Special Issue

Photoacoustic-Based Sensing Systems: Advances, Applications, and Innovative Measurement Strategies

Message from the Guest Editors

Photoacoustic sensing has emerged as a powerful technique for imaging and sensing, with applications ranging from medical diagnostics, to environmental monitoring, to industrial quality control, to name only a few. Recent advancements in light sources, such as quantum cascade lasers and tunable microstructure light sources, coupled with breakthroughs in microphones (MEMS), have significantly elevated the capabilities of photoacoustic sensing, promoting novel opportunities and applications. These improvements, particularly in microsystems, offer new avenues for miniaturization and enhanced measurement strategies. Additionally, the integration of innovative photoacoustic cell structures further enhances the performance of these sensing solutions. This Special Issue aims to explore the synergy between systems and microsystems, novel light sources, innovative sensors, photoacoustic cell design, advanced microphones, and innovative measurement strategies in the realm of photoacoustic sensing.

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