



Frontiers in Energy Efficiency and Sustainability of Buildings

Guest Editors:

Prof. Dr. Chengchu Yan

College of Urban Construction,
Nanjing Tech University, Nanjing
210009, China

chengchu.yan@njtech.edu.cn

Dr. Zhengwei Li

College of Mechanical
Engineering, Tongji University,
Shanghai 200092, China

zhengwei_li@tongji.edu.cn

Dr. Rui Tang

Institute for Environmental
Design and Engineering, The
Bartlett, University College
London, London WC1E 6BT, UK

rui.tang@ucl.ac.uk

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Message from the Guest Editors

The building sector is the largest energy consumer in most countries and accounts for 25–30% of total energy-related carbon dioxide (CO₂) emissions worldwide.

The high energy efficiency and sustainability of buildings can be realized through the lifecycle optimization and integration of multiple technologies within or beyond buildings. 1) a passive design to reduce building demand and environmental impact; 2) advanced HVAC (heating, ventilation, and air-conditioning) technologies and high efficient energy systems; 3) performance assessment, fault detection, and diagnosis, optimal control, and operation of existing buildings; 4) development and integration of renewable energy systems such as solar energy systems, wind energy systems, biomass energy systems, etc.; 5) smart buildings toward smart grids and energy-flexible buildings for power demand management and response.

This Special Issue invites researchers to contribute original research papers and technical review papers on innovative approaches and solutions to benefit the sustainability and energy efficiency of buildings and assist in reducing energy use and carbon footprint.





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Editor-in-Chief

Prof. Dr. Marc A. Rosen

Faculty of Engineering and
Applied Science, University of
Ontario Institute of Technology,
Oshawa, ON L1G 0C5, Canada

Message from the Editor-in-Chief

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Sustainability
MDPI, St. Alban-Anlage 66
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