



New Advances in Magnetic Materials for Power Electronics Applications

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Deadline for manuscript
submissions:

closed (31 December 2021)

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 trough 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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Message from the Editor-in-Chief

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