Special Issue

Applications of Capacitors in Power Electronics

Message from the Guest Editor

Capacitors are found everywhere in power electronics. They are used as DC-link capacitors in power converters in power generation with renewables, HVDC power transmission, train traction, or EVs. They are also used further in filter applications for grid stability. This Special Issue focuses on the enhancement of power quality and stability of modern power systems through power-electronic-based solutions. It aims to lay a foundation for the further integration of renewable energies in future renewable-dominated power systems. The topics of interest for this Special Issue include, but are not limited to, the following:

- New materials and designs of aluminum electrolytic capacitors, especially polymer and hybrid-polymer capacitors;
- Materials and designs of tantalum electrolytic capacitors;
- New materials and designs of metalized film and power capacitors;
- New materials and design of ceramic capacitors;
- Condition monitoring of capacitors using artificial intelligence and machine learning.

Guest Editor

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Message from the Editor-in-Chief

Electronics is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guest-edited by leading experts in selected topics of interest.

Editor-in-Chief

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