materials

MDPI

Supplementary Materials: Two-level 3D Column-like Nanofilms with Hexagonally–Packed Tantalum Fabricated via Anodizing of Al/Nb and Al/Ta Layers – A Potential Nano-optical Biosensor

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Figure S1. 3D animation representation of the two-level column-like 3D anodic nanofilms biosensor operation principles.

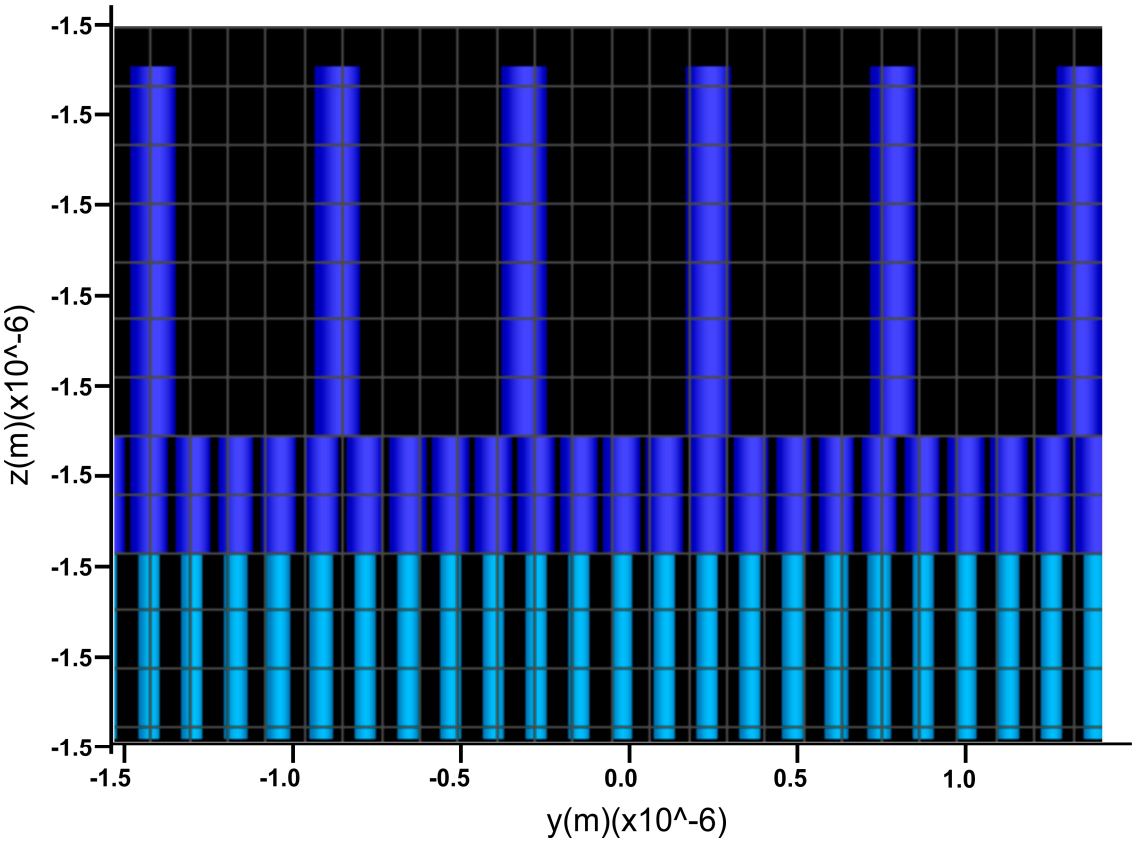

Figure S2. FDTD simulation of two-level 3-D column-like nanofilms ZY view by Lumerical Inc. software.

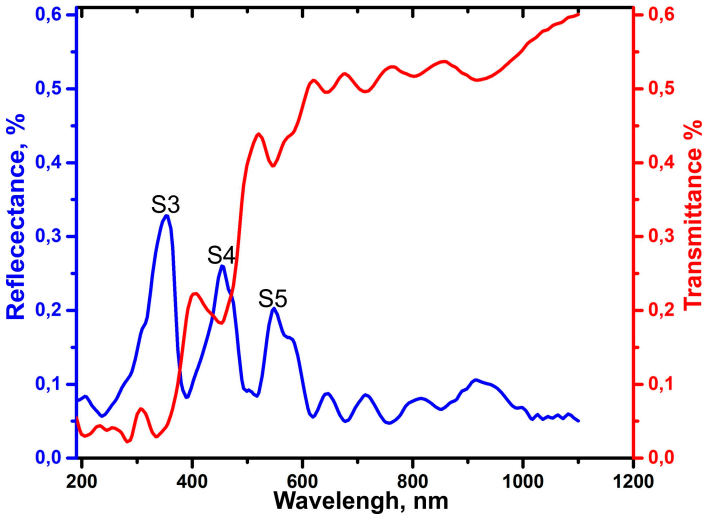

Figure S3. FDTD simulated transmittance and reflectance spectra as a function of wavelength for the two-level 3-D column-like nanofilms with marked three points of maximums on the reflection curve at 355 nm(S3), 456 nm(S4), 548 nm(S5) wavelength.

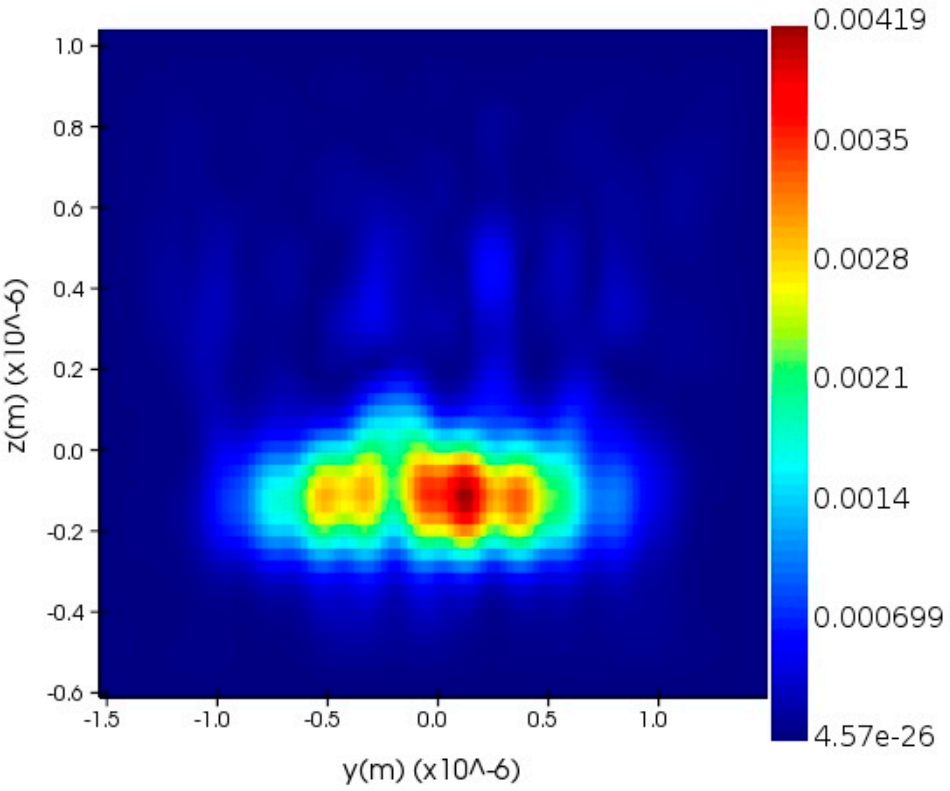

Figure S4. Poynting vector as the electromagnetic field distribution (control by YZ-plane reflectance monitor) for the first maximum of reflectance on 355 nm (S3) wavelength according to the reflectance curve on Figure S2.

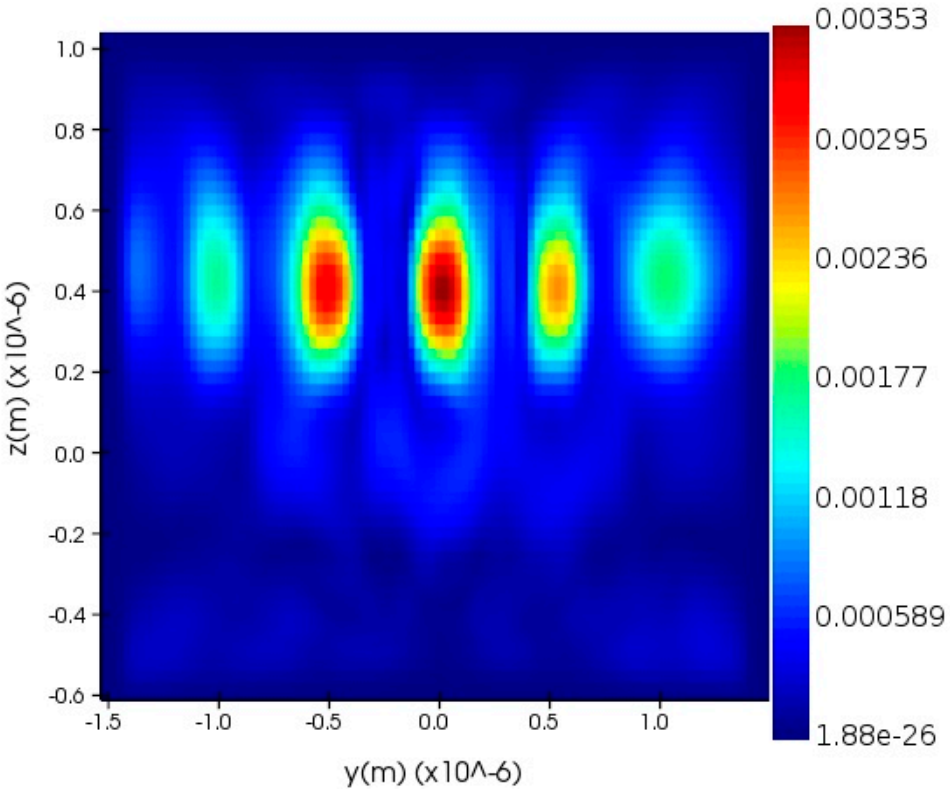

Figure S5. Poynting vector as the electromagnetic field distribution (control by YZ-plane reflectance monitor) for the second maximum of reflectance on 456 nm(S4) wavelength according to the reflectance curve on Figure S2.

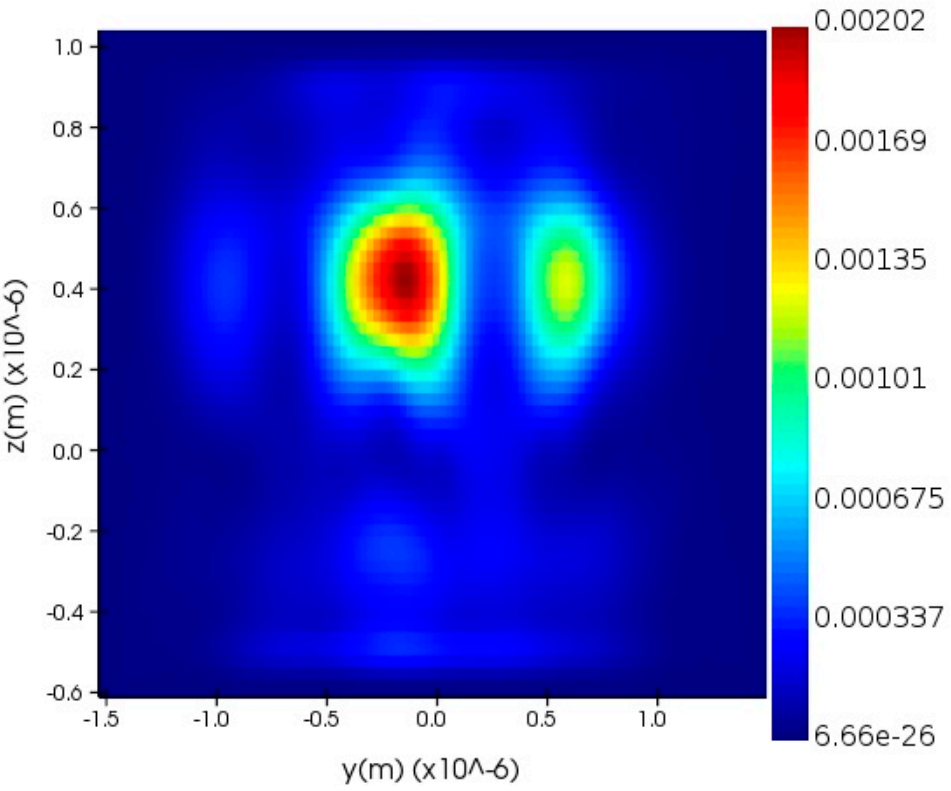

Figure S6. Poynting vector as the electromagnetic field distribution (control by YZ-plane reflectance monitor) for the third maximum of reflectance on 548 nm(S5) wavelength according to the reflectance curve on Figure S2.