

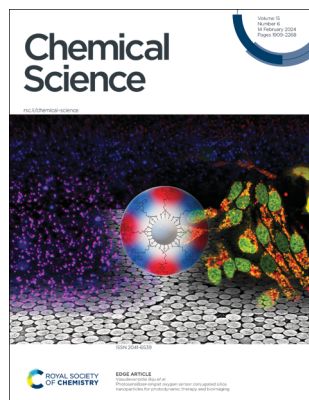
Chemical Science

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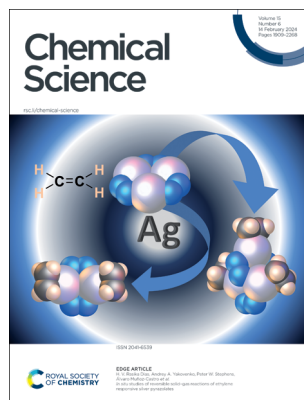
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Cover
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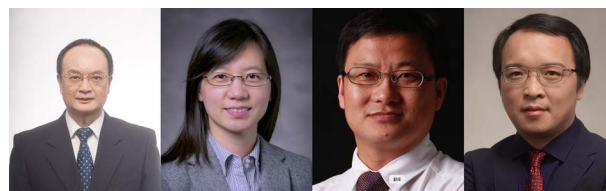
Inside cover
See H. V. Rasika Dias, Andrey A. Yakovenko, Peter W. Stephens, Álvaro Muñoz-Castro *et al.*, pp. 2019–2025. Image reproduced by permission of H. V. Rasika Dias from *Chem. Sci.*, 2024, 15, 2019.

EDITORIAL

1921

Celebrating the 130th anniversary of Wuhan University

Lin Zhuang, Qiu Wang, Aiwen Lei and Qianghui Zhou

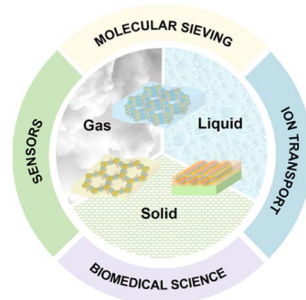


PERSPECTIVES

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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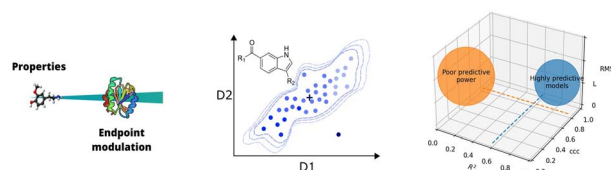
**Fundamental questions
Elemental answers**

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

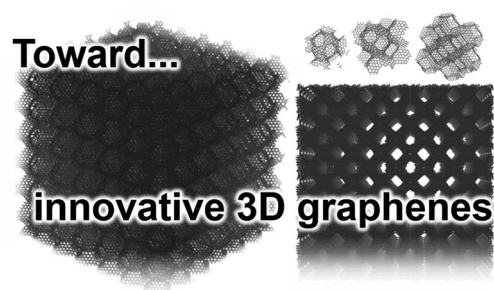


REVIEWS

1953

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

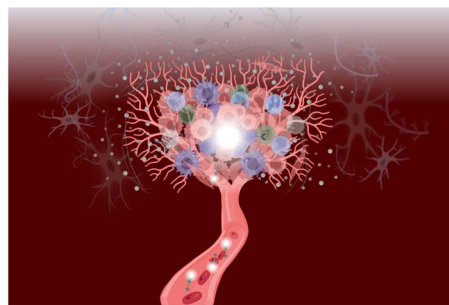
Masanori Yamamoto,* Shunsuke Goto, Rui Tang
and Kaoru Yamazaki*



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*

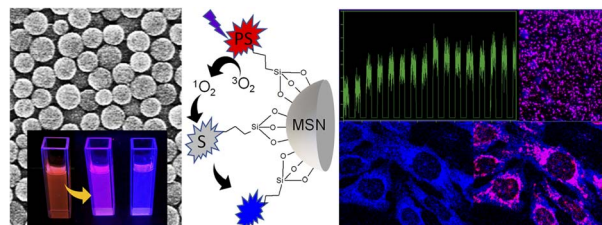


EDGE ARTICLES

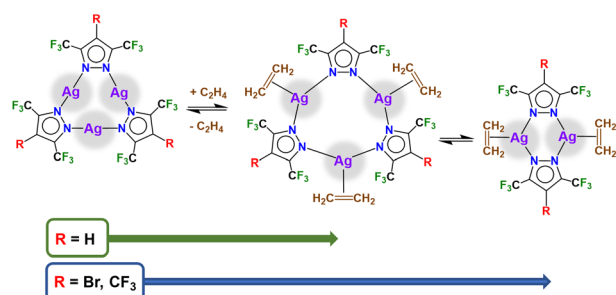
2007

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*



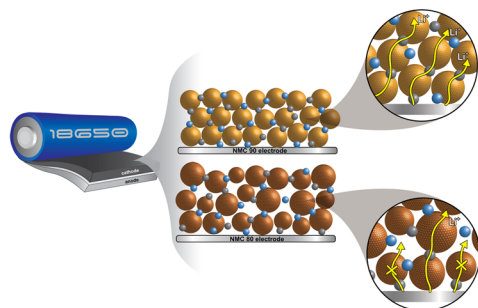
2019



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

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

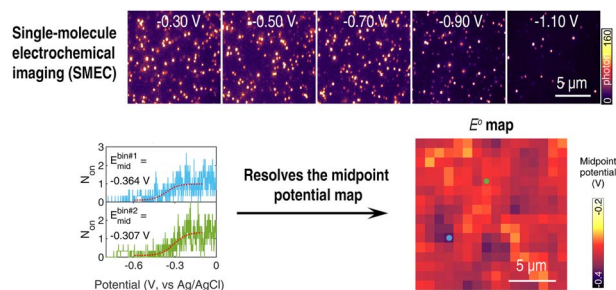
2026



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 Sawangphruk^{*}

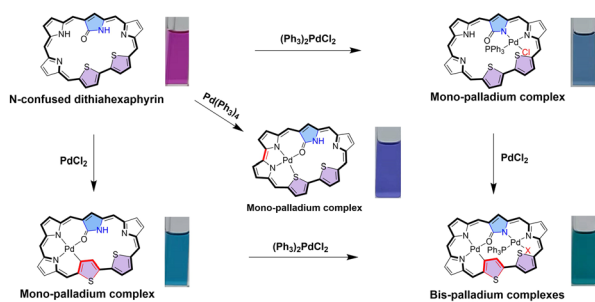
2037



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(1.1.1.1.1.0) with the absorption and aromaticity modulated by Pd(II) coordination, macrocycle contraction and ancillary ligands

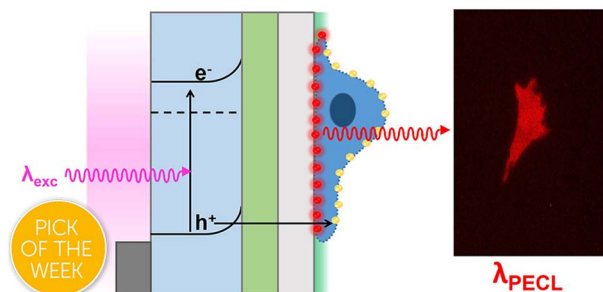
Meng Sun, Yongshu Xie,^{*} Glib Baryshnikov, Chengjie Li, Feng Sha, Xinyan Wu, Hans Ågren, Shijun Li and Qizhao Li^{*}



2055

Infrared photoinduced electrochemiluminescence microscopy of single cells

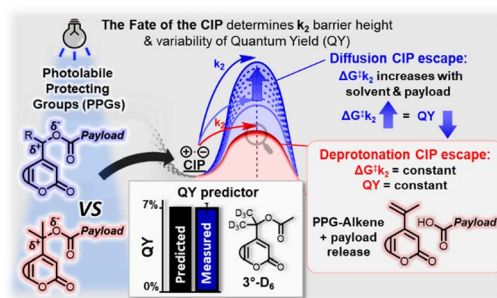
Julie Descamps, Yiran Zhao, Bertrand Goudeau, Dragan Manojlovic, Gabriel Loget* and Neso Sojic*



2062

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

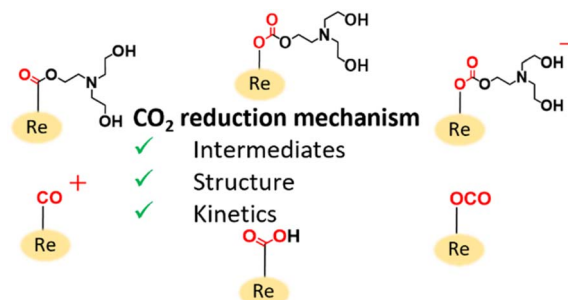
Albert Marten Schulte, Georgios Alachouzos*, Wiktor Szymanski* and Ben L. Feringa*



2074

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

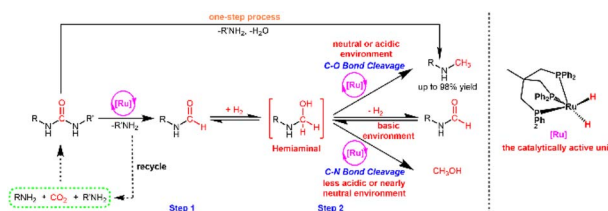
Kei Kamogawa, Yuki Kato*, Yusuke Tamaki, Takumi Noguchi, Koichi Nozaki, Tatsuo Nakagawa and Osamu Ishitani*



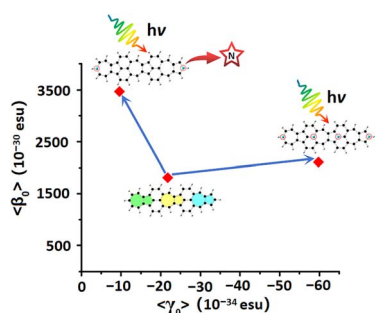
2089

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*



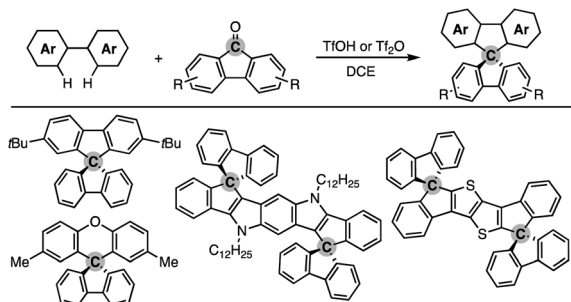
2100



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*

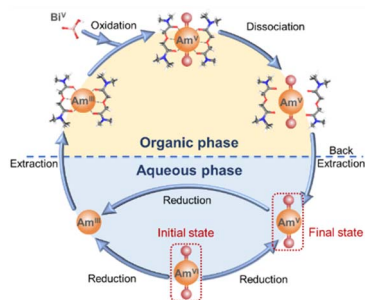
2112



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

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

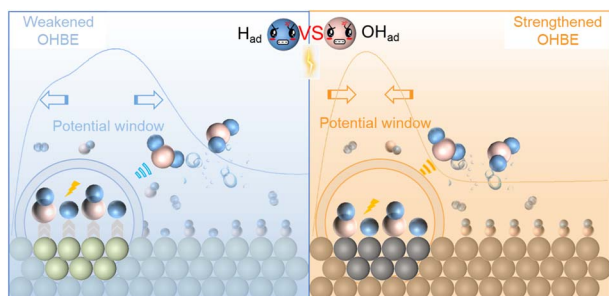
2118



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

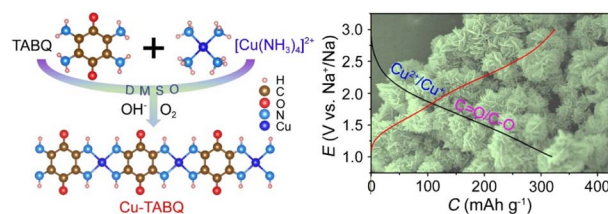
Youkai Feng, Siguang Lu, Luhong Fu, Fulin Yang* and Ligang Feng*



2133

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

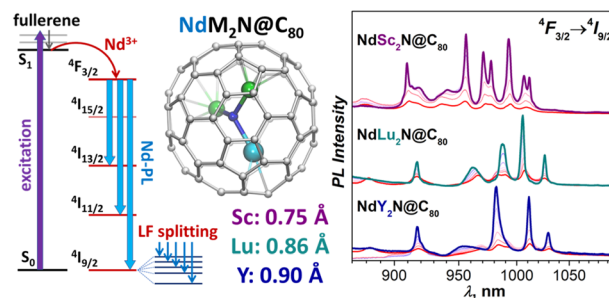
Liubin Wang,* Ningbo Liu, Xiaoying Zhao, Xiaohan Wang, Tong Zhang, Zhiqiang Luo* and Fujun Li*



2141

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)

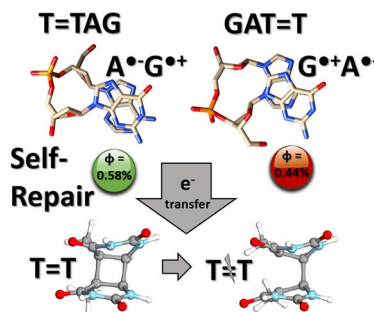
Wei Yang, Marco Rosenkranz, Georgios Velkos, Frank Ziegls, Vasilii Dubrovin, Sandra Schiemenz, Lukas Spree, Matheus Felipe de Souza Barbosa, Charles Guillemard, Manuel Valvidares, Bernd Büchner, Fupin Liu,* Stanislav M. Avdoshenko* and Alexey A. Popov*



2158

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

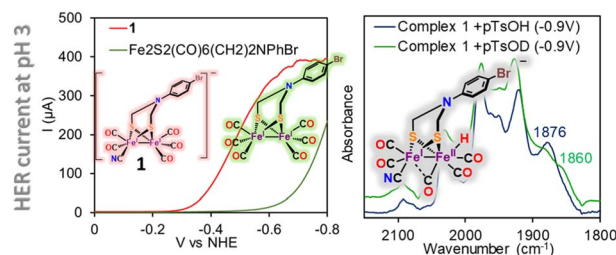
Corinna L. Kufner,* Sarah Crucilla, Dian Ding, Petr Stadlbauer, Jiří Šponer, Jack W. Szostak, Dimitar D. Sassellov and Rafat Szabla*



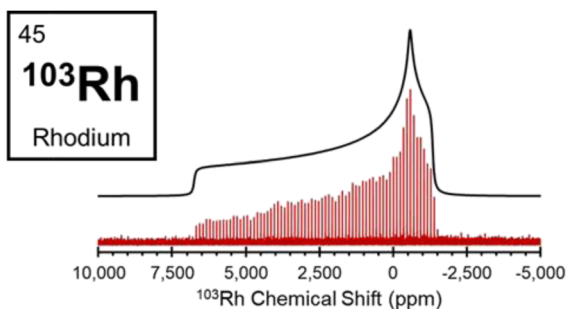
2167

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*



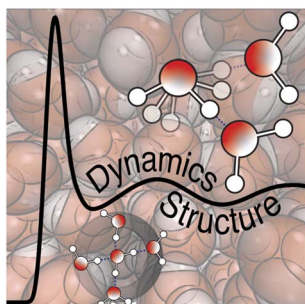
2181



Structure and bonding in rhodium coordination compounds: a ^{103}Rh 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*

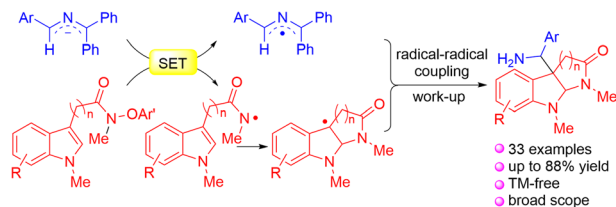
2197



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*

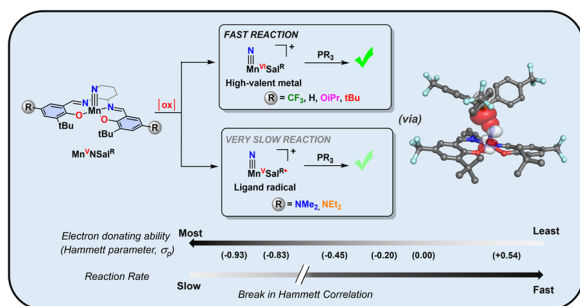
2205



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



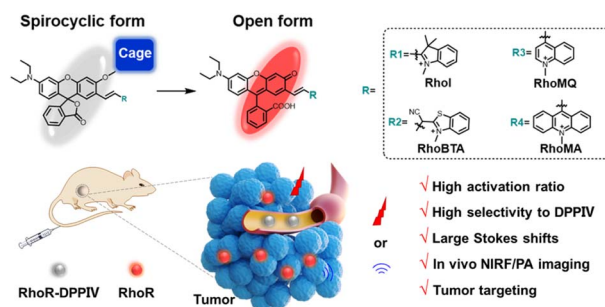
Untangling ancillary ligand donation *versus* locus of oxidation effects on metal nitride reactivity

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



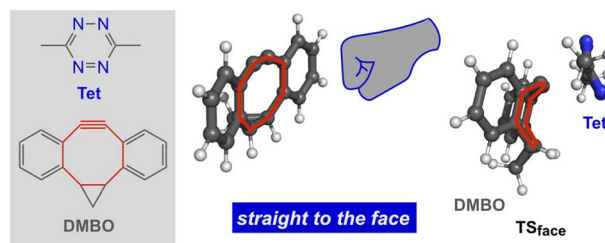
Pei Lu, Si-Min Dai, Huihui Zhou, Fenglin Wang,*
Wan-Rong Dong* and Jian-Hui Jiang

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



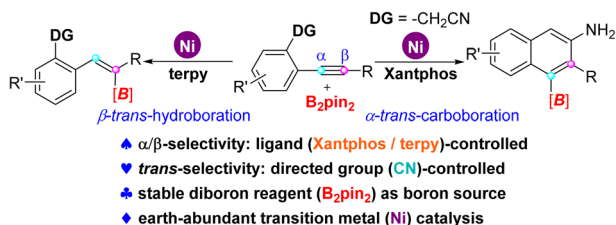
How cycloalkane fusion enhances the cycloaddition reactivity of dibenzocyclooctynes

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



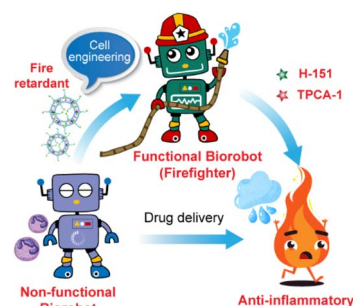
Ligand-controlled regiodivergent Ni-catalyzed *trans*-hydroboration/carboboration of internal alkynes with B₂pin₂

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

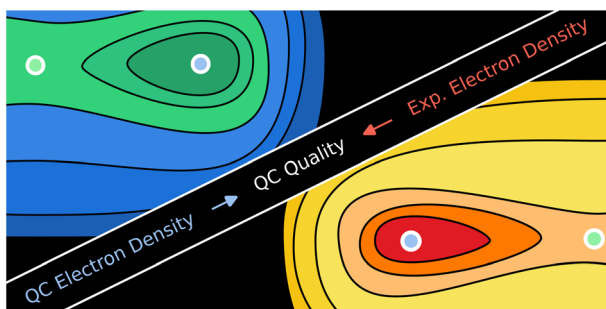


A living neutrophil Biorobot synergistically blocks multifaceted inflammatory pathways in macrophages to effectively neutralize cytokine storm

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



2257



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*

