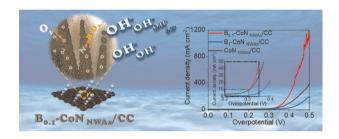
Huimin Liu, Chen Wang, Chang Liu, Xing Zong, Yongfei Wang,\* Zhizhi Hu and Zhiqiang Zhang\*



#### 9714

Special NaBH<sub>4</sub> hydrolysis achieving multiplesurface-modifications promotes the high-throughput water oxidation of CoN nanowire arrays

Sirui Liu, Yuxin Shi, Lingling Xu,\* Weican Zhan, Meixi Chen, Xiaoyue Pan, Yuqing Yao, Jiajie Cai, Mingyi Zhang\* and Xinzhi Ma\*



#### 9721

Modulating surface electron density of  $Ni(OH)_2$  nanosheets with longitudinal  $Ti_3C_2T_x$  MXenenanosheets by Schottky effect toward enhanced hydrogen evolution reaction

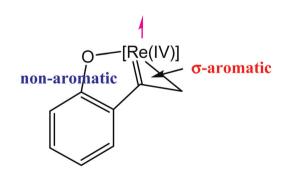
Xinyu Liu, Lan Wang,\* Shan Ji, Vladimir Linkov, Qianqian Fu, Zhichao Li and Hui Wang\*



#### 9731

# Radical metallacyclopropene: synthesis, structure and aromaticity

Wei Bai,\* Lei Li, Yukang Fu, Junping Tang, Yue Zhao, Yilun Wang and Yang Li\*



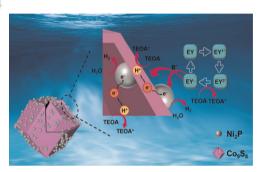
# 9737



# Synthesis and characterization of sulfide/ sulfone-containing 18-8-18-membered-ring ladder-type siloxanes

Zhanjiang Zheng,\* Yujia Liu,\* Nobuhiro Takeda and Masafumi Unno\*

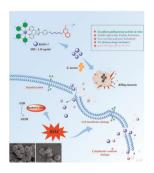
9744



Co-P bond effect on an MOF-derived Co<sub>9</sub>S<sub>8</sub> hollow polyhedron supported Ni<sub>2</sub>P co-catalyst for efficient photocatalytic hydrogen evolution

Yanxia Wang\* and Xiude Hu

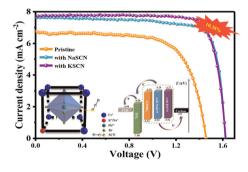
9757



# Coumarin-modified ruthenium complexes by disrupting bacterial membrane to combat Gram-positive bacterial infection

Hai-Yan Huang, Pei Wang, Wei Deng, Li-Xin Dou, Xiang-Wen Liao, Jin-Tao Wang, Xue-Min Duan, Ru-Jian Yu\* and Yan-Shi Xiong\*

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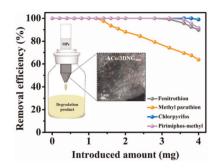
Synergistic effect of alkali metal doping and thiocyanate passivation in CsPbBr<sub>3</sub> for HTM-free all-inorganic perovskite solar cells

Shiqiang Jiang, Haojie Sui, Benlin He,\* Xinyi Zhang, Zhihao Zong, Haiyan Chen\* and Qunwei Tang\*

#### 9780

Removal of organophosphorus agents via atomically dispersed Co on nitrogen-doped graphene: catalytic degradation and adsorption

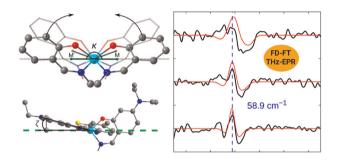
Yanfang Li, Jiali Zhang,\* Puyi Lei and Shouwu Guo\*



#### 9787

Kink distortion of the pseudo-S<sub>4</sub> axis in pseudotetrahedral [N2O2] bis-chelate cobalt(11) single-ion magnets leads to increased magnetic anisotropy

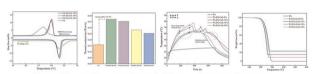
Sudhir Lima, Maximilian H. Pohle, Michael Böhme, Helmar Görls, Thomas Lohmiller, Alexander Schnegg, Rupam Dinda\* and Winfried Plass\*



#### 9797

Palmitic acid/expanded graphite/CuS composite phase change materials toward efficient thermal storage and photothermal conversion

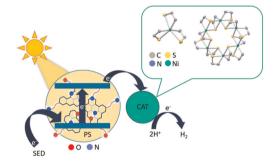
Ying-Jie Huo, Ting Yan,\* Zhi-Hui Li, Shu-Yao Li and Wei-Guo Pan\*



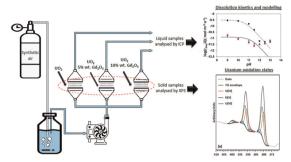
Excellent thermal stability, thermal storage capacity and photothermal conversion efficiency

Light-induced hydrogen production from water using nickel(II) catalysts and N-doped carbon-dot photosensitizers: catalytic efficiency enhancement by increase of catalyst nuclearity

Dimitra K. Gioftsidou, Georgios Landrou, Charikleia Tzatza, Antonios Hatzidimitriou, Emmanouil Orfanos, Georgios Charalambidis, Kalliopi Ladomenou, Athanassios G. Coutsolelos\* and Panagiotis A. Angaridis\*



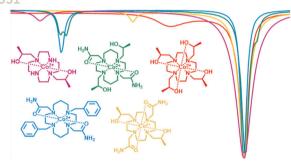
## 9823



# Oxidative dissolution mechanism of both undoped and $Gd_2O_3$ -doped $UO_2(s)$ at alkaline to hyperalkaline pH

Sonia García-Gómez,\* Javier Giménez, Ignasi Casas, Jordi Llorca and Joan De Pablo

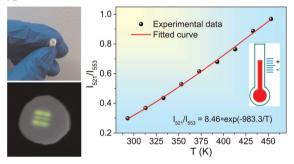
# 9831



# Co(II) complexes of tetraazamacrocycles appended with amide or hydroxypropyl groups as paraCEST agents

Jaclyn J. Raymond, Samira M. Abozeid, Gregory E. Sokolow, Christopher J. Bond, Constance E. Yap, Alexander Y. Nazarenko and Janet R. Morrow\*

#### 9840



# Optical temperature-sensing phosphors with high sensitivities in a wide temperature range based on different strategies

Songsong An, Jia Zhang,\* Zhenghe Hua and Jiajun Chen