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Novel Materials for Energy Efficient Buildings

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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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Special Issue



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Message from the Editor-in-Chief

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