

重庆大学城市建设与环境工程学院

# 科研简报

(2018 年第 1 期)

行政办公室编

二〇一八年三月

## 目 录

一、学术获奖 .....	- 1 -
二、科研论文 .....	- 2 -
三、发明专利 .....	- 6 -
四、专    著 .....	- 7 -

## 一、学术获奖

序号	获奖名称	获奖人	获奖类别	获奖等级
1	高性能系列无机高分子水处理混凝剂研究与应用	郑怀礼(1)、赵纯(5)、胡学斌(8)	重庆市科学技术奖 科技进步奖	一等奖
2	地下空间热湿环境与安全关键技术及应用	肖益民 (重大第二单位)	四川省科技进步奖	一等奖
3	三峡库区及重庆市水中PTS健康效应、污染过程及去除工艺的研究	郭劲松(3)、高旭(7) (重大第二单位)	中华预防医学会科学技术奖	一等奖
4	三峡库区城市水污染控制与治理关键技术及应用	何强(1)、翟俊(3)、艾海男(4)、张智(6)、古励(8)、周健(9)	环保部环境保护科学技术奖	二等奖
5	绿色建筑的技术创新体系研究与工程应用	丁勇(无单位证书)	重庆市科学技术奖 科技进步奖	二等奖
6	重庆城市供水系统安全保障关键技术研究及示范	蒋绍阶(1)、向平(3)、梁建军(4)、姜文超(5)	重庆市科学技术奖 科技进步奖	三等奖
7	一种适用于山地城市冲刷径流处理的下凹式绿地	古励(1)、何强(2)、艾海南(3) (专利已转让)	中国专利优秀奖	
8	生物法缓蚀阻垢技术及工业应用	叶姜瑜(1)、刘国涛(2)、李伟民(3)、许晓毅(4)、何梅(5)	中国微生物学会环境微生物学专委会 “简浩然环境工程奖”	

## 二、科研论文

序号	论文名称	奖励作者	期刊名称	期刊年	SCI 分区
1	Bacterial community structure in simultaneous nitrification, denitrification and organic matter removal process treating saline mustard tuber wastewater as revealed by 16S rRNA sequencing	周 健	BIORESOURCE TECHNOLOGY	2017	1
2	The potential multiple mechanisms and microbial communities in simultaneous nitrification and denitrification process treating high carbon and nitrogen concentration saline wastewater	周 健	BIORESOURCE TECHNOLOGY	2017	1
3	A review of air conditioning energy performance in data centers	白雪莲	RENEWABLE & SUSTAINABLE ENERGY REVIEWS	2017	1
4	Detailed multi-dimensional study on NO <sub>x</sub> formation and destruction mechanisms in dimethyl ether/air diffusion flame under the moderate or intense low-oxygen dilution (MILD) condition	亢银虎	ENERGY	2017	1
5	An enthalpy-based energy savings estimation method targeting thermal comfort level in naturally ventilated buildings in hot-humid summer zones	刘 猛	APPLIED ENERGY	2017	1
6	Characteristics of a heterotrophic nitrogen removal bacterium and its potential application on treatment of ammonium-rich wastewater	安 强	BIORESOURCE TECHNOLOGY	2017	1
7	Performance improvement of an ejector cooling system with thermal pumping effect (ECSTPE) by doubling evacuation chambers in parallel	程 勇	APPLIED ENERGY	2017	1
8	Efficient removal of ciprofloxacin by peroxymonosulfate/Mn <sub>3</sub> O <sub>4</sub> -MnO <sub>2</sub> catalytic oxidation system	阳 春	CHEMICAL ENGINEERING JOURNAL	2017	1
9	Fabricating an enhanced sterilization chitosan-based flocculants: Synthesis, characterization, evaluation of sterilization and flocculation	郑怀礼	CHEMICAL ENGINEERING JOURNAL	2017	1
10	UV-initiated template copolymerization of AM and MAPTAC: Microblock structure, copolymerization mechanism, and flocculation performance	郑怀礼	CHEMOSPHERE	2017	2
11	Optimized preparation of micro-block CPAM by response surface methodology and evaluation of dewatering performance	郑怀礼	RSC ADVANCES	2017	2

12	Characterization of an inorganic polymer coagulant and coagulation behavior for humic acid/algae-polluted water treatment: polymeric zinc-ferric-silicate-sulfate coagulant	郑怀礼	RSC ADVANCES	2017	2
13	Formation of cationic hydrophobic micro-blocks in P(AM-DMC) by template assembly: characterization and application in sludge dewatering	郑怀礼	RSC ADVANCES	2017	2
14	Enhancement of textile-dyeing sludge dewaterability using a novel cationic polyacrylamide: role of cationic block structures	郑怀礼	RSC ADVANCES	2017	2
15	Improvement of Sludge Dewaterability by Ultrasound-Initiated Cationic Polyacrylamide with Microblock Structure: The Role of Surface-Active Monomers	郑怀礼	MATERIALS	2017	2
16	Effect of the Cationic Block Structure on the Characteristics of Sludge Floccs Formed by Charge Neutralization and Patching	郑怀礼	MATERIALS	2017	2
17	Polymer-grafted magnetic microspheres for enhanced removal of methylene blue from aqueous solutions	郑怀礼	RSC ADVANCES	2017	2
18	Ultrasonic-template technology inducing and regulating cationic microblocks in CPAM: characterization, mechanism and sludge flocculation performance	郑怀礼	RSC ADVANCES	2017	2
19	Waste activated sludge (WAS) dewatering properties of an original hydrophobically modified polyacrylamide containing a cationic microblock structure	郑怀礼	RSC ADVANCES	2017	2
20	Fabricating an anionic polyacrylamide (APAM) with an anionic block structure for high turbidity water separation and purification	郑怀礼	RSC ADVANCES	2017	2
21	UV-initiated polymerization of acid-and alkali-resistant cationic flocculant P(AM-MAPTAC): Synthesis, characterization, and application in sludge dewatering	郑怀礼	SEPARATION AND PURIFICATION TECHNOLOGY	2017	2
22	Effects of various parameters of a PCM on thermal performance of a solar chimney	李永财	APPLIED THERMAL ENGINEERING	2017	2
23	Numerical study on heat and mass transfer characteristics of the counter-flow heat-source tower (CFHST)	李永财	ENERGY AND BUILDINGS	2017	2
24	Theoretical and numerical study on performance of the air-source heat pump system in Tibet	李永财	RENEWABLE ENERGY	2017	2
25	Optimal parameters of green roofs in representative cities of four climate zones in China: A simulation study	白雪莲	ENERGY AND BUILDINGS	2017	2

26	Study on heat fluxes of green roofs based on an improved heat and mass transfer model	白雪莲	ENERGY AND BUILDINGS	2017	2
27	Extracellular polymeric substances dependence of surface interactions of Bacillus subtilis with Cd <sup>2+</sup> and Pb <sup>2+</sup> : An investigation combined with surface plasmon resonance and infrared spectra	陈猷鹏	COLLOIDS AND SURFACES B-BIOINTERFACES	2017	2
28	A new method to measure and model dynamic oxygen microdistributions in moving biofilms	陈猷鹏	ENVIRONMENTAL POLLUTION	2017	2
29	Pathways of N removal and N <sub>2</sub> O emission from a one-stage autotrophic N removal process under anaerobic conditions	方 芳	SCIENTIFIC REPORTS	2017	2
30	N <sub>2</sub> O micro-profiles in biofilm from a one-stage autotrophic nitrogen removal system by microelectrode	方 芳	CHEMOSPHERE	2017	2
31	Significantly improving trace thallium removal from surface waters during coagulation enhanced by nanosized manganese dioxide	皇甫小留	CHEMOSPHERE	2017	2
32	Effective removal of trace thallium from surface water by nanosized manganese dioxide enhanced quartz sand filtration	皇甫小留	CHEMOSPHERE	2017	2
33	The appropriate airflow rate for a nozzle in commercial aircraft cabins based on thermal comfort experiments	李百战	BUILDING AND ENVIRONMENT	2017	2
34	Investigations of indoor air quality of large department store buildings in China based on field measurements	李百战	BUILDING AND ENVIRONMENT	2017	2
35	Thermal comfort criteria for personal air supply in aircraft cabins in winter	刘 红	BUILDING AND ENVIRONMENT	2017	2
36	Human responses to the air relative humidity ramps: A chamber study	刘 红	BUILDING AND ENVIRONMENT	2017	2
37	Synthesis of Reduced Grapheme Oxide as A Platform for loading beta-NaYF <sub>4</sub> :Ho <sup>3+</sup> @TiO <sub>2</sub> Based on An Advanced Visible Light-Driven Photocatalyst	徐 璇	SCIENTIFIC REPORTS	2017	2
38	One-step synthesis of composite material MWCNT@BiVO <sub>4</sub> and its photocatalytic activity	徐 璇	RSC ADVANCES	2017	2
39	Spatiotemporal distribution and risk assessment of organotins in the surface water of the Three Gorges Reservoir Region, China	高俊敏	CHEMOSPHERE	2017	2
40	Thermal performance and energy savings of white and sedum-tray garden roof: A case study in a Chongqing office building	高亚锋	ENERGY AND BUILDINGS	2017	2
41	Comparative study on the combustion characteristics of an atmospheric induction stove in the plateau and plain regions of China	黄小美	APPLIED THERMAL ENGINEERING	2017	2

42	Synthesis of carbon-doped nanosheets m-BiVO <sub>4</sub> with three-dimensional (3D) hierarchical structure by one-step hydrothermal method and evaluation of their high visible-light photocatalytic property	吉方英	JOURNAL OF NANOPARTICLE RESEARCH	2017	2
43	Study on effect of dimethyl ether addition on combustion characteristics of turbulent methane/air jet diffusion flame	亢银虎	FUEL PROCESSING TECHNOLOGY	2017	2
44	Remediation of hexavalent chromium spiked soil by using synthesized iron sulfide particles	刘元元	CHEMOSPHERE	2017	2
45	Groundwater source heat pump application in the heating system of Tibet Plateau airport	卢 军	ENERGY AND BUILDINGS	2017	2
46	Investigation of foaming causes in three mesophilic food waste digesters: reactor performance and microbial analysis	彭绪亚	SCIENTIFIC REPORTS	2017	2
47	Efficient simultaneous partial nitrification, anammox and denitrification (SNAD) system equipped with a real-time dissolved oxygen (DO) intelligent control system and microbial community shifts of different substrate concentrations	卿晓霞	WATER RESEARCH	2017	2
48	Silicon-aluminum additives assisted hydrothermal process for stabilization of heavy metals in fly ash from MSW incineration	石德智	FUEL PROCESSING TECHNOLOGY	2017	2
49	Performance evaluation approach for solar heat storage systems using phase change material	王 勇	ENERGY AND BUILDINGS	2017	2
50	Fire risk assessment for large-scale commercial buildings based on structure entropy weight method	翁庙成	SAFETY SCIENCE	2017	2
51	Extraction techniques using isopropanol and Tenax to characterize polycyclic aromatic hydrocarbons bioavailability in sediment	许晓毅	SCIENCE OF THE TOTAL ENVIRONMENT	2017	2
52	A study of thermal comfort in residential buildings on the Tibetan Plateau, China	喻 伟	BUILDING AND ENVIRONMENT	2017	2
53	Seasonal variations of carbonic anhydrase activity in Chongqing urban section of Jialing River and its influencing factors	张 智	CHEMOSPHERE	2017	2
54	In situ excess sludge reduction in SBBR through uncoupling of metabolism induced by novel aeration modes	周 健	RSC ADVANCES	2017	2

### 三、发明专利

序号	专利名称	专利类型	获权时间	专利证书号	发明人
1	SYSTEM AND METHOD FOR PURIFYING RAINFALL RUNOFF	发明	2017	US9580897B2	柴宏祥
2	SYSTEM AND METHOD FOR HARVESTING RAINWATER	发明	2017	US9605417B2	柴宏祥
3	SYSTEM FOR REDUCING EMISSION OF NITROUS OXIDE DURING SEWAGE TREATMENT	发明	2017	US9764974B2	柴宏祥
4	SYSTEM FOR TREATING AND RECYCLING RAINWATER	发明	2017	US9840428B2	柴宏祥
5	一种可升降的挂壁式硬化河道生态防护带	发明	2017	2361001	何强
6	自清式微曝气竖向折流湿地污水处理装置及方法	发明	2017	2649915	何强
7	一种缺氧生物滤池反硝化同步除磷脱氮深度处理系统的构建方法	发明	2017	2689720	何强
8	一种河流淤泥探测装置	发明	2017	2695874	何强
9	主动式辐射板换热系统及其换热处理方法	发明	2017	2378992	陈金华
10	一种用于建筑物的太阳能辅助通风屋面结构	发明	2017	2652992	陈金华
11	一种基于热舒适评价的热湿环境综合控制空调系统及方法	发明	2017	2362457	李百战
12	一种建筑热湿环境等级的评估系统及方法	发明	2017	2605526	李百战
13	一种测定聚合物特性粘度的装置	发明	2017	2387699	郑怀礼
14	一种聚磷硫酸铁絮凝剂及其制备方法和应用	发明	2017	2427364	郑怀礼
15	一种空气净化空调	发明	2017	6027230	郑洁
16	一种测量特定场所 PM2.5 的装置及方法	发明	2017	2705780	郑洁
17	一种农业面源污染高效截流系统及控制方法	发明	2017	2598190	曾晓岚
18	一种厌氧氨氧化菌中完整梯烷脂的超声提取方法	发明	2017	2574937	方芳
19	一种用微生物燃料电池测高盐度废水化学需氧量的方法	发明	2017	2465207	付国楷
20	一种用于改善水质的水车式强化处理装置	发明	2017	2546856	古励
21	具有强化絮凝功能的一体化沉淀装置	发明	2017	2659305	蒋绍阶
22	地源热泵系统的循环流量控制方法	发明	2017	1895580	刘方
23	一种球磨机磨球及一种提高建筑垃圾再生混凝土骨料性能的方法	发明	2017	2408663	刘国涛
24	一种供暖管辅助的洗浴蒸汽加湿装置	发明	2017	2366583	刘猛
25	一种用于修复六价铬污染土壤的 FeS 微粒的制备与使用方法	发明	2017	2532558	刘元元
26	一种风道式光催化空气净化器	发明	2017	2470312	卢军
27	一种测定藻类延迟荧光衰减的装置	发明	2017	2351308	马华
28	凸窗折叠外遮阳与太阳能热水收集一体化装置	发明	2017	2531737	肖益民

## 四、专著

序号	著作类别	著作名称	作者	出版社	出版时间
1	专著	动态负荷下地源热泵性能研究	王勇	金琅出版社	2017
2	专著	给排水科学与工程专业发展史记	张智	中国建筑工业出版社	2017
3	编著	重庆市建筑绿色化发展年度报告（2016）	丁勇	重庆大学出版社	2017