男人微笑的看着前面

AI 生成的内容可能不正确。

肖雷雷，男，1985年生，山东昌邑市人，九三学社社员，理学博士，中国科学院烟台海岸带研究所副研究员。兼任聊城大学地理与环境学院硕士研究生导师，研究方向为海岸带生态系统碳收支关键过程及碳汇评估。荣获“海洋工程科学技术奖”一等奖。

**教育经历：**

2006.09-2010.07 中国农业大学 食品质量与安全 理学学士

2010.09-2015.06 南京师范大学 生态学 理学博士

**工作经历：**

2015.06-2022.09 中国科学院烟台海岸带研究所，助理研究员

2022.09-至今 中国科学院烟台海岸带研究所，副研究员

**学术兼职：**

2022.4-至今 国际期刊 Environmental Chemistry Letters (associate editor)

2022.3-至今 国际期刊 Annals of Microbiology (editor)

2022.4-2024.3 国际期刊 Journal of Applied Microbiology (editor)

**招生专业：**

自然地理学

**科研项目：**

国家自然科学基金山东省联合基金项目：黄河口盐沼湿地固碳关键过程、调控机理及增汇潜力研究（U2106209），263万元，2022.01-2025.12，课题负责人

国家自然科学基金面上项目：电微生物-生物炭促进土壤乙酸裂解产甲烷的胞外电子传递机制（42077025），57万元，2021.01-2024.12，主持

中国科学院青年创新促进会人才项目：滨海湿地甲烷产生过程及生态环境影响（2021213），80万元，2021.01-2024.12，主持

国家自然科学基金青年科学基金项目：氮沉降对黄河三角洲滨海湿地甲烷产生途径的影响（41703075），25万元，2017.01-2020.12, 主持

山东省自然科学基金青年基金项目：CO2浓度升高对黄河三角洲甲烷产生的影响研究，传递机，11万元，2016-2019，主持

国家自然科学基金委员会面上项目: 生物炭和天然有机质协同介导电子传递对稻田甲烷产生的影响研究(42277236), 53万元，2023.01- 202612, 在研, 参与

国家自然科学基金委员会面上项目： 海岸带典型生境甲烷杆菌的种间直接电子传递机制(42273082)，58万元，2023.01-202612, 58万元, 在研, 参与

国家自然科学基金委员会地区科学基金项目： 马尾松外生菌根真菌对菌根际细菌群落及其功能多样性的调控机制（32260031），33万元，2023.01-202612，33万元, 在研, 参与

**科研奖励：**

导电矿物对环渤海河流及湿地甲烷产生的影响及机制，海洋工程科学技术奖一等奖，中国海洋工程咨询协会，2020，第2完成人 (省部级)

**国际合作：**

Carlos M. Duarte King Abdullah University of Science and Technology (KAUST) 欧洲科学院士； Andrew Tanentzap Cambridge University/Trent University （Canada Research Chair in Climate Change and Northern Ecosystems）；Isaac Santos University of Gothenburg （Editor-in-Chief Global Biogeochemical Cycles）；Robert Spencer Florida State University

**代表论著：**

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**联系方式：**[llxiao@yic.ac.cn](mailto:llxiao@yic.ac.cn)