

# 1. Essential Science Indicators for Hot papers for Hunan University on Mar 25, 2021

## Papers by Research Field

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- BORON NITRIDE QUANTUM DOTS DECORATED ULTRATHIN POROUS G-C3N4: INTENSIFIED EXCITON DISSOCIATION AND CHARGE TRANSFER FOR PROMOTING VISIBLE-LIGHT-DRIVEN MOLECULAR OXYGEN ACTIVATION**

By: YANG, Y; ZHANG, C; HUANG, DL; et.al

Source: APPLIED CATALYSIS B-ENVIRONMENTAL 245: 87-99 MAY 15 2019

Research Fields: CHEMISTRY

Times Cited: 220

ESI Hot

Research Front
- FACILE ASSEMBLED BIOCHAR-BASED NANOCOMPOSITE WITH IMPROVED GRAPHITIZATION FOR EFFICIENT PHOTOCATALYTIC ACTIVITY DRIVEN BY VISIBLE LIGHT**

By: YE, SJ; YAN, M; TAN, XF; et.al

Source: APPLIED CATALYSIS B-ENVIRONMENTAL 250: 78-88 AUG 5 2019

Research Fields: CHEMISTRY

Times Cited: 202

ESI Hot

Research Front
- VAN DER WAALS INTEGRATION BEFORE AND BEYOND TWO-DIMENSIONAL MATERIALS**

By: LIU, Y; HUANG, Y; DUAN, XF;

Source: NATURE 567 (7748): 323-333 MAR 21 2019

Research Fields: MATERIALS SCIENCE

Times Cited: 196

ESI Hot
- THE EFFECTS OF ACTIVATED BIOCHAR ADDITION ON REMEDIATION EFFICIENCY OF CO-COMPOSTING WITH CONTAMINATED WETLAND SOIL**

By: YE, SJ; ZENG, GM; WU, HP; et.al

Source: RESOURCES CONSERVATION AND RECYCLING 140: 278-285 JAN 2019

Research Fields: ENVIRONMENT/ECOLOGY

Times Cited: 189

ESI Hot

Research Front
- NUCLEIC ACIDS ANALYSIS**

By: ZHAO, YX; ZUO, XL; LI, Q; et.al

Source: SCIENCE CHINA-CHEMISTRY 64 (2): 171-203 FEB 2021

Research Fields: CHEMISTRY

Times Cited: 186

ESI Hot
- HIERARCHICAL 3D ELECTRODES FOR ELECTROCHEMICAL ENERGY STORAGE**

By: SUN, HT; ZHU, J; BAUMANN, D; et.al

Source: NATURE REVIEWS MATERIALS 4 (1): 45-60 JAN 2019

Research Fields: MATERIALS SCIENCE

Times Cited: 152

ESI Hot
- FABRICATION OF CUS/BIVO4 (040) BINARY HETEROJUNCTION PHOTOCATALYSTS WITH ENHANCED PHOTOCATALYTIC ACTIVITY FOR CIPROFLOXACIN DEGRADATION AND MECHANISM INSIGHT**

By: LAI, C; ZHANG, MM; LI, BS; et.al

Source: CHEMICAL ENGINEERING JOURNAL 358: 891-902 FEB 15 2019

Research Fields: ENGINEERING

Times Cited: 141

ESI Hot

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8
**GRAPHITE ANODE FOR A POTASSIUM-ION BATTERY WITH UNPRECEDENTED PERFORMANCE**

By: FAN, L; MA, RF; ZHANG, QF; et.al  
Source: ANGEWANDTE CHEMIE-INTERNATIONAL EDITION 58 (31): 10501-10506 JUL 2019  
Research Fields: CHEMISTRY

Times Cited: 139  
ESI Hot

9
**LARGE-AREA GRAPHENE-NANOMESH/CARBON-NANOTUBE HYBRID MEMBRANES FOR IONIC AND MOLECULAR NANOFILTRATION**

By: YANG, YB; YANG, XD; LIANG, L; et.al  
Source: SCIENCE 364 (6445): 1057-+ SP. ISS. SI JUN 14 2019  
Research Fields: MATERIALS SCIENCE

Times Cited: 122  
ESI Hot

10
**OBSERVATION OF A NARROW PENTAQUARK STATE, P-C(4312){+}, AND OF THE TWO-PEAK STRUCTURE OF THE P-C(4450){+}**

By: AAJ, R; BETETA, CA; ADEVA, B; et.al  
Source: PHYSICAL REVIEW LETTERS 122 (22): - JUN 5 2019  
Research Fields: PHYSICS

Times Cited: 120  
ESI Hot  
Research Front

11
**DEEP LEARNING FOR HYPERSPECTRAL IMAGE CLASSIFICATION: AN OVERVIEW**

By: LI, ST; SONG, WW; FANG, LY; et.al  
Source: IEEE TRANSACTIONS ON GEOSCIENCE AND REMOTE SENSING 57 (9): 6690-6709 SEP 2019  
Research Fields: GEOSCIENCES

Times Cited: 99  
ESI Hot  
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12
**Ti3C2 MXENE/POROUS G-C3N4 INTERFACIAL SCHOTTKY JUNCTION FOR BOOSTING SPATIAL CHARGE SEPARATION IN PHOTOCATALYTIC H2O2 PRODUCTION**

By: YANG, Y; ZENG, ZT; ZENG, GM; et.al  
Source: APPLIED CATALYSIS B-ENVIRONMENTAL 258: - DEC 5 2019  
Research Fields: CHEMISTRY

Times Cited: 97  
ESI Hot

13
**SULFUR DOPED CARBON QUANTUM DOTS LOADED HOLLOW TUBULAR G-C3N4 AS NOVEL PHOTOCATALYST FOR DESTRUCTION OF ESCHERICHIA COLI AND TETRACYCLINE DEGRADATION UNDER VISIBLE LIGHT**

By: WANG, WJ; ZENG, ZT; ZENG, GM; et.al  
Source: CHEMICAL ENGINEERING JOURNAL 378: - DEC 15 2019  
Research Fields: ENGINEERING

Times Cited: 94  
ESI Hot

14
**TRACE DOPING OF MULTIPLE ELEMENTS ENABLES STABLE BATTERY CYCLING OF LICOO2 AT 4.6V**

By: ZHANG, JN; LI, QH; OUYANG, CY; et.al  
Source: NATURE ENERGY 4 (7): 594-603 JUL 2019  
Research Fields: ENGINEERING

Times Cited: 94  
ESI Hot  
Research Front

15
**CARBON FOAM WITH MICROPOROUS STRUCTURE FOR HIGH PERFORMANCE SYMMETRIC POTASSIUM DUAL-ION CAPACITOR**

By: FENG, YH; CHEN, SH; WANG, J; et.al  
Source: JOURNAL OF ENERGY CHEMISTRY 43: 129-138 APR 2020  
Research Fields: CHEMISTRY

Times Cited: 89  
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16

**RECENT ADVANCES IN COVALENT ORGANIC FRAMEWORKS (COFs) AS A SMART SENSING MATERIAL**

Times Cited: 87  
 ESI Hot

By: LIU, XG; HUANG, DL; LAI, C; et.al  
 Source: CHEMICAL SOCIETY REVIEWS 48 (20): 5266-5302 OCT 21 2019  
 Research Fields: CHEMISTRY

17

**SINGLE ATOM ELECTROCATALYSTS SUPPORTED ON GRAPHENE OR GRAPHENE-LIKE CARBONS**

Times Cited: 59  
 ESI Hot

By: FEI, HL; DONG, JC; CHEN, DL; et.al  
 Source: CHEMICAL SOCIETY REVIEWS 48 (20): 5207-5241 OCT 21 2019  
 Research Fields: CHEMISTRY

18

**SHARP POWER MEAN INEQUALITIES FOR THE GENERALIZED ELLIPTIC INTEGRAL OF THE FIRST KIND**

Times Cited: 49  
 ESI Hot

By: WANG, MK; HE, ZY; CHU, YM;  
 Source: COMPUTATIONAL METHODS AND FUNCTION THEORY 20 (1): 1-15 MAR 2020  
 Research Fields: MATHEMATICS

19

**DEFECT ENGINEERING ON ELECTRODE MATERIALS FOR RECHARGEABLE BATTERIES**

Times Cited: 48  
 ESI Hot

By: ZHANG, YQ; TAO, L; XIE, C; et.al  
 Source: ADVANCED MATERIALS 32 (7): - FEB 2020  
 Research Fields: MATERIALS SCIENCE

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20

**FUTURE PHYSICS PROGRAMME OF BESIII**

Times Cited: 41  
 ESI Hot

By: ABLIKIM, M; ACHASOV, MN; ADLARSON, P; et.al  
 Source: CHINESE PHYSICS C 44 (4): - APR 2020  
 Research Fields: PHYSICS

21

**ANSWERS TO THREE CONJECTURES ON CONVEXITY OF THREE FUNCTIONS INVOLVING COMPLETE ELLIPTIC INTEGRALS OF THE FIRST KIND**

Times Cited: 39  
 ESI Hot

By: WANG, MK; CHU, HH; LI, YM; et.al  
 Source: APPLICABLE ANALYSIS AND DISCRETE MATHEMATICS 14 (1): 255-271 APR 2020  
 Research Fields: MATHEMATICS

22

**HIERARCHICALLY ORDERED POROUS CARBON WITH ATOMICALLY DISPERSED FEN4 FOR ULTRA-EFFICIENT OXYGEN REDUCTION REACTION IN PROTON-EXCHANGE MEMBRANE FUEL CELLS**

Times Cited: 34  
 ESI Hot

By: QIAO, MF; WANG, Y; WANG, Q; et.al  
 Source: ANGEWANDTE CHEMIE-INTERNATIONAL EDITION 59 (7): 2688-2694 FEB 10 2020  
 Research Fields: CHEMISTRY

23

**GENERAL SYNTHESIS OF TWO-DIMENSIONAL VAN DER WAALS HETEROSTRUCTURE ARRAYS**

Times Cited: 34  
 ESI Hot

By: LI, J; YANG, XD; LIU, Y; et.al  
 Source: NATURE 579 (7799): 368-+ MAR 2020  
 Research Fields: MATERIALS SCIENCE

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23	<b>GENERAL SYNTHESIS OF TWO-DIMENSIONAL VAN DER WAALS HETEROSTRUCTURE ARRAYS</b> By: LI, J; YANG, XD; LIU, Y; et.al Source: NATURE 579 (7799): 368-+ MAR 2020 Research Fields: MATERIALS SCIENCE	Times Cited: 34 ESI Hot
24	<b>MOLECULAR ENGINEERING OF POLYMERIC CARBON NITRIDE FOR HIGHLY EFFICIENT PHOTOCATALYTIC OXYTETRACYCLINE DEGRADATION AND H2O2 PRODUCTION</b> By: YANG, Y; ZENG, GM; HUANG, DL; et.al Source: APPLIED CATALYSIS B-ENVIRONMENTAL 272: - SEP 5 2020 Research Fields: CHEMISTRY	Times Cited: 25 ESI Hot Research Front
25	<b>COMPLEX-VALUED DISCRETE-TIME NEURAL DYNAMICS FOR PERTURBED TIME-DEPENDENT COMPLEX QUADRATIC PROGRAMMING WITH APPLICATIONS</b> By: QI, YM; JIN, L; WANG, YN; et.al Source: IEEE TRANSACTIONS ON NEURAL NETWORKS AND LEARNING SYSTEMS 31 (9): 3555-3569 SEPT 2020 Research Fields: COMPUTER SCIENCE	Times Cited: 23 ESI Hot Research Front
26	<b>OPERANDO IDENTIFICATION OF THE DYNAMIC BEHAVIOR OF OXYGEN VACANCY-RICH CO3O4 FOR OXYGEN EVOLUTION REACTION</b> By: XIAO, ZH; HUANG, YC; DONG, CL; et.al Source: JOURNAL OF THE AMERICAN CHEMICAL SOCIETY 142 (28): 12087-12095 JUL 15 20 Research Fields: CHEMISTRY	Times Cited: 21 ESI Hot

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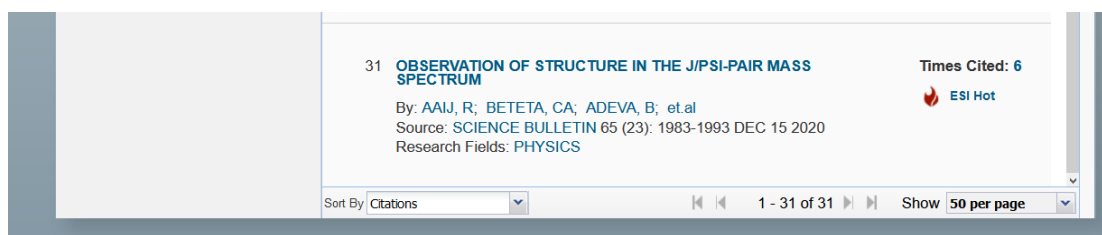
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27	<b>1D POROUS TUBULAR G-C3N4 CAPTURE BLACK PHOSPHORUS QUANTUM DOTS AS 1D/0D METAL-FREE PHOTOCATALYSTS FOR OXYTETRACYCLINE HYDROCHLORIDE DEGRADATION AND HEXAVALENT CHROMIUM REDUCTION</b> By: WANG, WJ; NIU, QY; ZENG, GM; et.al Source: APPLIED CATALYSIS B-ENVIRONMENTAL 273: - SEP 15 2020 Research Fields: CHEMISTRY	Times Cited: 17 ESI Hot Research Front
28	<b>LONG-ASPECT-RATIO N-RICH CARBON NANOTUBES AS ANODE MATERIAL FOR SODIUM AND LITHIUM ION BATTERIES</b> By: ZHONG, SY; LIU, HZ; WEI, DH; et.al Source: CHEMICAL ENGINEERING JOURNAL 395: - SEP 1 2020 Research Fields: ENGINEERING	Times Cited: 13 ESI Hot Research Front
29	<b>LARGE-SCALE CARAMBOLA-LIKE V2O5 NANOFLOWERS ARRAYS ON MICROPOROUS REED CARBON AS IMPROVED ELECTROCHEMICAL PERFORMANCES LITHIUM-ION BATTERIES CATHODE</b> By: TAN, H; YU, XZ; HUANG, K; et.al Source: JOURNAL OF ENERGY CHEMISTRY 51: 388-395 DEC 2020 Research Fields: CHEMISTRY	Times Cited: 12 ESI Hot
30	<b>HARMONIZING SELF-SUPPORTIVE VN/MOS2 PSEUDOCAPACITANCE CORE-SHELL ELECTRODES FOR BOOSTING THE AREAL CAPACITY OF LITHIUM STORAGE</b> By: XIONG, T; SU, H; YANG, F; et.al Source: MATERIALS TODAY ENERGY 17: - SEP 2020 Research Fields: MATERIALS SCIENCE	Times Cited: 10 ESI Hot



以上 31 篇论文中有 9 篇是环境学院的论文:

- 1) Yang Yang<sup>1</sup>, Chen Zhang<sup>1</sup>, Danlian Huang<sup>1</sup>, Guangming Zeng\*, Jinhui Huang\*, Cui Lai, Chengyun Zhou, Wenjun Wang, Hai Guo, Wenjing Xue, Rui Deng, Min Cheng, Weiping Xiong. Boron nitride quantum dots decorated ultrathin porous g-C<sub>3</sub>N<sub>4</sub>: Intensified exciton dissociation and charge transfer for promoting visible-light-driven molecular oxygen activation. *Applied Catalysis B: Environmental* (SCI 2019 IF=16.683), 2019, 245, 87-99 (ESI Highly Cited Paper and Hot Paper and ESI Research Front, ESI Hot Paper 第 9 次上榜).
- 2) Shujing Ye<sup>1</sup>, Min Yan<sup>1</sup>, Xiaofei Tan<sup>1</sup>, Jie Liang<sup>1</sup>, Guangming Zeng\*, Haipeng Wu\*, Biao Song, Chengyun Zhou, Yang Yang, Han Wang. Facile assembled biochar-based nanocomposite with improved graphitization for efficient photocatalytic activity driven by visible light. *Applied Catalysis B: Environmental* (SCI 2019 IF=16.683), 2019, 250, 78-88 (ESI Hot Paper and ESI Highly Cited Paper and ESI Research Front, ESI Hot Paper 第 7 次上榜)
- 3) Cui Lai\*, Mingming Zhang, Bisheng Li, Danlian Huang\*, Guangming Zeng, Lei Qin, Xigui Liu, Huan Yi, Min Cheng, Ling Li, Zhang Chen, Liang Chen. Fabrication of CuS/BiVO<sub>4</sub> (040) binary heterojunction photocatalysts with enhanced photocatalytic activity for Ciprofloxacin degradation and mechanism insight. *Chemical Engineering Journal* (SCI 2019 IF=10.652).2019,358:891-902. (ESI Highly Cited Paper and ESI Hot Paper and Research Front, ESI Hot Paper 第 7 次上榜)
- 4) Shujing Ye, Guangming Zeng\*, Haipeng Wu\*, Jie Liang, Chang Zhang, Juan Dai, Weiping Xiong, Biao Song, Shaohua Wu, Jiangfang Yu. The effects of activated biochar addition on remediation efficiency of co-composting with contaminated wetland soil. *Resources Conservation & Recycling* (SCI 2019 IF=8.086).2019.140:278-285 (ESI Hot Paper and ESI Highly Cited Paper and Research Front, ESI Hot Paper 第 7 次上榜)
- 5) Yang Yang<sup>1</sup>, Zhuotong Zeng<sup>1</sup>, Guangming Zeng\*, Danlian Huang\*, Rong Xiao\*, Chen Zhang, Chengyun Zhou, Weiping Xiong, Wenjun Wang, Min Cheng, Wenjing Xue, Hai Guo, Xiang Tang, Donghui He, Ti<sub>3</sub>C<sub>2</sub> Mxene/porous g-C<sub>3</sub>N<sub>4</sub> interfacial Schottky junction for boosting spatial charge separation in photocatalytic H<sub>2</sub>O<sub>2</sub> production, *Applied Catalysis B: Environmental* (SCI 2019 IF=16.683), 2019, 258, 117956 (ESI Hot Paper and ESI Highly Cited Paper and ESI Research Front, ESI Hot Paper 第 5 次上榜, 环境学院曾光明教授与中南大学湘雅附二医院的合作成果)
- 6) Wenjun Wang<sup>1</sup>, Zhuotong Zeng<sup>1</sup>, Guangming Zeng\*, Chen Zhang\*, Rong

Xiao\*, Chengyun Zhou, Weiping Xiong, Yang Yang, Lei Lei, Yang Liu, Danlian Huang, Min Cheng, YayaYang, Yukui Fu, Hanzhuo Luo, Yin Zhou, Sulfur doped carbon quantum dots loaded hollow tubular g-C<sub>3</sub>N<sub>4</sub> as novel photocatalyst for destruction of Escherichia coli and tetracycline degradation under visible light, Chemical Engineering Journal (SCI 2019 IF=10.652), 2019, 378, 122132 (ESI Hot Paper and ESI Highly Cited Paper and ESI Research Front, ESI Hot Paper 第 5 次上榜, 环境学院曾光明教授与中南大学湘雅附二医院的合作成果)

- 7) Xigui Liu, Danlian Huang\*, Cui Lai\*, Guangming Zeng, Lei Qin, Han Wang, Huan Yi, Bisheng Li, Shiyu Liu, Mingming Zhang, Rui Deng, Yukui Fu, Ling Li, Wenjing Xue, Sha Chen. Recent advances in covalent organic frameworks (COFs) as a smart sensing material. Chemical Society Reviews (SCI 2019 IF=42.846), 2019, 48(20), 5266-5302.(ESI Hot Paper, ESI Hot Paper 第 5 次上榜).
- 8) Yang Yang, Guangming Zeng\*, Danlian Huang\*, Chen Zhang\*, Donghui He, Chengyun Zhou, Wenjun Wang, Weiping Xiong, Xiaopei Li, Bisheng Li, Wanyue Dong, Yin Zhou, Molecular engineering of polymeric carbon nitride for highly efficient photocatalytic oxytetracycline degradation and H<sub>2</sub>O<sub>2</sub> production, Applied Catalysis B: Environmental (SCI 2019 IF=16.683), 2020, 272, 118970 (ESI Hot Paper, ESI Hot Paper 第 2 次上榜)
- 9) Wenjun Wang, Qiuya Niu, Guangming Zeng\*, Chen Zhang\*, Danlian Huang, Binbin Shao, Chengyun Zhou, Yang Yang, Yuxin Liu, Hai Guo, Weiping Xiong, Lei Lei, Shiyu Liu, Huan Yi, Sha Chen, Xiang Tang. 1D porous tubular g-C<sub>3</sub>N<sub>4</sub> capture black phosphorus quantum dots as 1D/0D metal-free photocatalysts for oxytetracycline hydrochloride degradation and hexavalent chromium reduction. Applied Catalysis B: Environmental (SCI 2019 IF=16.683). 2020.273(119051):1-13 (ESI Hot Paper, ESI Hot Paper 第 1 次上榜)