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Quantum Cascade Lasers - Advances and New Applications

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

Certain technologies are enabling. Fiber optics and telecommunication would never have become widespread without compact, inexpensive, and reliable laser diodes and photodetectors, made from InP-based semiconductors. A similar application revolution at longer wavelengths is underway, thanks to advances in a number of different semiconductor technologies. This spectral region can be used to identify almost any chemical based on structural resonance. Long wavelength infrared lasers, which used to require cryogenic cooling, are now being developed for high power and high efficiency at room temperature and above. Additional functionality is also being realized, including electrical tuning, surface emission, frequency combs, and photonic integrated circuits. All of these technologies are constantly evolving, and this Special Issue is designed to give a current overview of the state-of-the-art for cascade lasers and applications in the 2–300 μm wavelength range.

Prof. Dr. Manijeh Razeghi
Guest Editor