Buildings

an Open Access Journal by MDPI

CiteScore: 5.6
Impact Factor: 3.4

Special Issue Reprint

Indoor Climate and Energy Efficiency in Buildings

Edited by: Yanan Liu, Shen Wei and Lili Dong

As global warming challenges persist, balancing indoor comfort with low energy consumption is vital for sustainable development. This Reprint features twelve peer-reviewed articles exploring advanced technologies, design strategies, and behavioral insights to create energy-efficient buildings.nThe compiled research covers diverse building types, from residential homes and dormitories to gymnasiums, entertainment venues, and heritage architecture. Key themes include optimizing indoor lighting and thermal environments via passive design, cross-ventilation, and daylighting. The authors also evaluate innovative carbon-reduction solutions, like semi-transparent photovoltaic skylights, phase change materials, and roof retrofits. Furthermore, this Reprint emphasizes human factors, investigating occupant thermal needs in transitional spaces, student energy behaviors, and post-renovation user satisfaction. It also addresses indoor air quality through empirical studies on particle infiltration. By synthesizing architectural design, technological innovation, and occupant behavior, this collection provides a valuable resource for researchers and practitioners advancing low-carbon, sustainable built environments.

https://www.mdpi.com/books/reprint/12994