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Doping and Defect Engineering in Semiconductors

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Message from the Guest Editor

Dear Colleagues,

Semiconductors are particularly useful in industry as their electronic and optical properties are sensitive to dopants and defects. Deep level defects such as gold in silicon affects the recombination rate of excess carriers. However, the emergence of new semiconductors such as oxide semiconductors, 2D semiconductors, and organic semiconductors call for new doping technologies and a new understanding of the dopants and defects in semiconductors. Surface transfer doping and remote doping are representative examples.

On the other hand, renewed characterization techniques as well first principles calculations add to our understanding of doping and defect engineering in semiconductors. It is now time to obtain a deep understanding of dopants and defects in semiconductors from fundamental quantum mechanics.

Therefore, the aim of this Special Issue is to advance and disseminate knowledge in all the related areas of doping and defect engineering in semiconductors. The Editor encourages the submission of innovative findings, methodologies, and experimental results to this Special Issue.

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