



Optical Characterization and Applications of Metallic Thin Films

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Message from the Guest Editor

Metallic thin films are important parts of various devices used in microelectronics and optoelectronics. Noble metals (NM) are used as a conducting layer between oxide films and as a replacement for transparent conductive oxides (TSOs). These structures exhibit high conductivity and enough transmission in the visible spectral range, and they are suitable for use on flexible substrates. NM-alloys connect low electric resistivity of noble metal with a low melting temperature of Sn or In. Obviously, we cannot forget about the plasmonic effects of metallic thin films which are utilized in, e.g., optical sensors. The sensing mechanism of such a system is based on two phenomena: surface plasmon resonance (SPR) and localized surface plasmon resonance (LSPR). In SPR and LSPR, the optical constants of metallic films (and surrounding medium), which strongly depend on growing conditions, are crucial parameters affecting the operation of the system.

The aim of this Special Issue of *Materials* is to present the optical properties of metallic thin films which can be used in micro- and optoelectronics.





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Message from the Editor-in-Chief

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