



New Advances in Magnetic Materials for Power Electronics Applications

Guest Editors:

Prof. Dr. Thierry A. Meynard

Laboratoire Plasma et
Conversion d'Énergie, Université
de Toulouse, ENSEEIHT, CEDEX 7,
31071 Toulouse, France

Dr. Jaime W. Zapata

Infineon Technologies,
Neubiberg, Germany

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Message from the Guest Editors

Thanks to the recent advances in optimization algorithms, magnetic materials study and powerful simulation tools, the design of passive devices has been greatly improved. This not only increases the accuracy of the mathematic models, it also reduces the time of design consumption. Nowadays, passive components rule over the size, weight, and loss of many power electronics systems, with magnetics being the most challenging devices to design. Therefore, the academic and industry research challenge is focused on:

- The selection of proper magnetic materials to construct inductors that can achieve an efficiency increment through magnetic permeability and hysteresis improvements;
- Modelling and designing improved high-frequency power magnetics, addressing skin and proximity effects.

where both high-frequency magnetic materials and designs can yield improved performance.

The main aim of this Special Issue is to seek high-quality submissions that highlight contributions in new magnetic materials' selection, and its design for power electronic applications.





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Editor-in-Chief

Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada

2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

Message from the Editor-in-Chief

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Materials Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

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