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Driving Spectroscopy and Laser Physics toward Biological, Agricultural, and Medical Applications

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In this Research Topic, we aim to collect studies dealing with optical and laser spectroscopy techniques which forward the knowledge of biology and medicine with fundamental as well as new perspective applications of photonics studies for ecology, agriculture, and the food industry. The Research Topic focuses on but is not limited to:

- Laser spectroscopy sensing (scatterometry, fluorescence spectroscopy, Raman spectroscopy, interferometry, hyper-spectral imaging, etc.) techniques in both laboratory research and field measurements
- Optical and laser interaction with biological and medical targets
- Light and laser synthesis and modification of new materials (nanoparticles, nanotubes, etc.) valuable for biological systems as well as nanomaterials diagnostics inside such bioactive objects
- Laser spectroscopy (fluorescence spectroscopy, Raman spectroscopy, interferometry, scatterometry, pump-probe)
- Production (laser-based) and diagnostics (optics and spectroscopy) of nanomaterial for biological applications
- Application of spectroscopy and laser physics in medical, biological, environmental, food industry, agriculture, and ecology





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