



Inaugural editorial for *Energy Storage and Saving*

Nowadays, fossil fuels still account for the dominant market of global primary energy consumption, causing the big concern of climate warming due to the great amount of greenhouse gas production. Low-carbon economy and sustainable development have become the consensus for global countries. Against this background, the European Union (EU) has made the 2030 climate & energy framework which aims to cut emissions with a binding target by 40% before 2030 compared to the level in 1990. The United States has officially rejoined the Paris Agreement in 2021 and renewed the commitment for tackling the global climate issues with plans to reduce carbon emissions by 80% before 2050 compared to the 1990's level. For developing countries, some effective policies are also proposed for carbon emission reduction targets. It should be pointed that China has long-term development plans to reach peak emissions before 2030 and achieve the goal of carbon neutrality by 2060. Hence, countries all over the world unite to make their supreme efforts for achieving a low-carbon society.

The application of renewable energy, including solar, nuclear, geothermal, and wind power, is regarded as one of the main measures for carbon reduction. With the influence of the COVID-19 pandemic, the emerging demand market of renewable energy grows by almost 70% in 2021 due to the impediment of conventional fuel trading and transport. On the other hand, the high-efficiency utilization of energy resources may also contribute to emission reduction, which plays an essential role in the low-carbon economy. Note that the development and efficient utilization of renewable energy have become the primary issue of global common concern.

Energy storage technology is beneficial for shifting peak load, reducing the imbalance between energy supply and demand, and ensuring the safe and stable operation of the power system. According to the form of storage, the energy storage technologies can be classified into thermal storage as in phase change materials, electrical storage as in supercapacitors, electrochemical storage as in batteries, magnetic storage as in superconducting magnetic energy storage, kinetic storage as in flywheels, chemical storage as in hydrogen, etc. With the development of renewable energy, energy storage technology has become a critical concern for improving energy efficiency, maintaining system stability and ensuring energy security.

On the other hand, energy saving is another effective way for achieving carbon reduction and developing a sustainable economy. For both conventional and renewable energy resources, measures should be implemented for obtaining high-efficiency energy utilization and conversion, such as the optimization of combustion system (e.g., vehicle tur-

bine), reduction of high-energy consumption industries (e.g., battery production), energy management in buildings (e.g., HVAC and district heating system), waste products recovery (e.g., biogas), etc. The market survey indicates that energy storage and energy saving technologies are increasingly gaining impetus, and the level will skyrocket in the coming several decades.

Energy Storage and Saving (ENSS) is a forward-looking journal to meet the needs of renewable energy and energy utilization/conversion development. We hope to establish an international platform for exchanging academic perspectives, discussing development trends and attracting important achievements and high-quality publications related to the field of energy storage and energy saving.

1. Aims and scope of the journal

ENSS is an international and interdisciplinary journal that disseminates original research articles in the field of energy storage and energy saving. The mission of ENSS is to advance research in energy storage and saving and its application in the field of thermal and chemical storage, biological system, electromagnetics, economics, etc. ENSS welcomes original work covering theoretical, methodological, and empirical research articles, literature reviews, short communications, and commentaries. We are particularly interested in expanding representation on the board of the following areas of expertise but not limited to:

- (1) Energy storage technologies, including thermal energy storage, biological storage, chemical and electrochemistry storage, cryogenic storage, magnetic storage, hydrogen and fuel cells, batteries, phase change materials, etc.
- (2) Energy saving technologies, including energy efficiency, smart energy and intelligent management, pollutant emission reduction, heat exchangers, building applications, system integration, etc.
- (3) Energy security and economic analysis, including life cycle assessment, economics and business models, environmental impact, sustainable development, etc.

2. What this journal offers

ENSS is an Open Access (OA) journal, which will allow authors to have a broader impact in the field of energy storage and energy saving by sharing and spreading their new research works more precisely, quickly, and effectively across multiple and overlapping communities.

Peer review under responsibility of Xi'an Jiaotong University.

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The author does not have any publication charges for open access for now. Xi'an Jiaotong University will pay to make the article open access.

A streamlined submission process has been established in the Editorial Management (EM) system. The due date of peer review and decision-making processes is rigorously controlled within 21 days, providing accelerated publication in an OA environment. Additionally, about three best papers will be selected each year with award-winning certificates.

3. The Editorial Board of ENSS

For supervising and guiding the journal development, ENSS has formed an Editorial Advisory Board, which is composed of experts and famous researchers from all relevant fields including academicians, Editor-in-Chief of well-known journals in energy field, leading scholars of international advanced laboratories, etc. The Editor-in-Chief (EIC) and Associate Editors (AEs) of ENSS make the key decisions for the ENSS journal, including timely policy formulation, developing suggestions and influential topic collections for special issue (SI), invited articles, review articles and editorials.

The Editorial Board Members (EBMs) are tasked with handling peer review process, executing decisions of EIC and AEs, organizing SI in conferences, etc.

The colleagues listed on the website below are part of this effort:

<https://www.keaipublishing.com/en/journals/energy-storage-and-saving/editorial-board>

Eventually, we would like to take this opportunity to express sincere thanks and best wishes to all the authors, reviewers, EBMs and AEs for their contributions. We cordially invite researchers worldwide including faculties, postdocs and graduate students to submit your exciting research findings to ENSS and accept our invitations to provide review articles.

Wenquan Tao

Qiuwang Wang*

Wenxiao Chu

Xi'an Jiaotong University, China

*Corresponding author.

E-mail address: wangqw@mail.xjtu.edu.cn (Q. Wang)