Special Issue

Doping and Defect Engineering in Semiconductors

Message from the Guest Editor

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.

Guest Editor

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Deadline for manuscript submissions

closed (10 November 2023)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/111306

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Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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