Special Issue

Energy Harvesting and Wireless Power Transfer for 6G Sustainable IoT Networks

Message from the Guest Editors

Rapid evolution toward 6G and the massive deployment of Internet of Things (IoT) devices are dramatically increasing the energy demand of communication and computing infrastructures. Conventional battery-powered operation and grid-dependent supply are becoming unsustainable, especially for large-scale sensor networks, pervasive edge devices, electric vehicles (EVs), and unmanned aerial vehicles (UAVs). As a result, energy harvesting and wireless power transfer (WPT) have emerged as key enablers for sustainable energy networks, allowing devices to scavenge energy from RF, solar, vibration, and thermal sources and to receive power wirelessly from dedicated transmitters. This Special Issue aims to present the most recent advances related to the theory, design, modeling, control, implementation, and application of energy harvesting and wireless power transfer for 6G sustainable IoT networks. The Special Issue welcomes contributions that address fundamental concepts, enabling technologies, architectures, and practical demonstrations that improve the energy efficiency, reliability, and sustainability of wireless communication systems tightly coupled with modern energy networks.

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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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