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#### Inside cover

See Bintian Zhang,  
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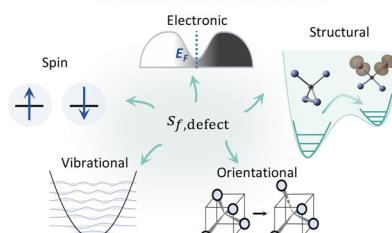
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#### Imperfections are not 0 K: free energy of point defects in crystals

Irea Mosquera-Lois, Seán R. Kavanagh, Johan Klarbring,  
Kasper Tolborg and Aron Walsh\*

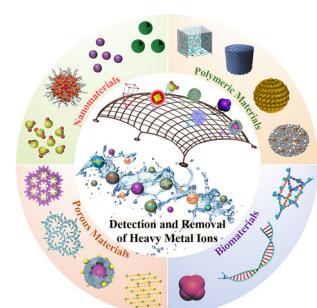
$$c_{\text{defect}} = \exp\left(\frac{-h_f + T s_f}{k_B T}\right)$$



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#### Current trends in the detection and removal of heavy metal ions using functional materials

Meng Li,\* Quanyu Shi, Ningxin Song, Yumeng Xiao,  
Lidong Wang, Zhijun Chen\* and Tony D. James\*



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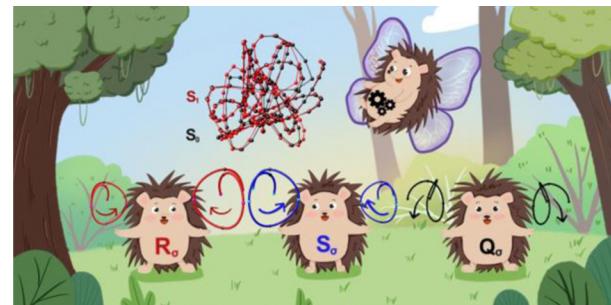
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**Tools for overcoming reliance on energy-based measures in chemistry: a tutorial review**

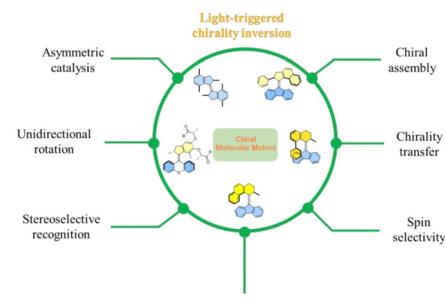
Steven R. Kirk and Samantha Jenkins\*



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**Enlightening dynamic functions in molecular systems by intrinsically chiral light-driven molecular motors**

Jinyu Sheng, Daisy R. S. Pooler and Ben L. Feringa\*

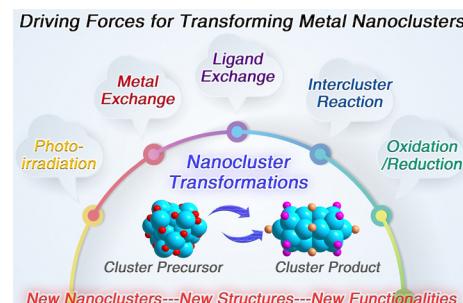


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**Recent developments in the investigation of driving forces for transforming coinage metal nanoclusters**

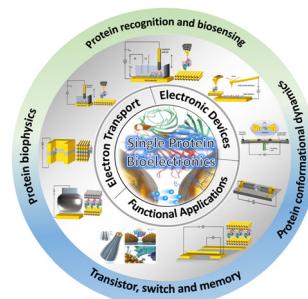
Xuejuan Zou, Xi Kang\* and Manzhou Zhu\*



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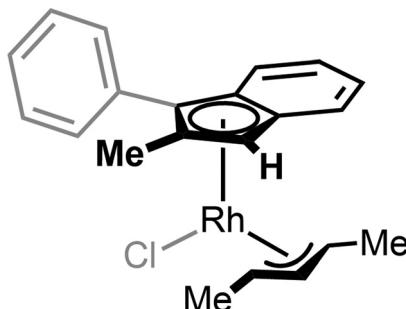
**Single-molecular protein-based bioelectronics via electronic transport: fundamentals, devices and applications**

Tao Jiang, Biao-Feng Zeng, Bintian Zhang\* and Longhua Tang\*



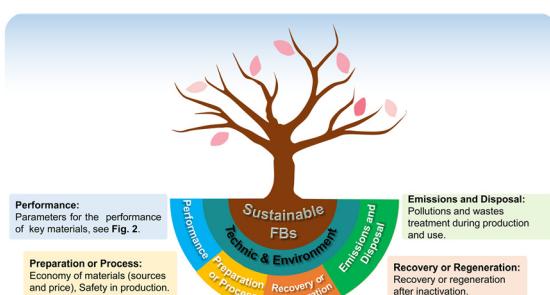
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**Synthesis, stereochemical assignment, and enantioselective catalytic activity of late transition metal planar chiral complexes**

David Laws III, Christopher D. Poff, Ethan M. Heyboer and Simon B. Blakey\*

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**Development of flow battery technologies using the principles of sustainable chemistry**

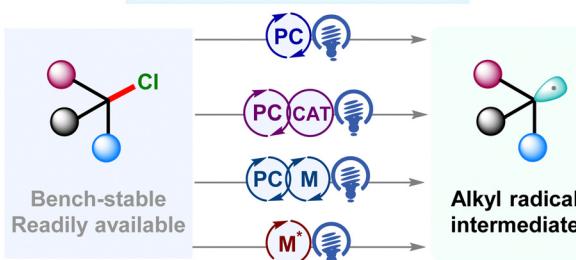
Ziming Zhao, Xianghui Liu, Mengqi Zhang, Leyuan Zhang, Changkun Zhang,\* Xianfeng Li\* and Guihua Yu\*

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**Potential of nonporous adaptive crystals for hydrocarbon separation**

Miaomiao Yan, Yuhao Wang, Jingyu Chen and Jiong Zhou\*

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**Activation mode of alkyl chlorides**

**Photoinduced activation of alkyl chlorides**

Cheng-Long Ji, Xinyi Zhai, Qing-Yun Fang, Chengjian Zhu, Jie Han and Jin Xie\*

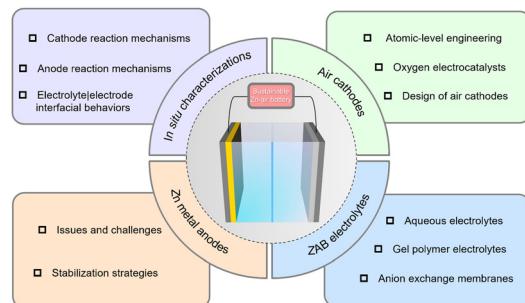


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**Sustainable zinc–air battery chemistry: advances, challenges and prospects**

Qichen Wang, Shubham Kaushik, Xin Xiao\* and Qiang Xu\*



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**Perspectives on recent advancements in energy harvesting, sensing and bio-medical applications of piezoelectric gels**

Thangavel Vijayakanth, Sudha Shankar, Gal Finkelstein-Zuta, Sigal Rencus-Lazar, Sharon Gilead and Ehud Gazit\*

