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一. 简历

2022-迄今: 英国约克圣约翰大学, 教授

2021-迄今: 广东海洋大学讲座教授

2016-2022: 英国诺丁汉特伦特大学, 动物、农业与环境学院教授, 副院长, iWEF 研究中心主任 (水-能源-粮食综合研究中心)。

2000-2016: 中国科学院生态环境研究中心, 重点实验室副主任, 研究员 (二级), 博士生导师。

1998-2000: 英国帝国理工大学, 高级研究员

1997-1998: 英国普利茅斯大学, 研究员

1996-1997: 英国利兹大学, 博士后

1991-1995: 英国东安格利亚大学, 环境化学博士学位

1982-1991: 中国海洋大学, 物理化学硕士学位, 讲师

1978-1982: 中国海洋大学, 海洋化学学士学位

二. 主要兼职

2020-迄今: 江苏沭官资源环境研究院, 院长

2019-迄今: 英国研究与创新 (UKRI) 环境可持续顾问委员会委员

2019-迄今: 非洲水环境研究科学家联盟国际委员会委员

2017-迄今: 英国爱登堡国家信托组织, 科学委员会委员

2016-迄今: 全国专业标准化技术委员会委员

2015-迄今: 国际 SCOPE “全球磷循环” 执行主席

2009-2012: 科技部欧盟政府间合作项目 “天然水体水质改善” 首席科学家

2009-2011: 中英科学桥项目(RCUK)中方首席科学家

2008-迄今: 中国环境学会水环境分会副理事长

2008-迄今: 上海光源 (SSRF) 国家科学中心学术委员会委员

2008: 香山会议执行主席

2007-迄今: 中国环境纳米技术委员会委员

2006-迄今: 中国物理学会同步辐射专业委员会委员

三. 主要获奖

1991: 英国皇家学会女王奖学金 (The Royal Fellowship, the Royal Society)

2009: 环保部环境科学与技术一等奖

2011: 全国“科学中国人”年度人物奖

2017: 水利部大禹奖(一等)

四. 学术简介

Prof. Pan is known worldwide for the development of methods to mitigate eutrophication, including removal of harmful algal blooms from water, lock nutrients in-situ to the sediment, and utilization of the nutrients for ecological restoration of submerged macrophytes.

Prof. Pan pioneered in application of nanobubble and geo-engineering nanomaterials for natural water pollution control, including hypoxia/anoxia remediation and its effects on ecological restoration and the reduction of sediment to water flux of nutrients and

greenhouse gas emission. It is recognized that his work laid the principle of geo-engineering for lake restoration. He developed a fundamental Metastable-Equilibrium Adsorption theory (MEA). Further he applied synchrotron radiation and quantum chemical simulation methods to quantify the behavior and molecular structures of inorganic (heavy metals) and organic pollutants (PFOS) on particle-water interfaces to explain their transport and transformation mechanisms.

Prof. Pan is recognized for the technological development of removing and harvesting nutrients/algal blooms in natural waters and utilizing them for wastewater treatment, green energy, soil improvement and fertilizers for food security. The integrated Water-Energy-Food framework he has established (iWEF) providing a novel technical pathway for environmental sustainability.

Prof. Pan has supervised over 80 PhD/MSc students and mentored many researchers, who have become leading scholars in several countries. He has published more than 300 papers with total citations > 10,000 and an H-index 52 (Google Scholar).

五. 近五年代表论文

2022

- 1) Huiping Ding, Jie Lan, Shuo Yao, Dahai Zhang, Bin Han, **Gang Pan**, Xianguo Li, Evolution of polycyclic aromatic hydrocarbons in the surface sediment of southern Jiaozhou Bay in northern China after an accident of oil pipeline explosion, *Marine Pollution Bulletin*, 2022, 183, 114039 (IF: 7.001). <https://doi.org/10.1016/j.marpolbul.2022.114039>
- 2) Yafeng Zhong, **Gang Pan**, Hui Zhao, Chao Wang, Characteristics of Dissolved Organic Matter in a Semi-closed Bay in Summer: Insights from Stable Isotope and Optical Analyses, *Frontiers in Marine Science*, 2022, 9 (IF: 5.247, in press). <https://doi.org/10.3389/fmars.2022.956930>
- 3) Ying Chen, Chaoxing Ren, Yuting Feng, Haiyi Shi, **Gang Pan***, Mick Cooper, Hui Zhao, Different responses of chlorophyll a to the passage of the tropical storm Wipha (2019) in the coastal waters of the northern Beibu Gulf, *Frontiers in Marine Science*, 2022, 6, 1013 (IF: 5.247). <https://doi.org/10.3389/fmars.2022.88724>
- 4) Sean Waters, David Hamilton, **Gang Pan**, Steven Michener, Shaun Ogilvie, Oxygen Nanobubbles for Lake Restoration—Where Are We at? A Review of a New-Generation Approach to Managing Lake Eutrophication, *Water*, 2022, 14, 1989 (IF: 3.530). <https://doi.org/10.3390/w14131989>
- 5) Chongchao Yao, Jiaxin Li, Zhihao Zhang, Chunli Gou, Zhongshen Zhang, **Gang Pan**, Jing Zhang, Hierarchical Core – Shell Co₂N/CoP Embedded in N, P - doped Carbon Nanotubes as Efficient Oxygen Reduction Reaction Catalysts for Zn - air Batteries, *Small*, 2022, 18, 2108094 (IF: 15.153). <https://doi.org/10.1002/sml.202108094>
- 6) Shahi Mulk, Muhammad Sajid, Lei Wang, Feng Liu, **Gang Pan***, Catalytic conversion of sucrose to 5-hydroxymethylfurfural in green aqueous and organic medium, *Journal of Environmental Chemical Engineering*, 2022, 10, 106613 (IF: 7.968). <https://doi.org/10.1016/j.jece.2021.106613>
- 7) Ming Kong, Tianlun Han, Hongbin Yin, Xueting Xu, Tao Zhang, Ting Chen, **Gang Pan**, Wenqing Shi, Daming Wei, Algal Settlement Inactivates Lanthanum/Aluminum Comodified Attapulgite: Implications for Phosphorus Control in Shallow Lakes, *ACS ES&T Water*, 2022, 2, 547. <https://doi.org/10.1021/acsestwater.1c00334>
- 8) Wenqing Shi, Lin Zhu, Bryce Van Dam, Ashley R Smyth, Jianming Deng, Jian Zhou, **Gang Pan**, Qitao Yi, Jianghua Yu, Boqiang Qin, Wind induced algal migration manipulates sediment denitrification N-loss patterns in shallow Taihu Lake, China, *Water Research*, 2022, 209, 117887

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- 9) Rui Xu, Tao Lyu, Lijing Wang, Yuting Yuan, Meiyi Zhang, Mick Cooper, Robert JG Mortimer, Queping Yang, **Gang Pan***, Utilization of coal fly ash waste for effective recapture of phosphorus from waters, *Chemosphere*, 2022, 287, 132431 (IF: 8.943).
<https://doi.org/10.1016/j.chemosphere.2021.132431>

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- 10) Jing Su, Tao Lyu, Mick Cooper, Robert JG Mortimer, **Gang Pan***, Efficient arsenic removal by a bifunctional heterogeneous catalyst through simultaneous hydrogen peroxide (H₂O₂) catalytic oxidation and adsorption, *Journal of Cleaner Production*, 2021, 325, 129329 (IF: 11.072).
<https://doi.org/10.1016/j.jclepro.2021.129329>
- 11) Ying Tang, Meiyi Zhang, Jing Zhang, Tao Lyu, Mick Cooper, **Gang Pan***, Reducing arsenic toxicity using the interfacial oxygen nanobubble technology for sediment remediation, *Water Research*, 2021, 205, 117657 (IF: 13.400). <https://doi.org/10.1016/j.watres.2021.117657>
- 12) Hongbo Lu, Chunli Wang, Xueming Liu, Jing Zhang, ZhangLin, Zhengping Hao, **Gang Pan**, PH-dependent photochemical transformation of arsenic sulfide sludge catalyzed by Fe ions under visible light irradiation, *Applied Catalysis B: Environmental*, 2021, 120186 (IF: 24.319).
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- 13) J Chen, H Zhang, L Liu, J Zhang, M Cooper, RJG Mortimer, **G Pan***, Effects of elevated sulfate in eutrophic waters on the internal phosphate release under oxic conditions across the sediment-water interface, *Science of the Total Environment*, 2021, 148010 (IF: 10.753).
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- 14) M Pan, Y Su, X Zhu, **G Pan**, Y Zhang, I Angelidaki, Bioelectrochemically assisted sustainable conversion of industrial organic wastewater and clean production of microalgal protein, *Resources, Conservation and Recycling*, 2021, 168, 105441 (IF: 13.136).
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- 15) Minmin Pan, Xinyu Zhu, **Gang Pan**, Irini Angelidak, Integrated valorization system for simultaneous high strength organic wastewater treatment and astaxanthin production from *Haematococcus pluvialis*, *Bioresource Technology*, 2021, 124761 (IF: 11.889).
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- 19) Qingnan Chu, Tao Lyu, Lihong Xue, Linzhang Yang, Yanfang Feng, Zhimin Sha, Bin Yue, Robert JG Mortimer, Mick Cooper, **Gang Pan***, Hydrothermal carbonization of microalgae for phosphorus recycling from wastewater to crop-soil systems as slow-release fertilizers, *Journal of Cleaner*

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- 20) Lin Zhu, **Gang Pan**, Hui Xu, Lingwei Kong, Weijie Guo, Jianghua Yu, Robert JG Mortimer, Wenqing Shi, Enhanced chitosan flocculation for microalgae harvesting using electrolysis, *Algal Research*, 2021, (in Press, IF: 5.276). <https://doi.org/10.1016/j.algal.2021.102268>
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- 31) Qingnan Chu, Lihong Xue, Bhupinder Pal Singh, Shan Yu, Karin Müller, Hailong Wang, Yanfang Feng, **Gang Pan**, Xuebo Zheng, Linzhang Yang, Sewage sludge-derived hydrochar that inhibits ammonia volatilization, improves soil nitrogen retention and rice nitrogen utilization, *Chemosphere*, 2020, 245, 125558 (IF: 8.943). <https://doi.org/10.1016/j.chemosphere.2019.125558>
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<https://doi.org/10.1016/j.cej.2019.123335>
- 33) Lei Wang, Jafar Ali, Zhibin Wang, NA Oladoja, Rong Cheng, Changbo Zhang, Gilles Mailhot, **Gang Pan***, Oxygen nanobubbles enhanced photodegradation of oxytetracycline under visible light: Synergistic effect and mechanism, *Chemical Engineering Journal*, 2020, 388, 124227 (IF: 16.744).
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<https://doi.org/10.1016/j.jece.2017.12.057>
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