

Special Issue

Safety Design and Management of Power Devices including Gate-Drivers

Message from the Guest Editor

Power devices play a major role in power converter performance. However, most of them are typically not tolerant against accidental short-circuit and overvoltage events. The same applies to long-term or cyclic electrical and thermal overloads. Yet, robustness is an essential feature to be addressed in an increasing number of applications. The aim of this Special Issue is to gather a selection of the best papers on the topic. Priority will be given to contributions dealing with wide bandgap technologies (SiC BJT/JFET/MOSFET devices and GaN HEMT devices) as well as advanced or innovative silicon structures.

- increased short-circuit capability;
- increased avalanche capability;
- increased robustness;
- health monitoring and diagnosis (offline/online);
- aging real-time prognostics (offline/online);
- safe failure mode;
- fast and robust short-circuit detection;
- smart gate-driver management;
- passive integrated fuse (monolithic and hybrid technologies);
- active fuse (monolithic and hybrid technologies)

Guest Editor

Dr. Frédéric Richardeau

Energy Conversion and Plasma Laboratory, University of Toulouse III,
31071 Toulouse, France

Deadline for manuscript submissions

closed (15 April 2023)



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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
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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.

Editor-in-Chief

Prof. Dr. Enrico Sciubba
Department of Mechanical and Industrial Engineering, University
Niccolò Cusano, 00166 Roma, Italy

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