

Chem Soc Rev

Chemical Society Reviews

rsc.li/chem-soc-rev

The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

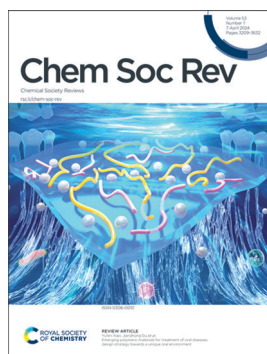
IN THIS ISSUE

ISSN 0306-0012 CODEN CSRVBR 53(7) 3209–3632 (2024)



Cover

See Jianhua Zou, Zhengwei Mao, Xiaoyuan Chen et al., pp. 3224–3252. Image reproduced by permission of Jianhua Zou, Zhengwei Mao and Xiaoyuan Chen from *Chem. Soc. Rev.*, 2024, 53, 3224.



Inside cover

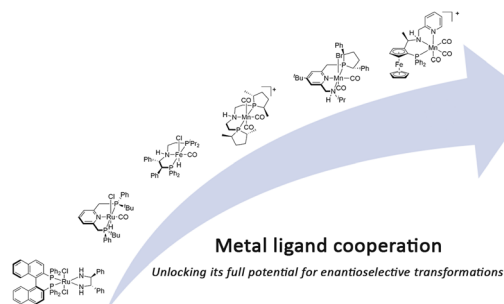
See Yufen Xiao, Jianzhong Du et al., pp. 3273–3301. Image reproduced by permission of Jianzhong Du from *Chem. Soc. Rev.*, 2024, 53, 3273.

VIEWPOINT

3216

Unlocking the potential of metal ligand cooperation for enantioselective transformations

Tizian-Frank Ramspoth, Johanan Kootstra and Syuzanna R. Harutyunyan*

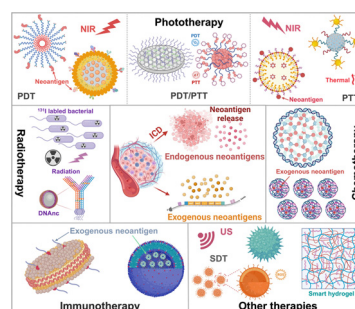


TUTORIAL REVIEWS

3224

Advancing nanotechnology for neoantigen-based cancer theranostics

Jianhua Zou,* Yu Zhang, Yuanbo Pan, Zhengwei Mao* and Xiaoyuan Chen*



RSC Advances

**At the heart of open access for
the global chemistry community**

Editor-in-chief

Russell J Cox

Leibniz Universität Hannover, Germany

We stand for:



Breadth We publish work in all areas of chemistry and reach a global readership



Affordability Low APCs, discounts and waivers make publishing open access achievable and sustainable



Quality Research to advance the chemical sciences undergoes rigorous peer review for a trusted, society-run journal



Community Led by active researchers, we publish quality work from scientists at every career stage, and all countries

Submit your work now

rsc.li/rsc-advances

@RSC_Adv

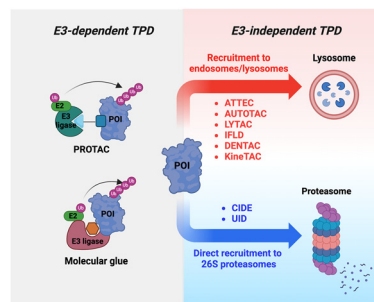


TUTORIAL REVIEWS

3253

Targeted protein degradation directly engaging lysosomes or proteasomes

Jiseong Kim, Insuk Byun, Do Young Kim, Hyunhi Joh, Hak Joong Kim* and Min Jae Lee*

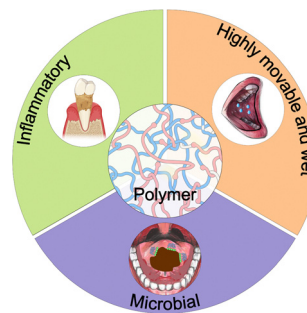


REVIEW ARTICLES

3273

Emerging polymeric materials for treatment of oral diseases: design strategy towards a unique oral environment

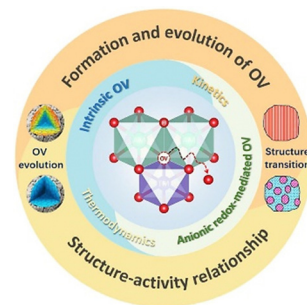
Bo Jia, Beibei Zhang, Jianhua Li, Jinlong Qin, Yisheng Huang, Mingshu Huang, Yue Ming, Jingjing Jiang, Ran Chen, Yufen Xiao* and Jianzhong Du*



3302

Oxygen vacancy chemistry in oxide cathodes

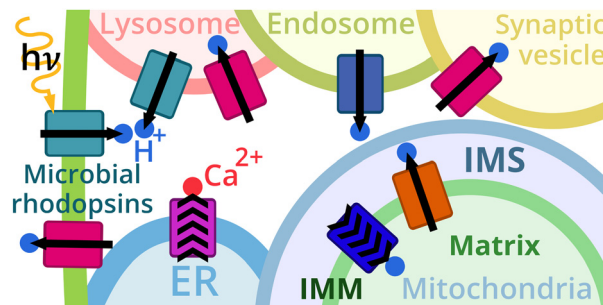
Yu-Han Zhang, Shu Zhang, Naifang Hu, Yuehui Liu, Jun Ma,* Pengxian Han, Zhiwei Hu,* Xiaogang Wang* and Guanglei Cui*



3327

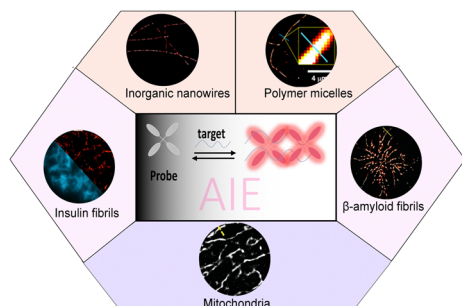
Intracellular microbial rhodopsin-based optogenetics to control metabolism and cell signaling

Anastasiia D. Vlasova, Siarhei M. Bukhalovich, Diana F. Bagaeva, Aleksandra P. Polyakova, Nikolay S. Ilyinsky, Semen V. Nesterov, Fedor M. Tsybrov, Andrey O. Bogorodskiy, Egor V. Zinovev, Anatolii E. Mikhailov, Alexey V. Vlasov, Alexander I. Kuklin, Valentin I. Borshchevskiy, Ernst Bamberg, Vladimir N. Uversky* and Valentin I. Gordeliy*



REVIEW ARTICLES

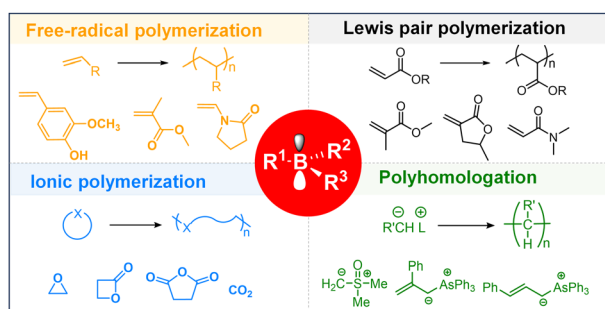
3350



Recent advances in super-resolution optical imaging based on aggregation-induced emission

Feng-Yu Zhu, Li-Jun Mei, Rui Tian, Chong Li,*
Ya-Long Wang, Shi-Li Xiang, Ming-Qiang Zhu* and
Ben Zhong Tang*

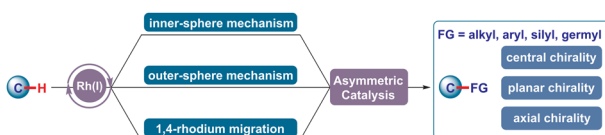
3384



Organoboron-mediated polymerizations

Yao-Yao Zhang, Guan-Wen Yang, Chenjie Lu,
Xiao-Feng Zhu, Yuhui Wang and Guang-Peng Wu*

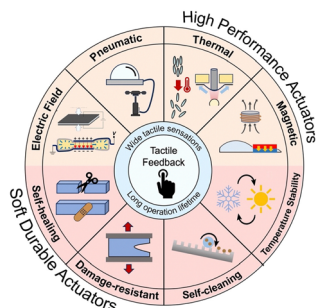
3457



Recent advances in Rh(III)-catalyzed enantioselective C–H functionalization

Yue Zhang, Jing-Jing Zhang, Lujun Lou, Ruofan Lin,
Nicolai Cramer,* Shou-Guo Wang* and Zhen Chen*

3485



Towards high performance and durable soft tactile actuators

Matthew Wei Ming Tan, Hui Wang, Dace Gao,
Peiwen Huang and Pooi See Lee*

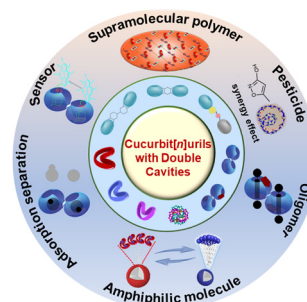


REVIEW ARTICLES

3536

Double-cavity cucurbiturils: synthesis, structures, properties, and applications

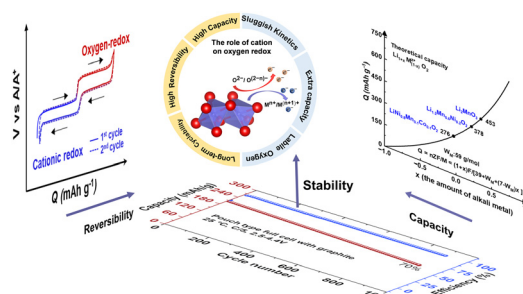
Qing Li,* Zhengwei Yu, Carl Redshaw, Xin Xiao* and Zhu Tao*



3561

Correlating concerted cations with oxygen redox in rechargeable batteries

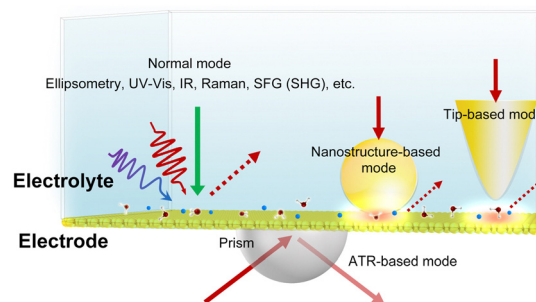
Shiqi Wang, Lifan Wang, David Sandoval, Tongchao Liu,* Chun Zhan* and Khalil Amine*



3579

Sixty years of electrochemical optical spectroscopy: a retrospective

Chao-Yu Li and Zhong-Qun Tian*



3606

Thermally activated structural phase transitions and processes in metal–organic frameworks

Celia Castillo-Blas,* Ashleigh M. Chester, David A. Keen and Thomas D. Bennett

