Special Issue

Novel Materials for Energy Efficient Buildings

Message from the Guest Editors

Energy retrofits have higher difficulties compared to new buildings, because of the necessity of adaptability to existing constructions, the requirement of low thicknesses, and the preferability of technologies that allow installation without invasive yards for allowing livability during the refurbishing. Novel materials can exploit several physical phenomena for reducing energy demands of buildings and emissions. Furthermore, materials can improve the thermal resistance or thermal inertia of the building shell; the reflectance or absorptance of solar energy of external coatings; the thermal energy storage in structures; and the time shifting of free gains, radiative cooling, or evaporative cooling; and, analogously, they can have applications in active energy systems too (as, for instance, phase change materials into components of heating and cooling systems or new lighting systems and photovoltaics by means of novel organic materials). This Special Issue of Energies is entirely focused on new materials for the energy efficiency of buildings and energy systems and is not limited to buildings themselves, their energy systems, or renewables on a building scale.

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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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