

Preface

The 2026 2nd International Conference on Eco-environmental Protection, Environmental Monitoring and Remediation (EPEMR 2026) was successfully convened in Lanzhou, China, from April 24 to 26, 2026. In response to the increasing global concern over environmental sustainability, ecological degradation, and climate-related challenges, the conference provided an international platform for scholars, researchers, engineers, and industry professionals to exchange recent scientific achievements and discuss emerging technologies and practical solutions in the fields of environmental monitoring, pollution control, ecological restoration, and sustainable environmental governance.

EPEMR 2026 attracted more than 80 participants from universities, research institutes, enterprises, and governmental organizations worldwide. A total of 97 manuscripts were submitted to the conference, among which 22 papers were accepted after a rigorous peer-review process conducted by the conference committees and invited reviewers. The accepted papers included in this volume represent recent advances in environmental science, ecological engineering, monitoring technologies, and remediation methodologies, reflecting both theoretical innovation and practical application.

The conference program featured a series of keynote and invited speeches delivered by distinguished scholars and experts, including Byong-Hun Jeon, Reda A.I. Abou-Shanab, Xiaodan Huang, El-Sayed Salama, and Sedky H. A. Hassan. Their presentations addressed frontier topics such as microbial restoration strategies for anaerobic digesters, arsenic remediation through microbiome-assisted approaches, microbial applications for high-altitude adaptation and host health, artificial intelligence and machine learning technologies in environmental and public health studies, as well as biogenic nanomaterials for multifunctional environmental remediation. In addition to the keynote sessions, oral presentation sessions provided participants with valuable opportunities to present ongoing research, exchange scientific perspectives, and promote interdisciplinary communication. These academic activities substantially enhanced the depth and diversity of the conference and facilitated international collaboration in eco-environmental research.

The conference covered a broad range of research topics related to environmental protection, ecological monitoring, and environmental remediation. Major discussions focused on air pollution control, atmospheric monitoring technologies, carbon emission reduction, ecosystem observation, water resource protection, soil pollution monitoring and restoration, biodiversity conservation, marine environmental protection, and ecological restoration strategies. The conference also emphasized emerging research directions involving remote sensing applications, environmental big data technologies, intelligent monitoring systems, sustainable waste management, resource recovery, low-carbon technologies, advanced environmental materials, microbial remediation technologies, and the impacts of climate change on environmental governance and monitoring systems. These discussions highlighted the increasing integration of environmental science, biotechnology, information technology, and sustainable engineering in addressing complex environmental challenges.

The organizing committee expresses sincere gratitude to all keynote speakers, reviewers, technical committee members, authors, and participants whose contributions ensured the academic quality and successful organization of EPEMR 2026. Their dedication and collaborative efforts created an active platform for scientific communication and international cooperation in environmental research and engineering.

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