Special Issue

Heat and Mass Transfers Modelling with Applications in Energy Efficiency in Buildings

Message from the Guest Editor

The coupled Heat and Moisture Transfer in porous building materials represents a major social concern related to the improvement of the living environment of buildings through the use of low-energy solutions with a low environmental footprint. The current thermal regulations recommend the design of buildings more thermally insulated with very low permeability. these regulations also lead to new issues, as it may affect summer comfort and indoor air quality.

The special issue deals with heat and moisture transfer at different scales: from the microstructure, to the material and building scales. It covers not only the aspects related to the numerical and experimental modeling of transfer mechanisms at two microscopic-macroscopic scales, numerical and experimental phenomenological modeling at the material scale, but also contributions associated to the characterization of the properties of building materials, eco-materials and bio-based materials: microstructural, mechanical, thermal, hydric. All the original works applied to the evaluation of the energy performances of buildings and the reduction of environmental impacts are also concerned.

Guest Editor

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Message from the Editor-in-Chief

Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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