Special Issue

Power Quality Analysis and Control of Railway Power Supply Systems

Message from the Guest Editors

Recently, distributed renewable energy systems (RESs), due to their pollution-free and flexible features, have been extensively applied in various practical fields. Naturally, the wide dissemination of these new power supply modes integrated with RESs has also resulted in rethinking and reformation in other industries, typically including railway traction power supply systems (TPSSs). Moreover, the contradiction between dramatic development and distressed power supply capacity has exacerbated the dilemma of the current high-speed railway TPSS, which urgently needs new methods to achieve balance between supply and demand. Hence, in order to ease the tension in TPSSs, the conventional TPSS should be transformed to provide access for RESs, eventually realizing the coexistence of them. Some multi-port railway power conditioners integrated with RES access are proposed to achieve the comprehensive management of power quality and RES access. This Special Issue is focused on railway power supply system modeling, power quality analysis, power quality compensation, new energy access and control of the railway power supply system.

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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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