

Photoacoustic and photothermal: progress to date towards fostering multidisciplinarity

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Photoacoustic and photothermal spectroscopies have experienced remarkable progress in the last six decades in both, their fundamental understanding as well as application in an increasingly large number of research areas. In this talk of the special section of the Senior Scientist IPPA 2022 award, a comprehensive overview on these aspects of thermal lens, thermal mirror, photomechanical mirror, and photoacoustic methods will be presented. It is of particular interest their application in physics, material science as well as the exploitation of such techniques towards clinical diagnosis. In relation to the latter, their utilization is particularly warranted on account of their non-destructive and non-invasive characteristics, in addition to the ability to use them in depth profiling and tissue physicochemical evaluation. Thus, those aspects will be accordingly highlighted.