

2017 年度代表性文章

序号	论文名称	发表刊物	影响因子	所属学部	第一作者/通讯作者
1	The depth dependent hardness of bicrystals with dislocation transmission through grain boundaries: A theoretical model	International Journal of Plasticity	5.502	先进制造部	Xiazi Xiao/ Huiling Duan
2	Morphological bubble evolution induced by air diffusion on submerged hydrophobic structures	Physics of Fluids	2.279	先进制造部	Pengyu Lv/ Huiling Duan
3	磁性微纳米尺度游动机器人: 现状与应用前景	科学通报	1.088	先进制造部	Dongdong Jin/ Huiling Duan
4	Ultimate Stable Underwater Superhydrophobic State	Physical Review Letters	8.839	先进制造部	Yaolei Xiang/ Huiling Duan
5	Pore Size Dependent Slippage in Capillary Filling of Compressed Carbon Nanotube Sponges	Int. Journ. of Wettability Science and Technology		先进制造部	Xiying Li/ Huiling Duan
6	Particle-Based Modeling of Asymmetric Flexible Fibers in Viscous Flows	Computer Physics Communications	1.762	先进制造部	Xiufeng Yang/ Moubin Liu
7	An improved SPH model for multiphase flows with large densityratios	International Journal for Numerical Methods in Fluids	1.673	先进制造部	Guixun Zhu/ Moubin Liu
8	A density-adaptive SPH method with kernel gradient correction for modeling explosive welding	Computational Mechanics	2.724	先进制造部	Zhilang Zhang/ Moubin Liu
9	Smoothed particle hydrodynamics with kernel gradient correction for modeling high velocity impact in two- and three-dimensional spaces	Engineering Analysis with Boundary Elements	2.138	先进制造部	Zhilang Zhang/ Moubin Liu
10	Modelling incompressible flows and fluid-structure interaction problems with smoothed particle hydrodynamics: Brefig on the 2017 SPHERIC Beijing International Workshop	Journal of Hydrodynamics	1.563	先进制造部	Moubin Liu
11	Ultrasensitive triboelectric nanogenerator for weak ambient energy with rational unipolar stacking structure and low-loss	Nano Energy	13.12	先进制造部	Chao Yang/ Youfan Hu, Xiaoding Wei (非第一非通讯)

	power management				
12	Budding of an adhesive elastic particle out of a lipid vesicle	ACS Biomaterials Science & Engineering	4.432	先进制造部	Xin Yi/Huajian Gao
13	Packing of flexible nanofibers in vesicles	Extreme Mechanics Letters	4.075	先进制造部	Guijin Zou/Huajian Gao, Xin Yi (第二作者)
14	Combining push-off power and nonlinear damping behaviors for a lightweight motor-driven transtibial prosthesis	IEEE/ASME Transactions on Mechatronics	4.357	先进制造部	Qingning Wang
15	Real-time hybrid locomotion mode recognition for lower limb wearable robots	IEEE/ASME Transactions on Mechatronics	4.357	先进制造部	Qingning Wang
16	Gait phase estimation based on noncontact capacitive sensing and adaptive oscillators	IEEE Transactions on Biomedical Engineering	3.577	先进制造部	Qingning Wang
17	Range-of-motion measurement with therapist-joined method for robot-assisted ankle stretching	Robotics and Autonomous Systems	1.95	先进制造部	Qingning Wang
18	Constrained large-eddy simulation of supersonic turbulent boundary layer over a compression ramp	Journal of Turbulence	1.57	先进制造部	Liang Chen/Zuoli Xiao
19	Scale-adaptive subgrid-scale modelling for large-eddy simulation of turbulent flows	Physics of Fluids	2.279	先进制造部	Changping Yu/Zuoli Xiao
20	A Novel Suction-Side Winglet Design Philosophy for High-Pressure Turbine Rotor Tips	Journal of Turbomachinery	2.45	软件仿真部	Chao Zhou
21	Comparison of aerodynamic characteristics between a novel highly loaded injected blade with curvature induced pressure-recovery concept and one with conventional design	Chinese Journal of Aeronautics	1.614	软件仿真部	Chao Zhou
22	Effects of Tip Gap Size on the Aerodynamic Performance of a Cavity-Winglet Tip in a Turbine Cascade	Journal of Turbomachinery	2.45	软件仿真部	Chao Zhou
23	Effects of molecular transport in	Combustion and	2.89	软件仿真部	Yue Yang

	LES/PDF of piloted turbulent dimethyl ether/air jet flames	Flame			
24	The boundary-constraint method for constructing vortex-surface fields	Journal of Computational Physics	2.86	软件仿真部	Yue Yang
25	Principal curvatures and area ratio of propagating surfaces in isotropic turbulence	Physical Review Fluids	2.02	软件仿真部	Yue Yang
26	Nested sparse grid collocation method with delay and transformation for subsurface flow and transport problems	Advances in Water Resources	3.221	能源技术部	Qinzhao Liao/ Dongxiao Zhang
27	Study of Adsorption Behavior in Shale Reservoirs under High Pressure	Journal of Natural Gas Science and Engineering	2.781	能源技术部	Zheng Jiang/ Dongxiao Zhang
28	Experimental Investigation of the Pore Structure of Triassic Terrestrial Shale in the Yanchang Formation	Journal of Natural Gas Science and Engineering	2.781	能源技术部	Zheng Jiang/ Dongxiao Zhang
29	Multiscale Pore Structure and its Effect on Gas Transport in Organic-rich Shale	Water Resources Research	4.397	能源技术部	Tianhao Wu/ Dongxiao Zhang
30	The Effect of Heterogeneity on Hydraulic Fracturing	Journal of Petroleum Science and Engineering	1.873	能源技术部	Haoyu Tang/ Dongxiao Zhang
31	Where Gas is Produced from a Shale Formation: A Simulation Study	Journal of Natural Gas Science and Engineering	2.781	能源技术部	Tingyun Yang/ Dongxiao Zhang
32	An adsorbed gas estimation model for shale gas reservoirs via statistical learning	Applied Energy	7.9	能源技术部	Yuntian Chen/ Dongxiao Zhang
33	Mathematical Model for Wells Drilled in Large-Scale Partially Filled Cavity in Fractured-Cavity Reservoirs	Earth Science	1.475	能源技术部	Gang Lei/ Dongxiao Zhang
34	Tailoring biomass-derived carbon for high-performance supercapacitors from controllably cultivated algae microspheres	Journal of Materials Chemistry A	9.931/ 一区	能源技术部	Bingjun Zhu/ Feng Chen
35	Inhibition of autophagy modulates astaxanthin and total fatty acid	Bioresource Technology	5.813/ 一区	能源技术部	Zhao Zhang/ Feng Chen

	biosynthesis in <i>Chlorella zofingiensis</i> under nitrogen starvation				
36	Staged cultivation enhances biomass accumulation in the green growth phase of <i>Haematococcus pluvialis</i>	Bioresource Technology	5.810/ 一区	能源技术部	Han Sun/ Feng Chen
37	Differential responses of the green microalga <i>Chlorella zofingiensis</i> to the starvation of various nutrients for oil and astaxanthin production	Bioresource Technology	5.808/ 一区	能源技术部	Xuemei Mao/ Feng Chen
38	Genetic engineering of the Calvin cycle toward enhanced photosynthetic CO ₂ fixation in microalgae.	Biotechnology for Biofuels	5.497/ 一区	能源技术部	Bo Yang/ Feng Chen
39	RNAi-mediated silencing of a pyruvate dehydrogenase kinase enhances triacylglycerol biosynthesis in the oleaginous marine alga <i>Nannochloropsis salina</i>	Scientific Reports	4.122/ 三区	能源技术部	Xiaonian Ma/ Feng Chen
40	The synergistic energy and carbon metabolism under mixotrophic cultivation reveals the coordination between photosynthesis and aerobic respiration in <i>Chlorella zofingiensis</i> .	Algal Research	3.745/ 二区	能源技术部	Zhao Zhang/ Feng Chen
41	Physiochemical and gene expression analyses reveal differential responses of the marine oleaginous alga <i>Nannochloropsis salina</i> under different lipid-induction conditions	Journal of Applied Phycology	2.401/ 三区	能源技术部	Xiaonian Ma/ Feng Chen
42	Effects of gold core size on regulating the performance of doxorubicin-conjugated gold nanoparticles	Nano Research	7.354	能源技术部	Dongyan Wu/Yanglong Hou, Ya Ding
43	Cobalt selenide decorated carbon spheres for excellent cycling performance of sodium ion batteries	Energy Storage Materials		能源技术部	Zeeshan Ali/Yanglong Hou
44	Monodisperse Au-Fe ₂ C Janus Nanoparticles: An Attractive Multifunctional Material for Triple-Modal Imaging-Guided Tumor Photothermal Therapy	ACS nano	13.942	能源技术部	Yanmin Ju/Jing Yu, Fugeng Sheng, Yanglong Hou
45	Ultrathin Fe ₂ O ₃ Nanoflakes via a smart Chemical Stripping for High performance Lithium Storage	Journal of Materials Chemistry A	5.256	能源技术部	Yazhou Wang/Yanglong Hou, Shanqing

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46	Integrated Design of MnO ₂ @Carbon Hollow Nanoboxes to Synergistically Encapsulate Polysulfides for Empowering Lithium Sulfur Batteries	Small	8.643	能源技术部	Sarish Rehman/Yanglong Hou
47	In situ Fe ₂ N@N-doped porous carbon hybrids as superior catalysts for oxygen reduction reaction	Nanoscale	7.367	能源技术部	Xiaoxiao Huang/Yanglong Hou
48	Nanostructured cathode materials for lithium-sulfur batteries: progress, challenges and perspectives	Journal of Materials Chemistry A	8.867	能源技术部	Sarish Rehman/Yanglong Hou
49	Strain-Controlled Electrocatalysis on Multimetallic Nanomaterials	Nature Reviews Materials	51.941	能源技术部	Mingchuan Luo/Shaojun Guo
50	Recent progress in two-dimensional inorganic quantum dots	Chemical Society Reviews	40.182	能源技术部	Yuanhong Xu/Shaojun Guo
51	Biomimetic Ant-nest Ionogel Electrolyte Boosts the Performance of Dendrite-free Lithium Batteries	Energy & Environmental Science	30.067	能源技术部	Nan Chen/Shaojun Guo
52	Iridium-based Multimetallic Porous Hollow Nanocrystals for Efficient Overall Water Splitting Catalysis	Advanced Materials	21.95	能源技术部	Jianrui Feng, Fan Lv/Shaojun Guo
53	Oxygen Vacancies Dominated NiS ₂ /CoS ₂ Interface Porous Nanowires for Portable Zn-Air Batteries Driven Water Splitting Devices	Advanced Materials	21.95	能源技术部	Jie Yin/Shaojun Guo
54	Mo-Based Ultrasmall Nanoparticles on Hierarchical Carbon Nanosheets for Superior Lithium Ion Storage and Hydrogen Generation Catalysis	Advanced Energy Materials	21.875	能源技术部	Chen Ling/Shaojun Guo
55	Short-Range Order in Mesoporous Carbon Boosts Potassium-Ion Battery Performance	Advanced Energy Materials	21.875	能源技术部	Wei Wang/Shaojun Guo
56	NiO/CoN Porous Nanowires as Efficient Bifunctional Catalysts for Zn-Air Batteries	ACS Nano	13.709	能源技术部	Jie Yin/Shaojun Guo
57	Cr _{0.5} Nb _{24.5} O ₆₂ Nanowires with High Electronic Conductivity for High-Rate and Long-Life Lithium-Ion Storage	ACS Nano	13.709	能源技术部	杨超/Shaojun Guo
58	Tuning the Shell Number of Multi-shelled Metal Oxide Hollow Fibers	ACS Nano	13.709	能源技术部	Jin Sun/Shaojun Guo

	for Optimized Lithium Ion Storage				
59	Atomic-Level Coupled Interfaces and Lattice Distortion on CuS/NiS ₂ Nanocrystals Boost Oxygen Catalysis for Flexible Zn-Air Batteries	Advanced Functional Materials	13.325	能源技术部	Li An/Shaojun Guo
60	A temperature and electric field-responsive flexible smart film with full broadband optical modulation	Materials Horions	13.183	能源技术部	Xiao Liang/Shaojun Guo
61	Hybrid Carbon Nanowire Networks with Fe-P Bond Active Site for Efficient Oxygen/Hydrogen-Based Electrocatalysis	Nano Energy	13.12	能源技术部	Mian Li/Shaojun Guo
62	Atomically FeN ₂ Moieties Dispersed on Mesoporous Carbon: A New Atomic Catalyst for Efficient Oxygen Reduction Catalysis	Nano Energy	13.12	能源技术部	Hangjia Shen/Shaojun Guo
63	Bismuth Oxyhalide Layered Materials for Energy and Environmental Applications	Nano Energy	13.12	能源技术部	Jun Di/Shaojun Guo
64	Precise tuning in platinum-nickel/nickel sulfide interface nanowires for synergistic hydrogen evolution catalysis	Nature Communications	12.353	能源技术部	Pengtang Wang & Xu Zhang/Shaojun Guo
65	Trimetallic Oxyhydroxide Coralloids for Efficient Oxygen Evolution Electrocatalysis	Angewandte Chemie International Edition	12.102	能源技术部	Yecan Pi/Shaojun Guo
66	Li ₄ Ti ₅ O ₁₂ -TiO ₂ /MoO ₂ nanoclusters-embedded into carbon nanosheets core/shell porous superstructures boost lithium ion storage	Journal of Material Chemistry A	9.931	能源技术部	Yong Yang/Shaojun Guo
67	Design of Ultrathin Pt-Based Multimetallic Nanostructures for Efficient Oxygen Reduction Electrocatalysis	Small	9.598	能源技术部	Jianping Lai/Shaojun Guo
68	Ultrathin Layered SnSe Nanoplates for Low Voltage, High-Rate, and Long-Life Alkali-Ion Batteries	Small	9.598	能源技术部	Wei Wang/Shaojun Guo
69	Defects and Interfaces on PtPb Nanoplates Boost Fuel Cell Electrocatalysis	Small	9.598	能源技术部	Yingjun Sun/Shaojun Guo
70	Defects and Interfaces on PtPb	Small	9.598	能源技术部	Yingjun Sun/Shaojun

	Nanoplates Boost Fuel Cell Electrocatalysis				Guo
71	A Roll-to-roll Process for Multi-responsive Soft-matter Composite Films Containing CsxWO3 Nanorods for Energy-efficient Smart Window Applications	Nanoscale Horizons	9.391	能源技术部	Xiao Liang/Shaojun Guo
72	Graphene/Intermetallic PtPb Nanoplates Composites for Boosting Electrochemical Detection of H2O2 Released from Cells	Analytical Chemistry	6.042	能源技术部	Yingjun Sun/Shaojun Guo
73	裂缝性油藏压裂井产能敏感因素评价方法研究	特种油气藏		能源技术部	刘欣佳/温庆志
74	Theoretical study on stress sensitivity of fractal porous media with irreducible water	Fractals	2.85	能源技术部	Lei Gang
75	The role of meteorological conditions and pollution control strategies in reducing air pollution in Beijing during APEC 2014 and Victory Parade 2015	Atmospheric Chemistry and Physics	5.509	环境技术部	Pengfei Liang/ Tong Zhu
76	Air Pollution in China: Scientific Challenges and Policy Implications	National Science Review	9.408	环境技术部	Tong Zhu
77	A prospective study (SCOPE) comparing the cardiometabolic and respiratory effects of air pollution exposure on healthy and pre-diabetic individuals	Science China-Life Sciences	3.085	环境技术部	Yanwen Wang and Yiqun Han/Tong Zhu
78	Source apportionment of Pb-containing particles in Beijing during January 2013	Environmental Pollution	4.358	环境技术部	Cai Jing/ Zheng Mei
79	Sources and spatial distribution of particulate polycyclic aromatic hydrocarbons in Shanghai, China	Science of the Total Environment	4.61	环境技术部	Liu Yue/ Zheng Mei
80	Important fossil source contribution to brown carbon in Beijing during winter	Scientific Reports	4.122	环境技术部	Yan Caiqing/ Zheng Mei
81	Review of receptor-based source apportionment research of fine particulate matter and its challenges in China	Science of the Total Environment	4.61	环境技术部	Yan Jun Zhang/ Mei Zheng
82	机动车源对细颗粒物的贡献估算方法综述	科学通报	1.088	环境技术部	闫才青/郑玫
83	Temporal and Spatial Distribution of	Science of the	5.92	环境技术部	Mengren Li/ Min Hu

	PM2.5 Chemical Composition in the Coastal City of Southeast China	Total Environment			
84	Significant Influences of Continental Anthropogenic Sources on Organic Aerosols in the Coastal Atmosphere of East China	Environmental Pollution	5.98	环境技术部	Dongjie Shang/ Min Hu
85	Magnetic micro-/nanoscale swimmers: Current status and potential applications	Chinese Science Bulletin	1.649	先进制造部	Dongdong Jin/ Huiling Duan