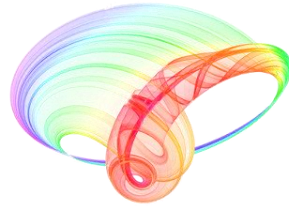


# Book of abstracts



## PHOTONICA2017

The Sixth International School and Conference on Photonics

& COST actions: MP1406 and MP1402



&H2020-MSCA-RISE-2015 CARDIALLY workshop



28 August – 1 September 2017

Belgrade, Serbia

*Editors*

Marina Lekić and Aleksandar Krmpot

Institute of Physics Belgrade, Serbia

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## Photoacoustic response of a transmission photoacoustic configuration for two-layer samples with thermal memory

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Over the last thirty years, multilayered systems have increasingly drawn attention due to their growing appearance in both natural and artificial structures. A number of measurements require the adsorption of an electrically conductible, anti-reflection and/or optically absorbing layer, which induces the necessity for theoretical modelling of the system as two-layered structure, when characterized or imaged by these methods. In this paper, the models of photoacoustic (PA) response are derived for transmission PA setup configurations of two-layered optically transparent samples with thermal memory. These models are considered a generalization of the models used so far, in two directions: first, the impact of finite heat propagation velocity through both layers is included; second, the existence of volume absorption in both layers is taken into account. These studies are important for the fundamental investigations of heat transfer mechanisms in soft matter, as well as for numerous applied researches, such as self-heating problems of very large scaling integration (VLSI) circuits, engineering of physical properties of the multi-layer structures etc.

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