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## Advanced Power Electronics Technologies

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### Message from the Guest Editors

Dear Colleagues,

The number of Electric Vehicles (EV) available on the market is growing, day-by-day, and EV charging has become another big issue. In the case of ultrafast DC charging, the tendency is to use a DC/DC converter inside charging stations, reducing, as much as possible, the amount of power electronics inside the vehicle. Hence, the amount of the electric power needed can easily reach several hundreds of kW, and sometime MW, suggesting a DC mid-voltage (10 kV) local distribution. Nowadays, power converters using Wide Band Gap (WBG) have a fundamental role in the electrification of vehicles. Silicon Carbide (SiC) and Gallium Nitride (GaN) increase converter efficiencies and are pushing the design of high-power-density converters. Using new HV SiC transistors, this power can be also achieved with a two-level converter. This Special Issue is intended to report on the recent advances in the multidisciplinary field of power electronic technologies, especially those devoted to high-voltage DC distributions.

Prof. Paolo Guglielmi

Mr. Alessandro La Ganga

*Guest Editors*



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# Special Issue



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## Message from the Editor-in-Chief

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