

《纳米研究》庆祝中国石油大学建校 70 周年 专刊发布活动



时间：2023 年 9 月 22 日 地点：中国石油大学（华东）海洋楼 B302-B308

时间	报告题目	报告人	主持人
9:00-9:05	开幕致辞	张永宁 中国石油大学（华东） 化学化工学院党委书记	胡涵
9:05-9:10	期刊致辞	王训 清华大学 Nano Research 副主编	
9:10-9:15	专刊发布	王训、姜桂元、冯翔	
9:15-9:20	合影		
9:20-9:50	近红外二区荧光量子点及其成像技术	王强斌 中国科学院苏州纳米技术与 纳米仿生研究所	吴明铂
9:50-10:20	亚纳米尺度材料控制合成及性质探索	王训 清华大学	王旱祥
10:20-10:30	茶歇		
10:30-11:00	空间分离双组份催化剂设计及协同机制研究	覃勇 中国科学院山西煤炭化学 研究所	智林杰
11:00-11:30	氢能存储与电催化转化关键材料研究进展	水江澜 北京航空航天大学	孙道峰

纳米研究青年科学家论坛（青岛）

会议日程

地点：中国石油大学（华东）海洋楼 B302-B308（第一组）；B314-B316（第二组）；B318-B320（第三组）

组别	报告时间	报告题目	报告人	主持人	点评专家
第一组	14:00-14:30	含碳能源清洁低碳高值转化利用技术的创新与应用	乔英云 中国石油大学（华东）	王亮 李福来	覃勇 徐建鸿
	14:30-15:00	石油组学与石油分子工程	韩晔华 中国石油大学（北京）		
	15:00-15:30	生物质工业催化转化	金鑫 中国石油大学（华东）		
	15:30-15:45	茶歇			
	15:45-16:15	炼油加氢催化剂原子尺度设计与应用基础	潘原 中国石油大学（华东）		
	16:15-16:45	劣质油品高效清洁加工	王喜龙 中国石油大学（北京）		
	16:45-17:15	储能电极材料的设计及储能机制研究	杨旺 中国石油大学（北京）		
第二组	14:00-14:30	仿生单位点催化剂的设计及应用	刘健 中国科学院青岛生物 能源与过程研究所	徐翔 吴文婷	王训 吴传德 姜桂圆
	14:30-15:00	超小纳米金属基电催化材料	赖建平 青岛科技大学		
	15:00-15:30	可见光催化氟代芳烃的合成与转化	徐文刚 中国石油大学（华东）		
	15:30-15:45	茶歇			
	15:45-16:15	基于无机钙钛矿的电催化 CO ₂ 还原	朱佳伟 中国科学院青岛生物 能源与过程研究所		
	16:15-16:45	柔性二维纳米异质结构电极分子自组装	孟凡陆 中国海洋大学		
	16:45-17:15	石油基有机液体储氢技术催化脱氢过程基础研究	脱永笑 中国石油大学（华东）		
第三组	14:00-14:30	金属-有机框架材料有序结构调控	戴昉纳 中国石油大学（华东）	詹国武 冯翔	王强斌 水江澜
	14:30-15:00	高能金属负极的界面设计与调控	吴敬一 中国海洋大学		
	15:00-15:30	多酸衍生电解水制氢催化材料	黄毅超 中国石油大学（华东）		
	15:30-15:45	茶歇			
	15:45-16:15	电催化材料的结构优化工程	田维乾 中国海洋大学		
	16:15-16:45	多维复合材料的设计及吸波性能研究	吴广磊 青岛大学		
	16:45-17:15	宽频带白光材料与 LED 器件	邢军 青岛科技大学		

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Nano Research

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70th Anniversary
1953-2023

**Special Issue: Celebrating the 70th Anniversary
of China University of Petroleum**

Guest Editors: Chunming Xu, Guiyuan Jiang, Yongming Chai, and Yuan Pan

中国石油大学

圖書館

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Project for Enhancing International
Impact of China STM Journals

Special Issue: Celebrating the 70th Anniversary of China University of Petroleum

Recent progress of diversiform humidity sensors based on versatile nanomaterials and their prospective applications

<https://doi.org/10.1007/s12274-022-4917-y>



Artificial intelligence-assisted colorimetry for urine glucose detection towards enhanced sensitivity, accuracy, resolution, and anti-illuminating capability

<https://doi.org/10.1007/s12274-022-5311-5>



Diversiform gas sensors based on two-dimensional nanomaterials

<https://doi.org/10.1007/s12274-022-5233-2>



Bio-organic adaptive photonic crystals enable supramolecular solvatochromism

<https://doi.org/10.1007/s12274-022-5331-1>



Boosting methylcyclohexane dehydrogenation over Pt-based structured catalysts by internal electric heating

<https://doi.org/10.1007/s12274-023-5771-2>



A multistimuli-responsive fluorescent hydrogel based on a fluorescence response to macromolecular segmental motion

<https://doi.org/10.1007/s12274-022-5361-8>



Developing in situ electron paramagnetic resonance characterization for understanding electron transfer of rechargeable batteries

<https://doi.org/10.1007/s12274-023-5855-z>



H₂O₂ actuated molybdenum oxide nanodots: Multi-enzyme-like activities, leverage of Fenton reaction, and dual-mode sensitive detection of alendronate sodium

<https://doi.org/10.1007/s12274-023-5387-6>



Improving flow and fluidization quality of fine and ultrafine particles via nanoparticle modulation

<https://doi.org/10.1007/s12274-023-6191-z>



W-doped FeNi₂S₄/Ni₃S₂/NF with interfacial effect as efficient bifunctional electrocatalyst for overall water splitting

<https://doi.org/10.1007/s12274-023-5453-0>



Effective regulation mechanisms of Fe-Ni (oxy)hydroxide: Ni-rich heteroatomic bonding (Ni-O-Fe-O-Ni) is essential

<https://doi.org/10.1007/s12274-022-5019-6>



La ions-enhanced NH₃-SCR performance over Cu-SSZ-1₃ catalysts

<https://doi.org/10.1007/s12274-023-5500-x>



Theoretical kinetic quantitative calculation predicted the expedited polysulfides degradation

<https://doi.org/10.1007/s12274-022-5061-4>



Aptamer-induced in-situ growth of acetylcholinesterase-Cu₃(PO₄)₂ hybrid nanoflowers for electrochemical detection of organophosphorus inhibitors

<https://doi.org/10.1007/s12274-023-5528-y>



Boosting CO₂ electroreduction to formate via bismuth oxide clusters

<https://doi.org/10.1007/s12274-022-5073-0>



Selectivity switching between CO and formate for CO₂ reduction on Sb modified amorphous ZnO by electronic effect

<https://doi.org/10.1007/s12274-023-5570-9>



Ni₃B modified BiVO₄ photoanodes for enhanced photoelectrochemical water splitting: The key role of Ni₃B on reducing the water oxidation barrier

<https://doi.org/10.1007/s12274-022-5079-7>



Ru-based catalysts for efficient CO₂ methanation: Synergistic catalysis between oxygen vacancies and basic sites

<https://doi.org/10.1007/s12274-023-5592-3>



In-situ synthesis of high thermal stability and salt resistance carbon dots for injection pressure reduction and enhanced oil recovery

<https://doi.org/10.1007/s12274-022-5083-y>



Oxygen-deficient tungsten oxide nanoflowers for dynamically tunable near-infrared light transmittance of smart windows

<https://doi.org/10.1007/s12274-023-5600-7>



Peptidomimetic-liganded gold nanoclusters for controlled iron delivery and synergistic suppression of tumor growth

<https://doi.org/10.1007/s12274-022-5103-y>



A novel 3D printed technology to construct a monolithic ultrathin nanosheets Co₃O₄/SiO₂ catalyst for benzene catalytic combustion

<https://doi.org/10.1007/s12274-023-5631-0>



Stable Au nanoparticles confined in boron nitride shells for optimizing oxidative desulfurization

<https://doi.org/10.1007/s12274-022-5113-9>



Interfacial engineering of atomic platinum-doped molybdenum carbide quantum dots for high-rate and stable hydrogen evolution reaction in proton exchange membrane water electrolysis

<https://doi.org/10.1007/s12274-023-5666-2>



Special Issue: Celebrating the 70th Anniversary of China University of Petroleum

Urea-assisted morphological engineering of MFI nanosheets with tunable b-thickness

<https://doi.org/10.1007/s12274-023-5749-0>



Laser irradiation constructing all-in-one defective graphene-polyimide separator for effective restraint of lithium dendrites and shuttle effect

<https://doi.org/10.1007/s12274-023-5947-9>



The aromatic peptide protected gold nanoclusters with significant Stokes shift: Ligand-mediated two-step FRET

<https://doi.org/10.1007/s12274-023-5754-3>



The activity of Zn precursors determines the cation exchange reaction kinetics with Ag_2S : Zn-doped Ag_2S or $\text{Ag}_2\text{S}@ZnS$ QDs

<https://doi.org/10.1007/s12274-023-5952-z>



TiO_2 nanoparticle supported Ru catalyst for chemical upcycling of polyethylene terephthalate to alkanes

<https://doi.org/10.1007/s12274-023-5772-1>



Enhanced charge separation by continuous homojunction with spatially separated redox sites for hydrogen evolution

<https://doi.org/10.1007/s12274-023-5976-4>



The role of aromatic residues in controlling the supramolecular chirality of short amphiphilic peptides

<https://doi.org/10.1007/s12274-023-5783-y>



Enriching the surface oxygen as efficient anchoring site of highly dispersed Ru for enhanced hydrogenolysis activity

<https://doi.org/10.1007/s12274-023-5988-0>



Biomined nanoparticles for the immobilization and degradation of crude oil-contaminated soil

<https://doi.org/10.1007/s12274-023-5788-6>



Robust ultra-microporous metal-organic frameworks for highly efficient natural gas purification

<https://doi.org/10.1007/s12274-023-6072-5>



Fast scanning growth of high-quality graphene films on Cu foils fueled by dimeric carbon precursor

<https://doi.org/10.1007/s12274-023-5814-8>



Sulfite activation by ZnO-encapsulated hydrogels for degradation of trimethylphenol

<https://doi.org/10.1007/s12274-023-6122-z>



Construction of pH-universal hydrogen evolution freeway in $\text{MoO}_3\text{-MoNi}_4@Cu$ core-shell nanowires via synergetic electronic and geometric effect

<https://doi.org/10.1007/s12274-023-5826-4>



Copper Nanowires Decorated with TiO_2 from MXene for Enhanced Electrocatalytic Nitrogen Oxidation into Nitrate under Vacuum Assistance

<https://doi.org/10.1007/s12274-023-6126-8>



CVD growth of graphene on copper-plated scrap steel without external carbon source

<https://doi.org/10.1007/s12274-023-5883-8>



Core-shell $\text{Cu}@SiO_2/SiO_2$ catalyst for 1,6-hexanediol dehydrogenation to ϵ -caprolactone: High activity and stability from core-shell nanostructure

<https://doi.org/10.1007/s12274-023-5891-8>



Quantum Griffiths singularity in two-dimensional superconducting $4\text{H}\alpha\text{-TaSe}_2$ nanodevices

<https://doi.org/10.1007/s12274-023-5901-x>



Simultaneously enhanced interfacial shear strength and tensile strength of heterocyclic aramid fiber by graphene oxide

<https://doi.org/10.1007/s12274-023-5904-7>



Hydrogen peroxide-activatable iodoBodipy-phthalhydrazid conjugate nanoparticles for cancer therapy

<https://doi.org/10.1007/s12274-023-5923-4>



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**Topical Collection: Key Nanomaterials for Industrial
Chemical Process**

Guest Editors: De Chen, Han Hu, and Xiang Feng

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Topical Collection: Key Nanomaterials for Industrial Chemical

Nano-enabled solar driven-interfacial evaporation:
Advanced design and opportunities

Nano Research, 2023, 16(5): 6015-6038
<https://doi.org/10.1007/s12274-023-5488-2>



Water boosted CO₂/C₂H₂ separation in L-arginine
functionalized metal-organic framework

Nano Research, 2023, 16(5): 6113-6119
<https://doi.org/10.1007/s12274-022-5028-5>



Tailoring interlayer spacing in MXene cathodes to boost
the desalination performance of hybrid capacitive
deionization systems

Nano Research, 2023, 16(5): 6039-6047
<https://doi.org/10.1007/s12274-022-4491-3>



Doped-nitrogen enhanced the performance of Nb₂CT_x on
the electrocatalytic synthesis of H₂O₂

Nano Research, 2023, 16(5): 6120-6127
<https://doi.org/10.1007/s12274-022-5051-6>



Facile and controllable synthesis of amino-modified
carbon dots for efficient oil displacement

Nano Research, 2023, 16(5): 6048-6056
<https://doi.org/10.1007/s12274-022-4527-8>



The role of CO₂ dissociation in CO₂ hydrogenation to
ethanol on CoCu/silica catalysts

Nano Research, 2023, 16(5): 6128-6133
<https://doi.org/10.1007/s12274-022-5092-x>



Cobalt-iron oxide/black phosphorus nanosheet
heterostructure: Electrosynthesis and performance of
(photo-)electrocatalytic oxygen evolution

Nano Research, 2023, 16(5): 6057-6066
<https://doi.org/10.1007/s12274-022-4676-9>



2D/2D hierarchical Co₃O₄/ZnIn₂S₄ heterojunction with
robust built-in electric field for efficient photocatalytic
hydrogen evolution

Nano Research, 2023, 16(5): 6134-6141
<https://doi.org/10.1007/s12274-022-5096-6>



Resisting metal aggregation in pyrolysis of MOFs
towards high-density metal nanocatalysts for efficient
hydrazine assisted hydrogen production

Nano Research, 2023, 16(5): 6067-6075
<https://doi.org/10.1007/s12274-022-4777-5>



Ethane dehydrogenation over the g-C₃N₄ supported metal
single-atom catalysts to enhance reactivity and
coking-resistance ability

Nano Research, 2023, 16(5): 6142-6152
<https://doi.org/10.1007/s12274-022-5187-4>



A novel synthetic method of porous and nanoflower-like
Al₂O₃/MoS₂ catalyst for reduction of SO₂ to elemental
sulfur

Nano Research, 2023, 16(5): 6067-6075
<https://doi.org/10.1007/s12274-022-4777-5>



Crown ether interlayer-modulated polyamide membrane
with nanoscale structures for efficient desalination

Nano Research, 2023, 16(5): 6153-6159
<https://doi.org/10.1007/s12274-022-5196-3>



Zero-oxidation state precursor assisted fabrication of
highly dispersed and stable Pt catalyst for chemoselective
hydrogenation of α,β -unsaturated aldehydes

Nano Research, 2023, 16(5): 6085-6093
<https://doi.org/10.1007/s12274-022-4822-4>



Dual MOFs composites: MIL-53 coated with amorphous
UiO-66 for enhanced photocatalytic oxidation of
tetracycline and methylene blue

Nano Research, 2023, 16(5): 6160-6166
<https://doi.org/10.1007/s12274-022-5200-y>



Structure and oxygen-defect regulation of hydrated
vanadium oxide for enhanced zinc ion storage via
interlayer doping strategy

Nano Research, 2023, 16(5): 6094-6103
<https://doi.org/10.1007/s12274-022-4834-0>



Graphdiyne anchoring to construct highly dense
palladium trimer active sites for the selective
hydrogenation of acetylene

Nano Research, 2023, 16(5): 6167-6177
<https://doi.org/10.1007/s12274-022-5219-0>



Tuning photocatalytic performance of Cs₃Bi₂Br₉
perovskite by g-C₃N₄ for C(sp³)-H bond activation

Nano Research, 2023, 16(5): 6104-6112
<https://doi.org/10.1007/s12274-022-4835-z>



Free radicals induced ultra-rapid synthesis of N-doped
carbon sphere catalyst with boosted pyrrolic N active
sites for efficient acetylene hydrochlorination

Nano Research, 2023, 16(5): 6178-6186
<https://doi.org/10.1007/s12274-022-5237-y>



K-modified MnO_δ catalysts with tunnel structure and layered structure: Facile preparation and catalytic performance for soot combustion

Nano Research, 2023, 16(5): 6187-6199
<https://doi.org/10.1007/s12274-022-5242-1>



Au/TS-1 catalyst for propylene epoxidation with H₂ and O₂: Effect of surface property and morphology of TS-1 zeolite

Nano Research, 2023, 16(5): 6278-6289
<https://doi.org/10.1007/s12274-023-5440-5>



Efficient selective activation of sorbitol C–O bonds over C–C bonds on CoGa (221) generated by lattice-induction strategy

Nano Research, 2023, 16(5): 6200-6211
<https://doi.org/10.1007/s12274-022-5249-7>



Two-dimensional Cu-porphyrin nanosheet membranes for nanofiltration

Nano Research, 2023, 16(5): 6290-6297
<https://doi.org/10.1007/s12274-023-5447-y>



Size control and electronic manipulation of Ru catalyst over B, N co-doped carbon network for high-performance hydrogen evolution reaction

Nano Research, 2023, 16(5): 6212-6219
<https://doi.org/10.1007/s12274-022-5250-1>



Water's motions in x–y and z directions of 2D nanochannels: Entirely different but tightly coupled

Nano Research, 2023, 16(5): 6298-6307
<https://doi.org/10.1007/s12274-023-5451-2>



Kinetics and mechanistic insights into the active sites of Au catalysts for selective propylene oxidation

Nano Research, 2023, 16(5): 6220-6227
<https://doi.org/10.1007/s12274-022-5283-5>



Efficient capture of iodine and methyl iodide using all-silica EMM-17 zeolite

Nano Research, 2023, 16(5): 6308-6315
<https://doi.org/10.1007/s12274-023-5497-1>



P-band center theory guided activation of MoS₂ basal S sites for pH-universal hydrogen evolution

Nano Research, 2023, 16(5): 6228-6236
<https://doi.org/10.1007/s12274-022-5287-1>



Electron transfer to direct oxidation of aqueous organics by perovskites

Nano Research, 2023, 16(5): 6316-6325
<https://doi.org/10.1007/s12274-023-5624-z>



Promotional nature of Sn on Pt/CeO₂ for the oxidative dehydrogenation of propane with carbon dioxide

Nano Research, 2023, 16(5): 6237-6250
<https://doi.org/10.1007/s12274-022-5316-0>



Pillar effect boosting the electrochemical stability of Prussian blue-polypyrrole for potassium ion batteries

Nano Research, 2023, 16(5): 6326-6333
<https://doi.org/10.1007/s12274-023-5692-0>



In-situ polarization of covalent organic frameworks in seawater enables enhanced photocatalytic hydrogen evolution under visible-light irradiation

Nano Research, 2023, 16(5): 6251-6259
<https://doi.org/10.1007/s12274-022-5332-0>



Heterostructuring 2D Co₂P nanosheets with 0D CoP via a salt-assisted strategy for boosting hydrogen evolution from ammonia borane hydrolysis

Nano Research, 2023, 16(5): 6260-6269
<https://doi.org/10.1007/s12274-023-5388-5>



Size dependence of carbon-encapsulated iron-based nanocatalysts for Fischer–Tropsch synthesis

Nano Research, 2023, 16(5): 6270-6277
<https://doi.org/10.1007/s12274-023-5417-4>

