Special Issue

Smart Energy Management for a Sustainable Built Environment

Message from the Guest Editor

Buildings can be coupled to multi-carrier energy systems and their inner flexibility can be exploited to optimize the overall energy system in order to make better use of the available resources and achieve a sustainable energy system. There are different kinds of energy demand in buildings, which can be mainly divided into electricity and thermal demand. The energy demand of buildings can be reduced by means of different actions aimed at increasing their energy efficiency. Furthermore, part of the demand is due to the so-called deferrable loads, which can be shifted in time without altering the service provided to the end user (e.g., refrigerators, dishwashers and thermostatically controlled loads). The focus of this Special Issue concerns the smart management of energy demand in the built environment, which can be realized in different ways, e.g., by refurbishment, use of higher performing energy production devices, introduction of energy storage systems, and proper control strategies. All of these actions can indeed make buildings interact with the energy production system in a more effective way, leading to a more sustainable world.

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Message from the Editor-in-Chief

Environmental issues are quickly becoming central political, economic and academic topics of the twenty-first century. A large number of modern challenges are directly or indirectly caused by complex interactions between environmental issues. Such issues require interdisciplinary research, knowledge and insights to understand and, ultimately, for solutions to be found. Through the journal Environments, we strive to create a platform for meaningful discourse by accepting contributions from a wide range of fields. We sincerely hope you will consider publishing your distinguished work in this highly-accessible, peer-reviewed journal.

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