

# Carbon Reports Special Issue: Carbon materials for energy-storage and energy-conversion devices

**Publication: December 2024**

**Deadline of submission: 31 July, 2024**

**Editor: Kohei Miyazaki, Hiroyuki Itoi, Yuya Kado, and Fumihiko Sagane**

Electric energy plays an increasingly important role in modern society. Electrification is not limited to the information and communication fields, such as smartphones, large computing devices (servers), and network devices that distribute large amounts of content such as video and music, but the electricity is also rapidly being used to power vehicles such as automobiles, airplanes, and ships. Traditionally, the energy sources have been limited to fossil fuels, but the use of electrical energy from renewable sources can be expected to reduce emissions of carbon dioxide and other greenhouse gases.

While renewable energies such as wind and solar have environmental advantages, they are also susceptible to weather conditions and have low adaptability to demand fluctuations. Therefore, methods of temporarily storing renewable energy in chemical energy are being considered for the safe and efficient use of renewable energy. For example, research and development on devices such as rechargeable batteries, electric double layer capacitors, water electrolysis, ammonia electrolysis synthesis, and fuel cells are currently being actively conducted. In all of these devices, carbon materials are widely used for their good balance of cost and performance and are expected to continue to be used in the future.

Therefore, Carbon Reports is planning a special issue focusing on carbon materials that play an active role in energy-storage and energy-conversion devices. Examples of research applicable to this call for proposals are listed below:

- (1) Energy storage reaction using graphite intercalation compounds
- (2) Charge storage mechanism of electric double layer capacitors using porous carbon
- (3) Carbon materials in energy conversion reaction devices such as fuel cells and water electrolysis

Even if the above examples do not apply, we welcome a wide range of submissions on carbon materials related to energy storage and conversion devices.

**How to submit:** Please prepare a manuscript in accordance with the “Author instruction” and submit the manuscript file to [tanso-edit@bunken.co.jp](mailto:tanso-edit@bunken.co.jp) Please clearly describe in your email that you are submitting the manuscript to the special issue.

**Type of manuscript:** Any formats are acceptable: Research Papers, Communications, Integrated Paper, Accounts, Reviews, Technical Reports, and Reference Data.

**Deadline:** 31 July, 2024

**Peer-review:** The manuscript will be subjected to our advanced review process in which reviewers provide constructive comments to improve your manuscript, rather than rejecting your manuscript.

**Publication:** Carbon Reports Vol. 3, No. 4, December 2024

TEL: 03-6824-9363 FAX: 03-5206-5332 E-mail: [tanso-edit@bunken.co.jp](mailto:tanso-edit@bunken.co.jp)