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Advances in III-V Integration Materials and Devices

Guest Editor:

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Deadline for manuscript submissions:
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Message from the Guest Editor

Numerous III-V material-based devices have emerged in the past decade. Such devices have shown promising characteristics for energy-saving applications, such as very high speed and high power at high frequencies. Further devices, such as InGaAs FinFETs, are compatible with the established complementary metal oxide semiconductor (CMOS) process for low-power logic applications. In addition, high bandgap and high mobility GaN HEMT can be used for power amplifiers for mobile communication (5G) and SATCOM (millimeter wave band). High voltage GaN-HEMTs are gaining momentum for industrial power electronics applications. These III-V semiconductor devices improve the system performance because of their unique properties such as low effective mass, high mobility, direct bandgap and high saturation velocity. Integration of different III-V compound semiconductors (GaN, AlGaN, GaAs, InGaAs, etc.) with silicon (Si) microelectronics covers a wide range of applications by removing the limitations of silicon technology.

This Special Issue will address recent development in III-V integration materials and devices. Full papers, communications, and reviews are all welcome.

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Message from the Editor-in-Chief

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