

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 CO₂ 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 CO₂ 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

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
biomimetics@mdpi.com

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Prof. Dr. Stanislav N. Gorb

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

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