

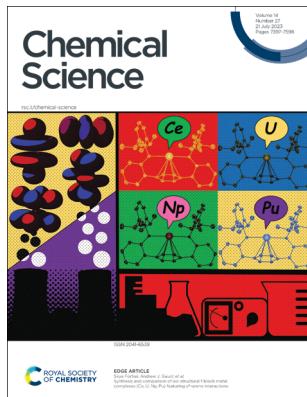
# Chemical Science

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## IN THIS ISSUE

ISSN 2041-6539 CODEN CSHCBM 14(27) 7397–7598 (2023)



### Cover

See Skye Fortier, Andrew J. Gaunt *et al.*, pp. 7438–7446.  
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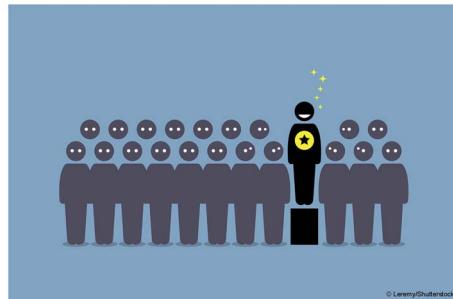
### Inside cover

See Todd J. Martínez *et al.*, pp. 7447–7464.  
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## EDITORIAL

7406

### Outstanding Reviewers for *Chemical Science* in 2022

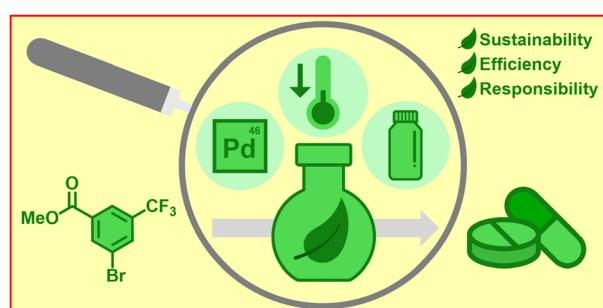


## COMMENTARY

7408

### A focus on sustainable method development for greener synthesis

Jasper L. Tyler, Felix Katzenburg and Frank Glorius\*



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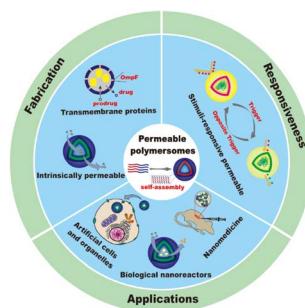
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## REVIEW

7411

## Recent advances in permeable polymersomes: fabrication, responsiveness, and applications

Yanyan Zhu, Shoupeng Cao, Meng Huo,\* Jan C. M. van Hest\* and Hailong Che\*

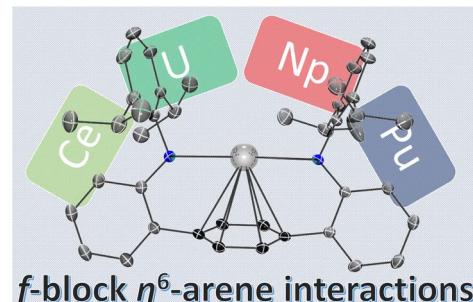


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Synthesis and comparison of iso-structural f-block metal complexes (Ce, U, Np, Pu) featuring  $\eta^6$ -arene interactions

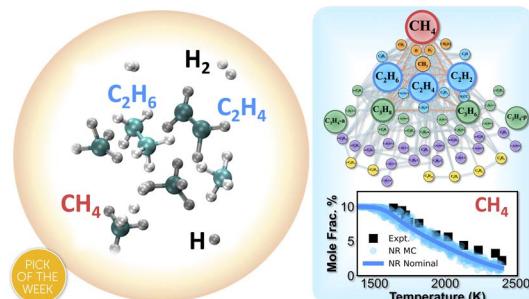
Jesse Murillo, Conrad A. P. Goodwin, Lauren Stevens, Skye Fortier,\* Andrew J. Gaunt\* and Brian L. Scott



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## First principles reaction discovery: from the Schrodinger equation to experimental prediction for methane pyrolysis

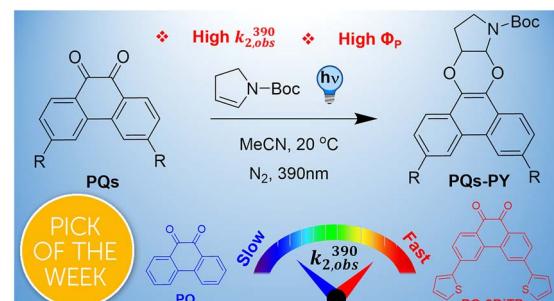
Rui Xu, Jan Meisner, Alexander M. Chang, Keiran C. Thompson and Todd J. Martinez\*



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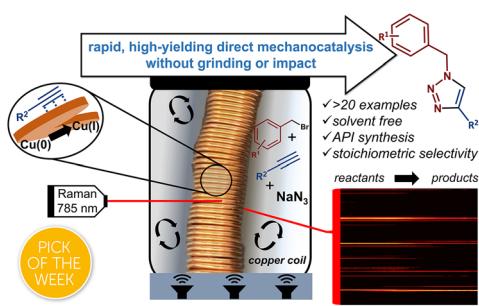
## Establishing PQ-ERA photoclick reactions with unprecedented efficiency by engineering of the nature of the phenanthraquinone triplet state

Youxin Fu, Georgios Alachouzos, Nadja A. Simeth, Mariangela Di Donato, Michiel F. Hilbers, Wybren Jan Buma,\* Wiktor Szymanski\* and Ben L. Feringa\*



## EDGE ARTICLES

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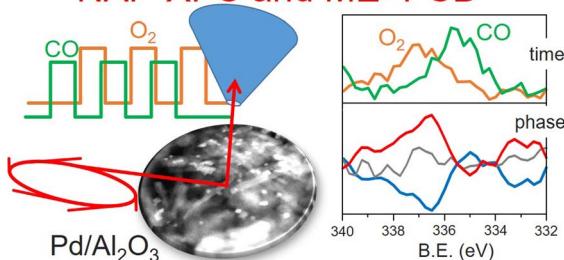


## Direct mechanocatalysis by resonant acoustic mixing (RAM)

Cameron B. Lennox, Tristan H. Borchers, Lori Gonnet, Christopher J. Barrett, Stefan G. Koenig,\* Karthik Nagapudi\* and Tomislav Friščić\*

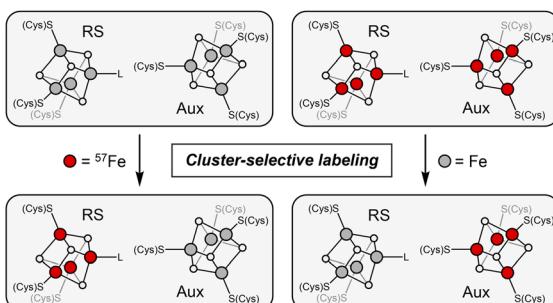
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## NAP-XPS and ME+PSD

Improving time-resolution and sensitivity of *in situ* X-ray photoelectron spectroscopy of a powder catalyst by modulated excitation

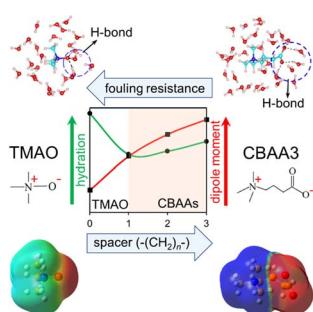
M. Roger, L. Artiglia,\* A. Boucly, F. Buttignol, M. Agote-Arán, J. A. van Bokhoven, O. Kröcher and D. Ferri\*

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Cluster-selective  $^{57}\text{Fe}$  labeling of a Twitch-domain-containing radical SAM enzyme

Gil Namkoong and Daniel L. M. Suess\*

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## Hydration behaviors of nonfouling zwitterionic materials

Pranab Sarker, Tieyi Lu, Di Liu, Guangyao Wu, Hanning Chen, Md Symon Jahan Sajib, Shaoyi Jiang,\* Zhan Chen\* and Tao Wei\*

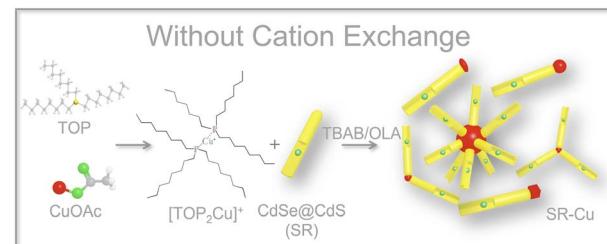


## EDGE ARTICLES

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**Shape tunability of copper nanocrystals deposited on nanorods**

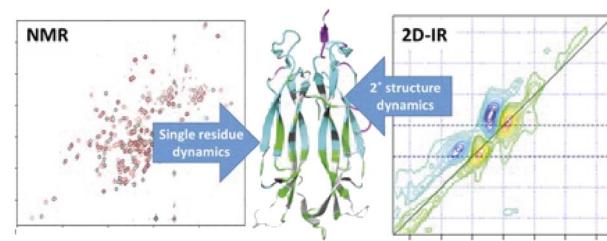
Yuxing Chen and Lilac Amirav\*



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**Modulation of IL-17 backbone dynamics reduces receptor affinity and reveals a new inhibitory mechanism**

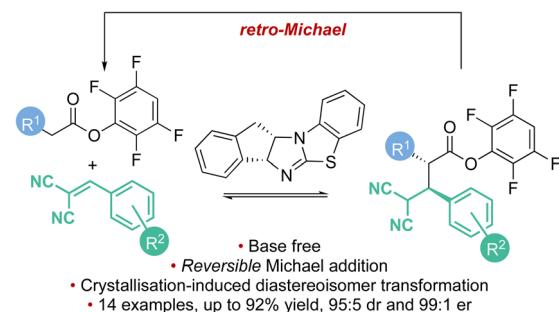
Daniel J. Shaw, Lorna C. Waters, Sarah L. Strong, Monika-Sarah E. D. Schulze, Gregory M. Greetham, Mike Towrie, Anthony W. Parker, Christine E. Prosser, Alistair J. Henry, Alastair D. G. Lawson, Mark. D. Carr, Richard J. Taylor, Neil T. Hunt\* and Frederick W. Muskett\*



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**Enantioselective isothiourea-catalysed reversible Michael addition of aryl esters to 2-benzylidene malononitriles**

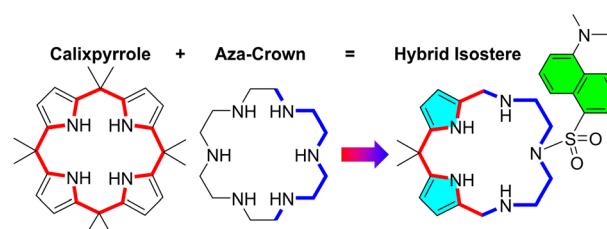
Alastair J. Nimmo, Jacqueline Bitai, Claire M. Young, Calum McLaughlin, Alexandra M. Z. Slawin, David B. Cordes and Andrew D. Smith\*



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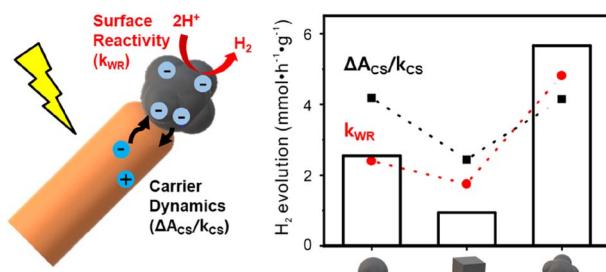
**Azacrown-calixpyrrole isosteres: receptors and sensors for anions**

Austin R. Sartori, Aco Radujić, Sandra M. George and Pavel Anzenbacher, Jr\*



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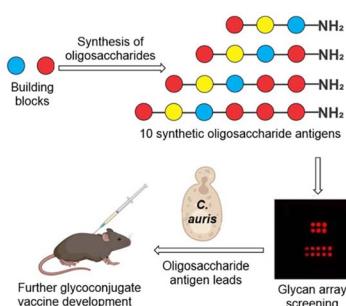
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**Pt cocatalyst morphology on semiconductor nanorod photocatalysts enhances charge trapping and water reduction**

Bumjin Park, Won-Woo Park, Ji Yong Choi, Woong Choi, Young Mo Sung, Soohwan Sul,\* Oh-Hoon Kwon\* and Hyunjoon Song\*

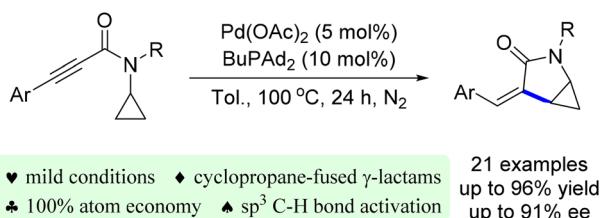
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**Synthesis of oligosaccharides to identify an immunologically active epitope against *Candida auris* infection**

Rajat Kumar Singh, Emelie E. Reuber, Mariolina Bruno, Mihai G. Netea and Peter H. Seeberger\*

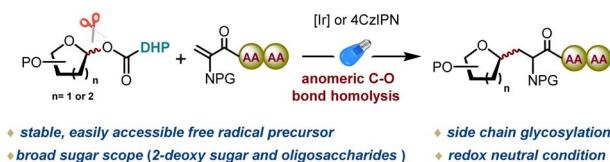
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**Palladium-catalyzed intramolecular asymmetric hydrocyclopropanylation of alkynes: synthesis of cyclopropane-fused  $\gamma$ -lactams**

Han-Ze Lin, Zhuang Qi, Qi-Min Wu, Yong-Yu Jiang and Jin-Bao Peng\*

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**Stereoselective alkyl C-glycosylation of glycosyl esters via anomeric C–O bond homolysis: efficient access to C-glycosyl amino acids and C-glycosyl peptides**

Anrong Chen, Shiyin Zhao, Yang Han, Zhenghong Zhou, Bo Yang, Lan-Gui Xie,\* Maciej A. Walczak\* and Feng Zhu\*

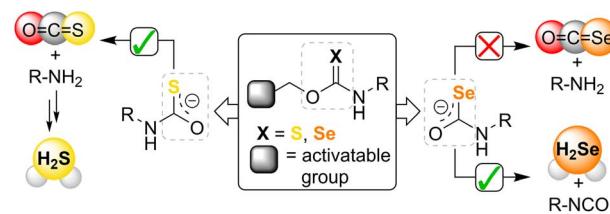


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Direct hydrogen selenide ( $H_2Se$ ) release from activatable selenocarbamates

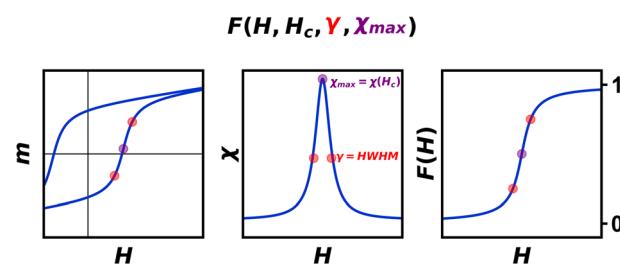
Turner D. Newton, Keyan Li, Jyoti Sharma, Pier Alexandre Champagne\* and Michael D. Pluth\*



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## Quantifying superparamagnetic signatures in nanoparticle magnetite: a generalized approach for physically meaningful statistics and synthesis diagnostics

Kyle M. Kirkpatrick, Benjamin H. Zhou, Philip C. Bunting and Jeffrey D. Rinehart\*



## CORRECTION

7595

## Correction: Abiotic microcompartments form when neighbouring droplets fuse: an electrochemiluminescence investigation

Silvia Voci, Thomas B. Clarke and Jeffrey E. Dick\*

