

## Special Issue

# Bionic Functional Interfaces and Devices for Low-Carbon Applications

### Message from the Guest Editors

Nature provides us with different forms of energy sources and various kinds of materials for use in daily life and social developments. However, the consumption of fossil energy also discharges a huge amount of carbon dioxide, resulting in ever-increasing hazards, e.g., extremely high-temperature weather leading to mountain wildfires, glacier melting causing rises in sea level, biological extinction, etc. For these reasons, low-carbon living is attracting increasing attention, and the need for a significant reduction in CO<sub>2</sub> emissions has gradually become a global consensus. Biomimetics can play a significant role in preventing such hazards. Artificial photosynthesis, for example, has made a huge breakthrough in the past two years, making it possible to synthesize proteins and other carbohydrates from CO<sub>2</sub> in the air in the laboratory setting.

---

### Guest Editors

**Dr. Zhaolong Wang**

College of Mechanical and Vehicle Engineering, Hunan University, Changsha 410082, China

**Prof. Dr. Ping Cheng**

MOE Key Laboratory for Power Machinery and Engineering, School of Mechanical Engineering, Shanghai Jiao Tong University, Shanghai 200240, China

---

### Deadline for manuscript submissions

closed (20 March 2024)



## Biomimetics

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.9  
CiteScore 6.2  
Indexed in PubMed



[mdpi.com/si/134190](https://mdpi.com/si/134190)

*Biomimetics*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[biomimetics@mdpi.com](mailto:biomimetics@mdpi.com)

[mdpi.com/journal/  
biomimetics](https://mdpi.com/journal/biomimetics)





# Biomimetics

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.9  
CiteScore 6.2  
Indexed in PubMed



[mdpi.com/journal/  
biomimetics](https://mdpi.com/journal/biomimetics)



## About the Journal

### Message from the Editor-in-Chief

---

#### Editor-in-Chief

Prof. Dr. Stanislav N. Gorb

Department of Functional Morphology and Biomechanics, Zoological  
Institute, Kiel University, 24118 Kiel, Germany

---

#### Author Benefits

##### High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed,  
PMC, Ei Compendex, CAPlus / SciFinder, and other  
databases.

##### Journal Rank:

JCR - Q1 (Engineering, Multidisciplinary) / CiteScore - Q2  
(Biomedical Engineering)

##### Rapid Publication:

manuscripts are peer-reviewed and a first decision is  
provided to authors approximately 17 days after  
submission; acceptance to publication is undertaken in 3.8  
days (median values for papers published in this journal in  
the second half of 2025).