

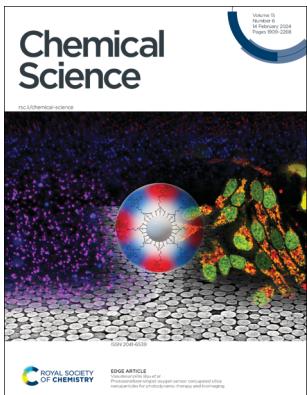
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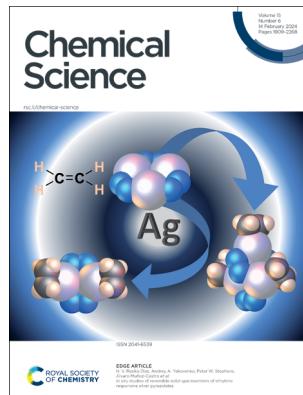
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Cover

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Inside cover

See H. V. Rasika Dias, Andrey A. Yakovenko, Peter W. Stephens, Álvaro Muñoz-Castro *et al.*, pp. 2019–2025. Image reproduced by permission of H. V. Rasika Dias from *Chem. Sci.*, 2024, 15, 2019.

EDITORIAL

1921

Celebrating the 130th anniversary of Wuhan University

Lin Zhuang, Qiu Wang, Aiwen Lei and Qianghui Zhou

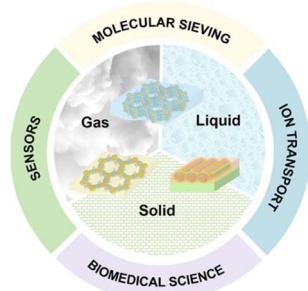


PERSPECTIVES

1924

Porous organic framework membranes based on interface-induced polymerisation: design, synthesis and applications

Lin Liu, Ruihe Yu, Liying Yin, Ning Zhang* and Guangshan Zhu*



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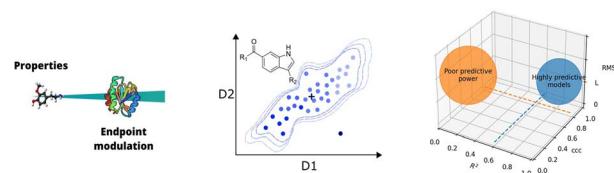
Fundamental questions
Elemental answers

PERSPECTIVES

1938

The pursuit of accurate predictive models of the bioactivity of small molecules

Karina Martinez-Mayorga,* José G. Rosas-Jiménez,
 Karla Gonzalez-Ponce, Edgar Lopez-Lopez,
 Antonio Neme and José L. Medina-Franco

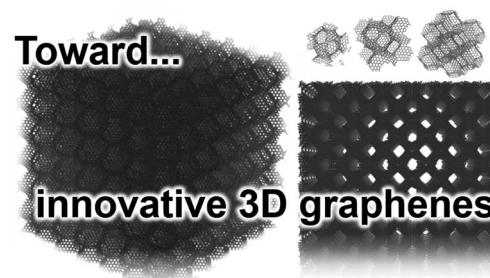


REVIEWS

1953

Toward three-dimensionally ordered nanoporous graphene materials: template synthesis, structure, and applications

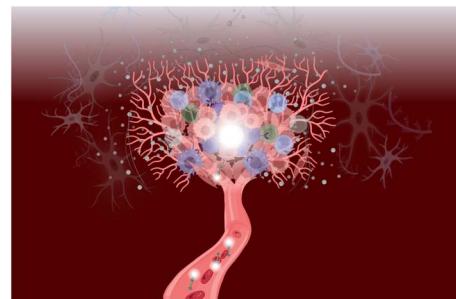
Masanori Yamamoto,* Shunsuke Goto, Rui Tang
 and Kaoru Yamazaki*



1966

Package delivered: folate receptor-mediated transporters in cancer therapy and diagnosis

Mohsen Ahmadi,* Christoph A. Ritter,
 Thomas von Woedtke, Sander Bekeschus
 and Kristian Wende*

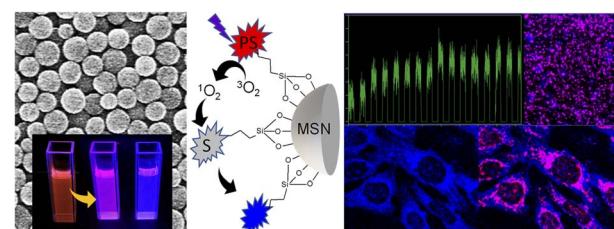


EDGE ARTICLES

2007

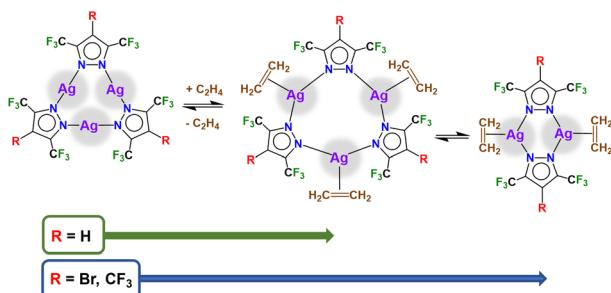
Photosensitizer-singlet oxygen sensor conjugated silica nanoparticles for photodynamic therapy and bioimaging

Jeladhara Sobhanan, Kenji Ono, Takuya Okamoto,
 Makoto Sawada, Paul S. Weiss and Vasudevanpillai Biju*



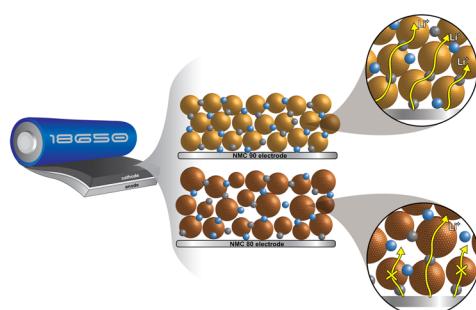
EDGE ARTICLES

2019

*In situ* studies of reversible solid–gas reactions of ethylene responsive silver pyrazolates

H. V. Rasika Dias,* Devaborniny Parasar, Andrey A. Yakovenko,* Peter W. Stephens,* Álvaro Muñoz-Castro,* Mukundam Vanga, Pavel Mykhailiuk and Evgeniy Slobodyanyuk

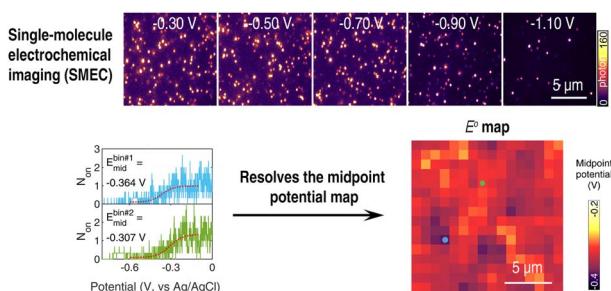
2026



How uniform particle size of NMC90 boosts lithium ion mobility for faster charging and discharging in a cylindrical lithium ion battery cell

Nichakarn Anansuksawat, Thitiphum Sangsanit, Surat Prempluem, Kan Homlamai, Worapol Tejangkura and Montree Sawangphrulk*

2037



Single-molecule electrochemical imaging resolves the midpoint potentials of individual fluorophores on nanoporous antimony-doped tin oxide

Jin Lu* and Matthew D. Lew*

2047



Mono- and bis-Pd(II) complexes of N-confused dithiahexaphyrin(1.1.1.1.0) with the absorption and aromaticity modulated by Pd(II) coordination, macrocycle contraction and ancillary ligands

Meng Sun, Yongshu Xie,* Glib Baryshnikov, Chengjie Li, Feng Sha, Xinyan Wu, Hans Ågren, Shijun Li and Qizhao Li*

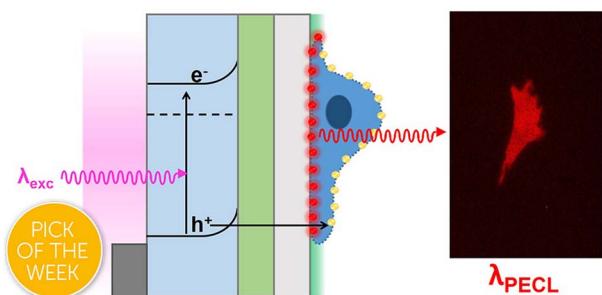


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Infrared photoinduced electrochemiluminescence microscopy of single cells

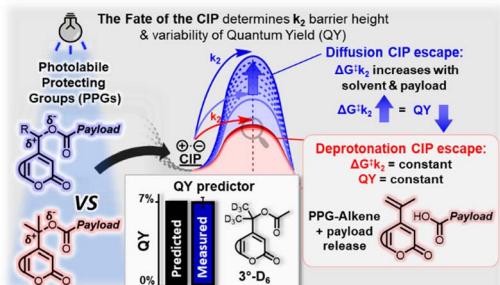
Julie Descamps, Yiran Zhao, Bertrand Goudeau, Dragan Manojlovic, Gabriel Loget* and Neso Sojic*



2062

The fate of the contact ion pair determines the photochemistry of coumarin-based photocleavable protecting groups

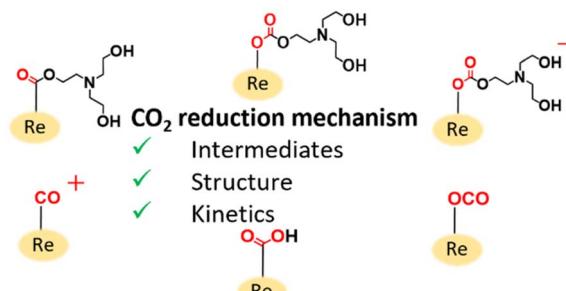
Albert Marten Schulte, Georgios Alachouzos,* Wiktor Szymanski* and Ben L. Feringa*



2074

Overall reaction mechanism of photocatalytic CO₂ reduction on a Re(i)-complex catalyst unit of a Ru(ii)–Re(i) supramolecular photocatalyst

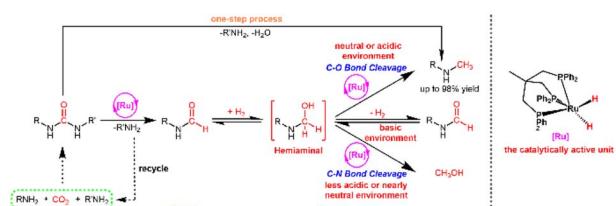
Kei Kamogawa, Yuki Kato,* Yusuke Tamaki, Takumi Noguchi, Koichi Nozaki, Tatsuo Nakagawa and Osamu Ishitani*



2089

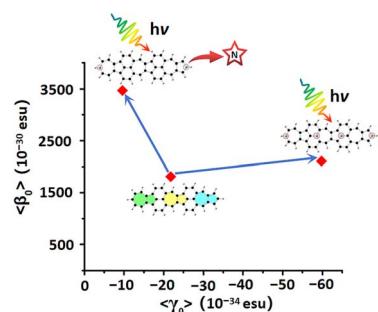
Switching the hydrogenation selectivity of urea derivatives via subtly tuning the amount and type of additive in the catalyst system

Jun Zhu, Yongtao Wang, Jia Yao and Haoran Li*



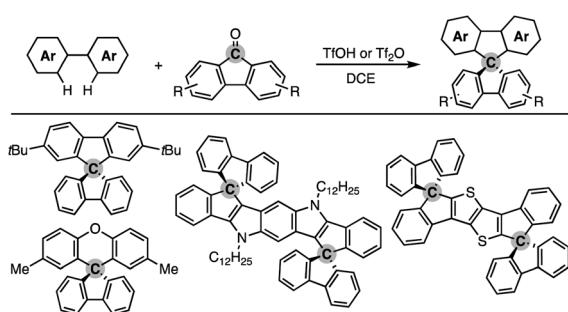
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2100

**The enhancement of nonlinear optical properties of azulene-based nanographene by N atoms: a finishing touch**

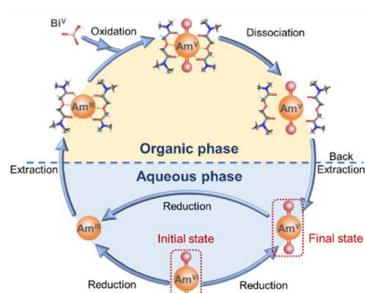
Ya Qing Zhang, Cui-Cui Yang, Jia-Ying Ma and Wei Quan Tian*

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**Direct synthesis of spirobifluorenes by formal dehydrative coupling of biaryls and fluorenones**

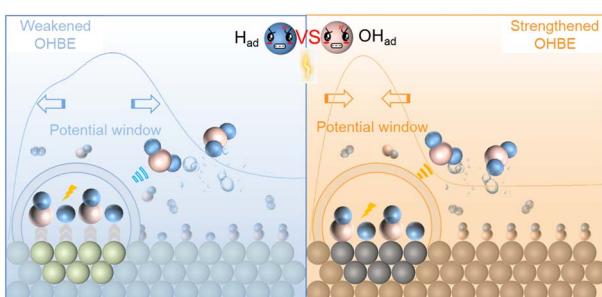
Yugo Kato, Kazutoshi Nishimura, Yuji Nishii and Koji Hirano*

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**Redox stabilization of Am(V) in a biphasic extraction system boosts americium/lanthanides separation efficiency**

Xue Dong, Huaixin Hao, Jing Chen, Zhipeng Wang* and Chao Xu*

2123

**Alleviating the competitive adsorption of hydrogen and hydroxyl intermediates on Ru by d-p orbital hybridization for hydrogen electrooxidation**

Youkai Feng, Siguang Lu, Luhong Fu, Fulin Yang* and Ligang Feng*

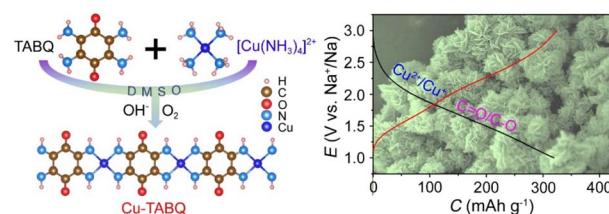


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Copper and conjugated carbonyls of metal–organic polymers as dual redox centers for Na storage

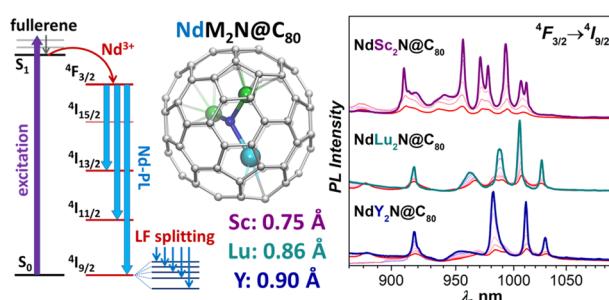
Liubin Wang,* Ningbo Liu, Xiaoying Zhao, Xiaohan Wang, Tong Zhang, Zhiqiang Luo* and Fujun Li*



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Covalency versus magnetic axiality in Nd molecular magnets: Nd-photoluminescence, strong ligand-field, and unprecedented nephelauxetic effect in fullerenes NdM2N@C80 (M = Sc, Lu, Y)

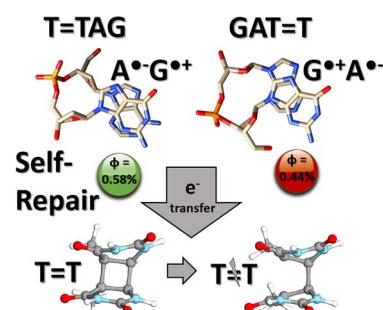
Wei Yang, Marco Rosenkranz, Georgios Velkos, Frank Ziegs, Vasilii Dubrovin, Sandra Schiemenz, Lukas Spree, Matheus Felipe de Souza Barbosa, Charles Guillemand, Manuel Valvidares, Bernd Büchner, Fupin Liu,* Stanislav M. Avdoshenko* and Alexey A. Popov*



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Photoinduced charge separation and DNA self-repair depend on sequence directionality and stacking pattern

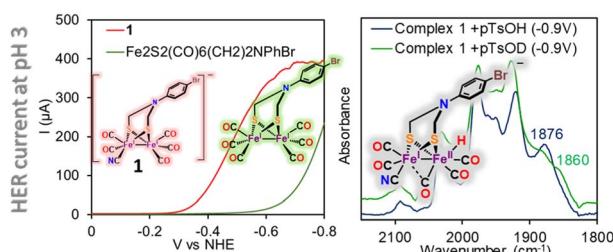
Corinna L. Kufner,* Sarah Crucilla, Dian Ding, Petr Stadlbauer, Jiří Šponer, Jack W. Szostak, Dimitar D. Sasselov and Rafat Szabla*



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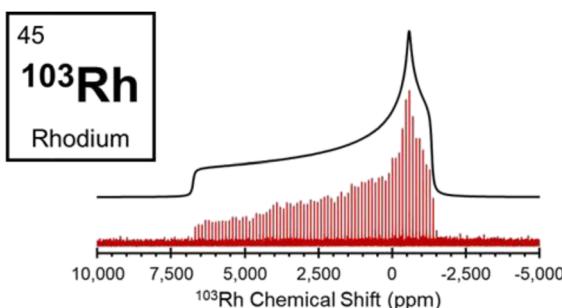
Facile electrocatalytic proton reduction by a [Fe–Fe]-hydrogenase bio-inspired synthetic model bearing a terminal CN⁻ ligand

Abhijit Nayek, Subal Dey, Suman Patra, Atanu Rana, Pauline N. Serrano, Simon J. George, Stephen P. Cramer, Somdatta Ghosh Dey* and Abhishek Dey*



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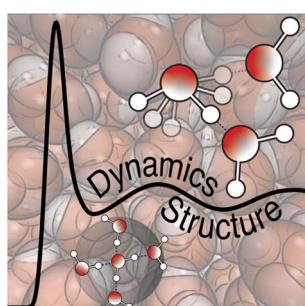
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Structure and bonding in rhodium coordination compounds: a ¹⁰³Rh solid-state NMR and relativistic DFT study

Sean T. Holmes, Jasmin Schönzart, Adam B. Philips, James J. Kimball, Sara Termos, Adam R. Altenhof, Yijue Xu, Christopher A. O'Keefe, Jochen Autschbach* and Robert W. Schurko*

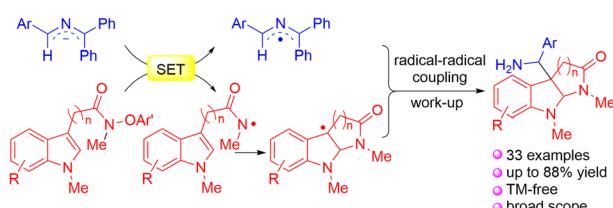
2197



A structure–dynamics relationship enables prediction of the water hydrogen bond exchange activation energy from experimental data

Zeke A. Piskulich,* Damien Laage* and Ward H. Thompson*

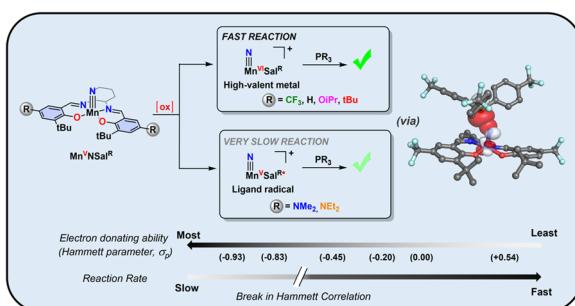
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Efficient construction of functionalized pyrroloindolines through cascade radical cyclization/intermolecular coupling

Yonggang Jiang, Dongxiang Liu, Lening Zhang, Cuirong Qin, Hui Li, Haitao Yang, Patrick J. Walsh* and Xiaodong Yang*

2211



Untangling ancillary ligand donation versus locus of oxidation effects on metal nitride reactivity

Samyadeb Mahato, Warren VandeVen, Gregory A. MacNeil, Jason M. Pulfer and Tim Storr*

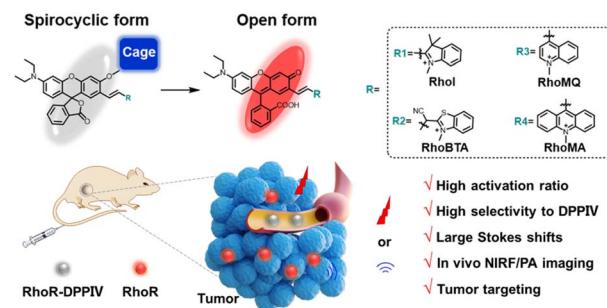


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Xanthene-based near-infrared chromophores for high-contrast fluorescence and photoacoustic imaging of dipeptidyl peptidase 4

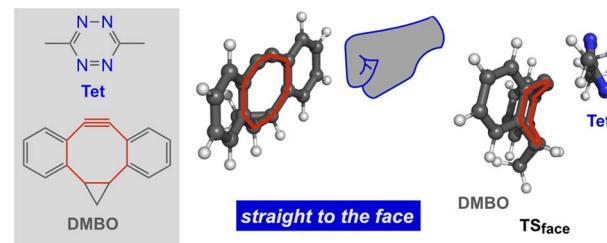
Pei Lu, Si-Min Dai, Huihui Zhou, Fenglin Wang,* Wan-Rong Dong* and Jian-Hui Jiang



2229

How cycloalkane fusion enhances the cycloaddition reactivity of dibenzocyclooctynes

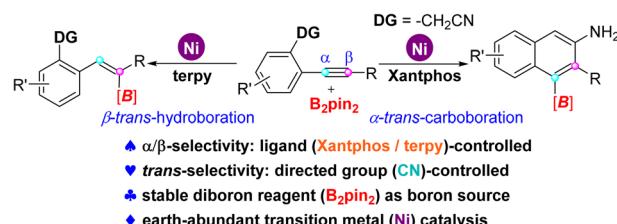
Dennis Svatunek,* Anton Murnauer, Zhuoting Tan, K. N. Houk and Kathrin Lang*



2236

Ligand-controlled regiodivergent Ni-catalyzed trans-hydroboration/carboboration of internal alkynes with B_2pin_2

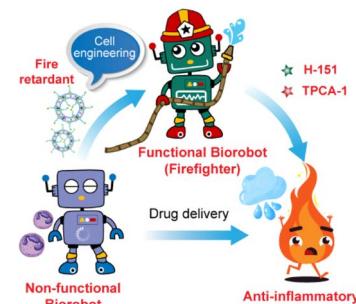
Zunsheng Chen, Biao Nie, Xiaoning Li, Teng Liu, Chunsheng Li and Jiuzhong Huang*



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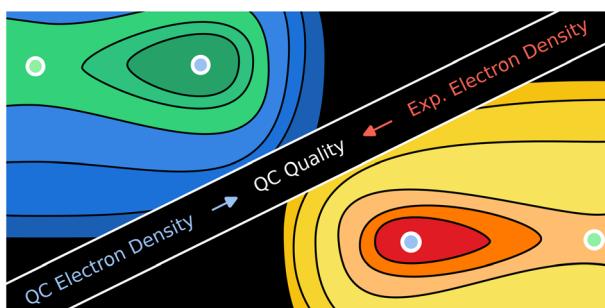
A living neutrophil Biorobot synergistically blocks multifaceted inflammatory pathways in macrophages to effectively neutralize cytokine storm

Ya Gao, Anwei Zhou, Kerong Chen, Xinyuan Zhou, Yurui Xu,* Shuangshuang Wu* and Xinghai Ning*



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**The electron density: a fidelity witness for quantum computation**

Mårten Skogh, Werner Dobrautz, Phalgun Lolur, Christopher Warren, Janka Biznárová, Amr Osman, Giovanna Tancredi, Jonas Bylander and Martin Rahm*

