



Editorial

# Inaugural Editorial: Embracing Great Challenges and Opportunities

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## 1. Introduction

Environmental challenges such as climate change, biodiversity loss, algae blooms, and waste management have intensified over the past decades, evolving into critical global issues. Algae, as a diverse and versatile natural resource, hold immense potential for commercial, industrial, and environmental applications, attracting significant scientific interest worldwide [1].

Algae play a vital role in mitigating environmental issues by absorbing and sequestering large amounts of CO<sub>2</sub>, functioning as carbon sinks, enhancing aquatic biodiversity, and providing renewable resources while facilitating pollutant remediation [2–4]. With advancements in algal research, numerous research centers and platforms have emerged, focusing on bioenergy and bioproducts.

Despite this progress, the current selection of international journals dedicated exclusively to algal research remains limited. Most existing journals emphasize biomass production or industrial applications in fields like nutrition, pharmaceuticals, biomaterials, and bioenergy. However, professional research addressing algae's potential in biodiversity, ecological functioning, environmental remediation, and sustainability remains underrepresented, leaving significant room for growth [5,6].

To address these gaps, *Algae and Environment* aims to provide an international, multidisciplinary platform for advancing algal research, with a particular focus on environmental applications. The mission is to foster systematic exploration of algae's potential and establish a globally recognized journal dedicated to disseminating high-quality, cutting-edge research.

## 2. Aim and Scope

*Algae and Environment* seeks to be a leading international journal focusing on emerging technologies and advancements in basic and applied algal research. The journal welcomes contributions across various disciplines, including biological, environmental, and ecological applications. Topics of interest include:

- Algal biology, ecology, and biotechnology
- Algal bloom dynamics
- Environmental bioremediation using algae
- Development of sustainable algal resources
- Algae-based bioenergy and bioproducts

The journal will publish original research, reviews, and perspective articles aimed at advancing knowledge exchange. A long-term vision is to enhance understanding of fundamental physiological processes and their applications in environmental remediation and sustainable development.

*Algae and Environment* will also include special issues featuring emerging, state-of-the-art research on algae's role in addressing critical environmental challenges. As an open-access journal, it will ensure free and immediate availability of all published work to researchers, professionals, and the public, thereby maximizing its impact.



### 3. Outlook

*Algae and Environment* prioritizes high-impact research in fundamental and applied algal studies, particularly emphasizing resource development and environmental remediation. The journal will be guided by an exceptional editorial board of international experts and active researchers with extensive experience in algal science and publishing.

To support rapid dissemination, the journal will adopt an expedited review process and a fully open-access publishing model. During its initial two years, there will be no article processing charges (APCs) for authors, encouraging high-quality submissions and fostering a strong foundation for the journal's growth.

We warmly invite scientists and researchers passionate about algae research and its environmental applications to contribute to this exciting initiative. By working together—authors, reviewers, editorial board members, and the publishing team—we aim to establish *Algae and Environment* as a globally respected journal driving innovation and addressing critical environmental challenges.

We believe that *Algae and Environment* will bridge current knowledge gaps, inspire innovative solutions, and contribute meaningfully to global sustainability efforts. Thank you to all contributors for supporting this vision and helping make *Algae and Environment* a leading platform in the field.

Conflicts of Interest: The author declares no conflict of interest.

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