



Optical Spectroscopy of Low-Dimensional Quantum Materials

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

In recent years, since quantum emitters were found in various 2D materials, there has been an increasing interest in their quantum optical properties, and 2D materials have become a key platform for applications in photonic quantum technologies.

Optical spectroscopies such as Raman, absorbance, and photoluminescence represent a powerful tool to investigate the structure, the electronic, and the optical properties of low-dimensional materials and their heterostructures. Time-resolved spectroscopy allows researchers to investigate fundamental issues defining the electronic states’ dynamics, such as radiative and nonradiative decay channels. The coupling of optical spectroscopy to high-resolution microscopy offers unprecedented opportunities to resolve spatial inhomogeneities and new nanoscale phenomena, such as polariton propagation.

This Special Issue is envisioned as a forum for the discussion of the latest findings in the optical characterization of low-dimensional materials and of their future applications in optoelectronics and photonic quantum technologies.





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Message from the Editor-in-Chief

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