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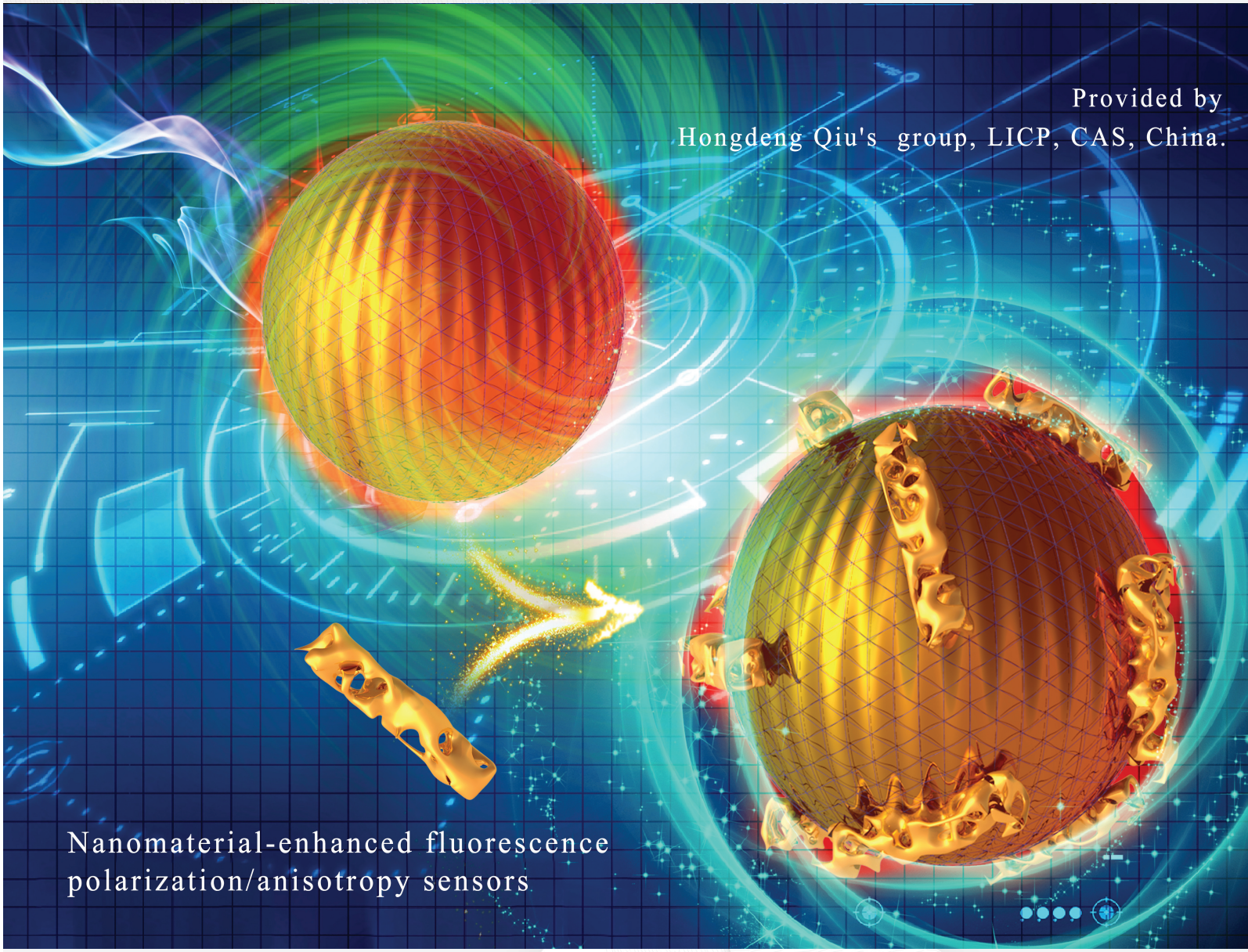

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Special Issue: Nanomaterials for Analytical Chemistry

Editorial

Nanomaterials for analytical chemistry

Chinese Chemical Letters 30 (2019) 1545

Juewen Liu, Hongdeng Qiu

Department of Chemistry, University of Waterloo, Waterloo, Ontario, N2L 3G1, Canada
Lanzhou Institute of Chemical Physics, Chinese Academy of Sciences, Lanzhou 730000, China

Reviews

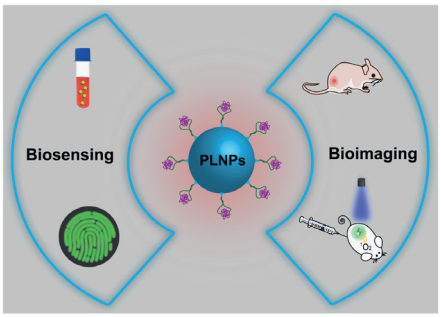
Recent advances in autofluorescence-free biosensing and bioimaging based on persistent luminescence nanoparticles

Chinese Chemical Letters 30 (2019) 1547

Qiaosong Lin, Zhihao Li, Quan Yuan

Key Laboratory of Analytical Chemistry for Biology and Medicine (Ministry of Education), College of Chemistry and Molecular Sciences, Wuhan University, Wuhan 430072, China

Persistent luminescence nanoparticles (PLNPs) refer to a series of luminescent nanomaterials that can swiftly store the excitation energy and emit persistently after ceasing the excitation. Due to the characteristics of quickly storing the excitation energy and slowly emitting luminescence for a long time after ceasing excitation, they can effectively diminish background fluorescence, and are ideal for fluorescent analysis, especially in autofluorescence-free biosensing and bioimaging.



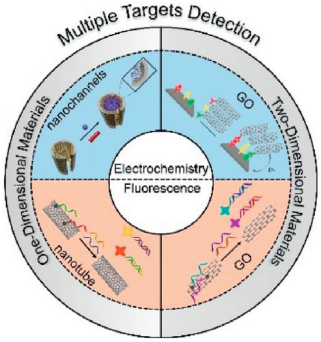
One-dimensional and two-dimensional nanomaterials for the detection of multiple biomolecules

Chinese Chemical Letters 30 (2019) 1557

Quan Wang[a], Xudong Wang[c], Min Xu[a], Xiaoding Lou[a,b], Fan Xia[a]

[a] *Engineering Research Center of Nano-Geomaterials of Ministry of Education, Faculty of Materials Science and Chemistry, China University of Geosciences, Wuhan 430074, China*
[b] *Zhejiang Institute, China University of Geosciences Wuhan, Hangzhou 311305, China*
[c] *Hubei Key Laboratory of Bioinorganic Chemistry & Materia Medica, School of Chemistry and Chemical Engineering, Huazhong University of Science and Technology, Wuhan 430074, China*

By utilizing nanomaterials including one-dimensional materials (1DMs) and two-dimensional materials (2DMs), the recent development for the determination of multiple biomolecules has been focused.



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Communications

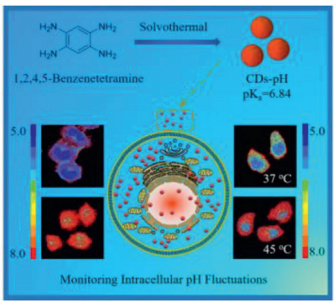
SciFinder-guided rational design of fluorescent carbon dots for ratiometric monitoring intracellular pH fluctuations under heat shock

Chinese Chemical Letters 30 (2019) 1647

Haifang Liu[a], Yuanqiang Sun[a], Zhaohui Li[a], Ran Yang[a], Jie Yang[a], Aaron Albert Aryee[a], Xiaoge Zhang[a], Jia Ge[a], Lingbo Qu[a], Yuehe Lin[b]

[a] *Institute of Chemical Biology and Clinical Application at The First Affiliated Hospital, Henan Joint International Research Laboratory of Green Construction of Functional Molecules and Their Bioanalytical Applications, Zhengzhou University, Zhengzhou 450001, China*
[b] *School of Mechanical and Materials Engineering, Washington State University, Pullman, WA 99164, United States*

A novel SciFinder-guided strategy for the preparation of pH responsive carbon dots (CDs-pH) for ratiometric intracellular imaging was developed.



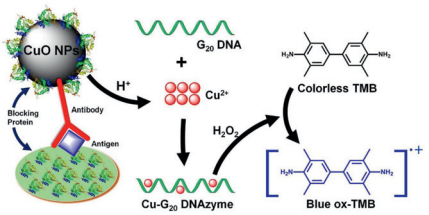
Cu-DNAzyme facilitates highly sensitive immunoassay

Chinese Chemical Letters 30 (2019) 1652

Zhi Shan[a,b], Mingsheng Lyu[a,c], Dennis Curry[a], David Oakley[a], Ken Oakes[d], Xu Zhang[a,e]

[a] *Verschuren Centre for Sustainability in Energy & the Environment, Cape Breton University, Sydney, Nova Scotia, B1P 6L2, Canada*
[b] *College of Life Science, Sichuan Agriculture University, Yaan 625014, China*
[c] *Jiangsu Key Laboratory of Marine Bioresources and Environment, Huaihai Institute of Technology, Lianyungang 222005, China*
[d] *Department of Biology, Cape Breton University, Sydney, Nova Scotia, B1P 6L2, Canada*
[e] *Department of Chemistry, Cape Breton University, Sydney, Nova Scotia, B1P 6L2, Canada*

A simple Cu-DNAzyme system is used for signal transduction of a CuO nanoparticle-labeled immunoassay, which makes the immunoassay fast, simple, cost-effective, and sensitive, thus promising for biomedical applications and point-of-care testing.



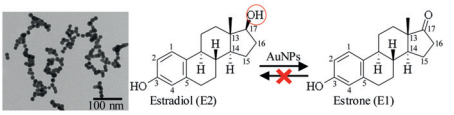
Gold nanoparticles as dehydrogenase mimicking nanozymes for estradiol degradation

Chinese Chemical Letters 30 (2019) 1655

Zijie Zhang[a], Leslie M. Bragg[b], Mark R. Servos[b], Juewen Liu[a]

[a] *Department of Chemistry, Waterloo Institute for Nanotechnology, University of Waterloo, Waterloo, Ontario, N2L 3G1, Canada*
[b] *Department of Biology, University of Waterloo, Waterloo, Ontario, N2L 3G1, Canada*

Small gold nanoparticles can mimic dehydrogenase activity to catalyze estradiol (E2) oxidation to estrone (E1), extending the range of nanozyme catalysis to environmentally and biologically important substrates.



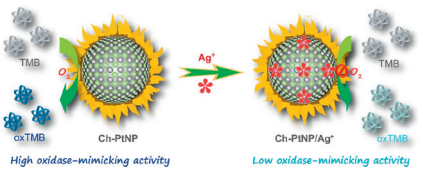
Target-triggered inhibiting oxidase-mimicking activity of platinum nanoparticles for ultrasensitive colorimetric detection of silver ion

Chinese Chemical Letters 30 (2019) 1659

Haohua Deng, Shaobin He, Xiuling Lin, Lu Yang, Zhen Lin, Ruiting Chen, Huaping Peng, Wei Chen

Higher Educational Key Laboratory for Nano Biomedical Technology of Fujian Province, Department of Pharmaceutical Analysis, Fujian Medical University, Fuzhou 350004, China

A facile colorimetric method for sensitive and selective detection of Ag^+ is successfully developed based on the excellent oxidase-like activity of chitosan-stabilized platinum nanoparticles and the strong metallophilic Pt^{2+}-Ag^+ interactions.



Etching of gold nanorods: The effects of diameter on analytical performances

Bingjie Zhang, Yunsheng Xia

Key Laboratory of Functional Molecular Solids, Ministry of Education, College of Chemistry and Materials Science, Anhui Normal University, Wuhu 241000, China

The diameters of gold nanorods have profound effects on the analytical performances of the corresponding etching based sensing system.

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