

Optical and photothermal properties of TiN nanomaterials

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Transition metal nitrides (TMNs) have emerged as a promising alternative to precious metals thanks to their similar optical response and the additional advantages of refractory nature and compatibility with micro-electronic industry fabrication process. This presentation will discuss the optical tunability of nanomaterials based on titanium nitride (TiN) in relation to their photothermal applications. A few selected case studies will be considered, including ultrathin planar films prepared by magnetron sputtering or atomic layer deposition (ALD), and titanium oxynitride nanotubes exhibiting broadband absorption for solar-thermal applications and photothermal catalysis.

Hlavní autor: MASCARETTI, Luca (Department of Laser Physics and Photonics, Faculty of Nuclear Sciences and Physical Engineering)

Spoluautoři: RICHTER, Ivan (Czech Technical University in Prague, FNSPE); KALVODA, Ladislav (CTU in Prague, FNSPE, Department of Solid State Engineering); KWIECIEN, Pavel

Přednášející: MASCARETTI, Luca (Department of Laser Physics and Photonics, Faculty of Nuclear Sciences and Physical Engineering)

Zařazení sekce: Preparation techniques and analysis