Supplementary Material

**Ti/TiO2/SiO2 multilayer thin films with enhanced spectral selectivity for optical applications**

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**Figure captions.**

**Figure. S1.** XRD patterns of (a) TiO2 thin film, and (b) SiO2 thin film.

**Figure. S2.** Process and mechanism for the formation of dense thin films by Pulsed-DC reactive sputtering: (a) Ti thin film, (b) TiO2 thin film, (c) SiO2 thin film.

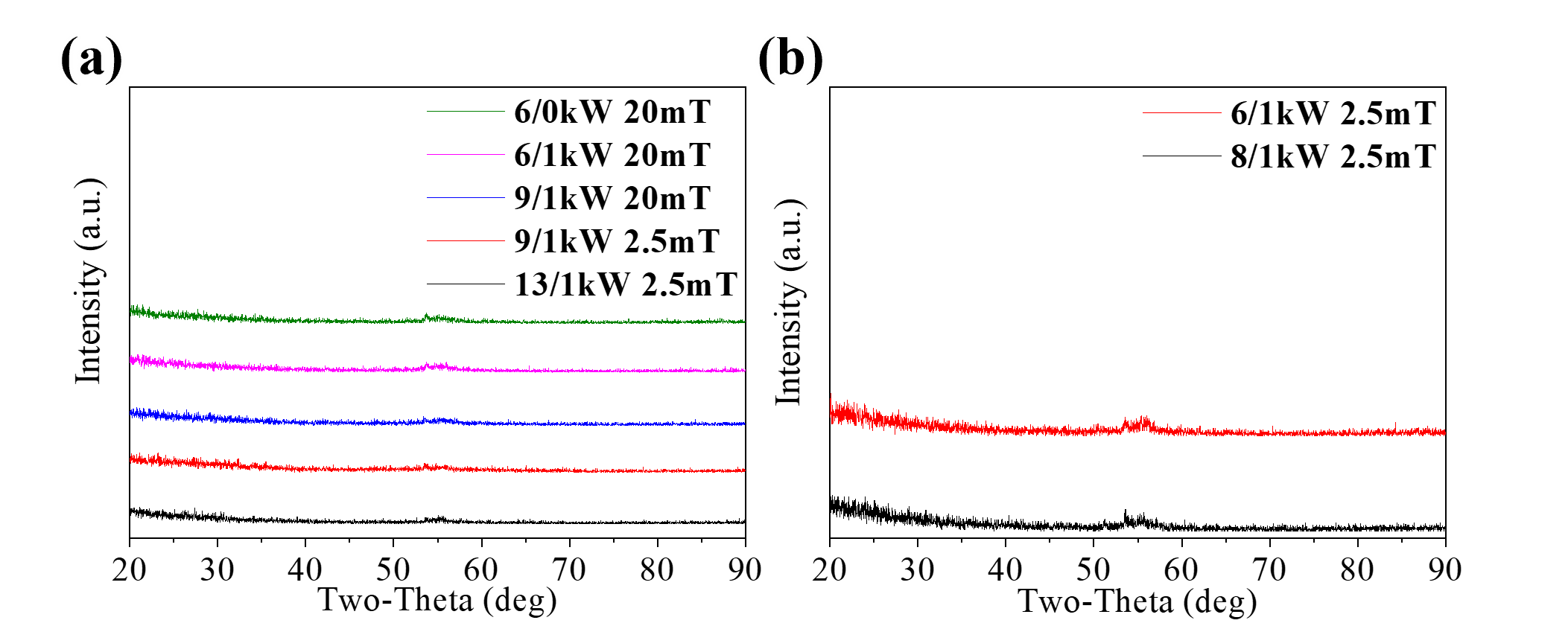
**Figure. S3.** Refractive Index (n) and Extinction Coefficient (k) as a function of sputtering parameters: (a) Ti thin film, (b) TiO2 thin film, (c) SiO2 thin film.

**Figure. S4.** Morphology and transmittance spectra of multi-layered structures of Ti/TiO2/SiO2 films with 7-8 layers: (a) Cross-sectional SEM micrograph of multilayer film with Ti 4 nm (b) Cross-sectional SEM micrograph of multilayer film with Ti 8 nm, and (c) Cross-sectional SEM micrograph of multilayer film with Ti 11 nm.

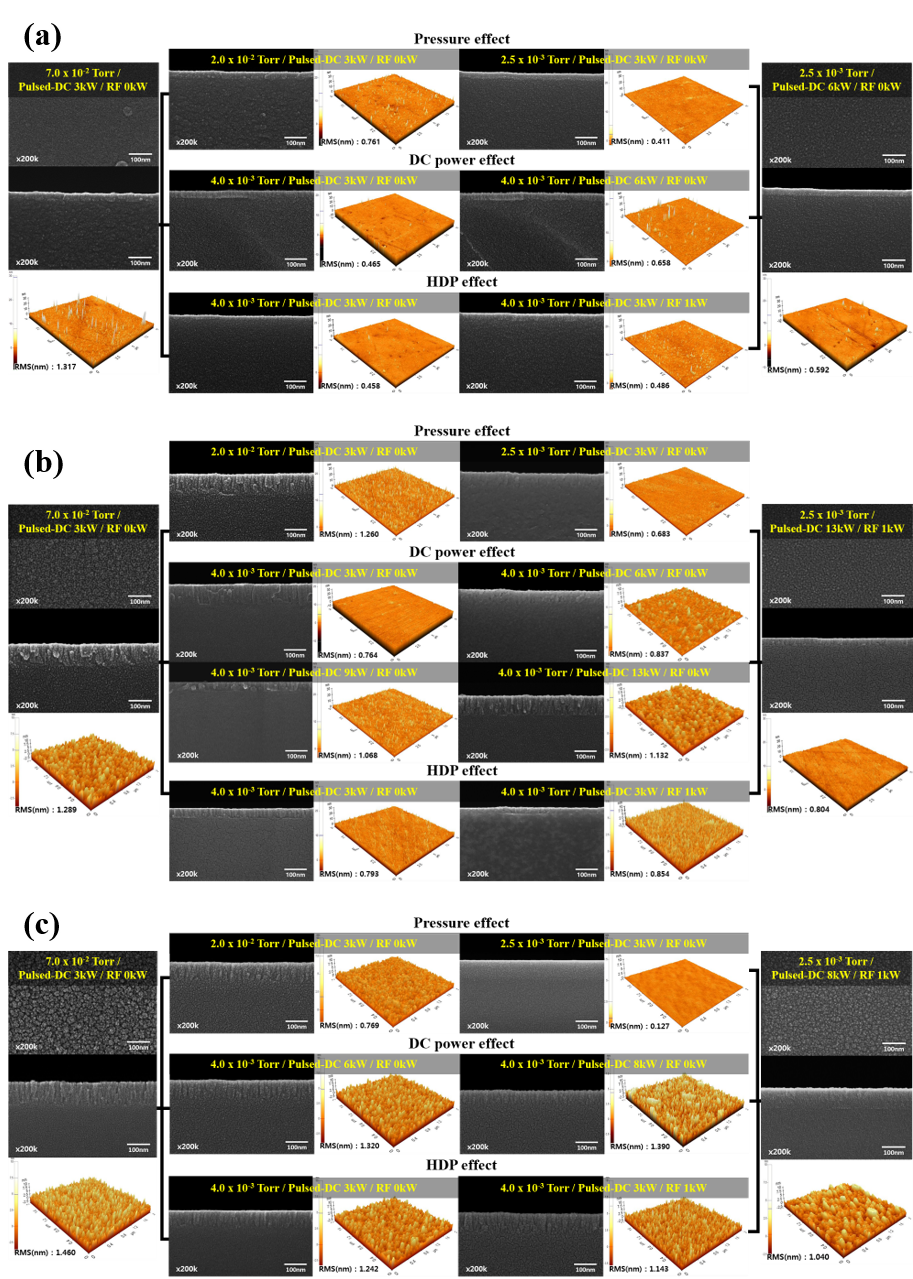
**Figure. S5.** Morphology and layer thickness multi-layered structure of TiO2/SiO2 films with 23 layers.

**Figure. S6.** Transmittance spectra of multilayer films of (a) TiO2/SiO2 films with 23-layers, (b) Ti/TiO2/SiO2 films with 24-layers. (c) 25-layers, and (d) 26-layers.

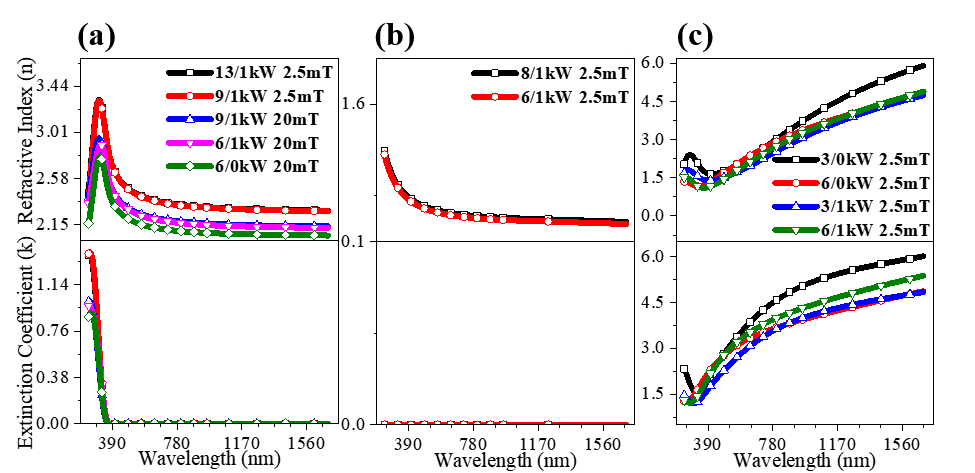
**Figure. S1.**



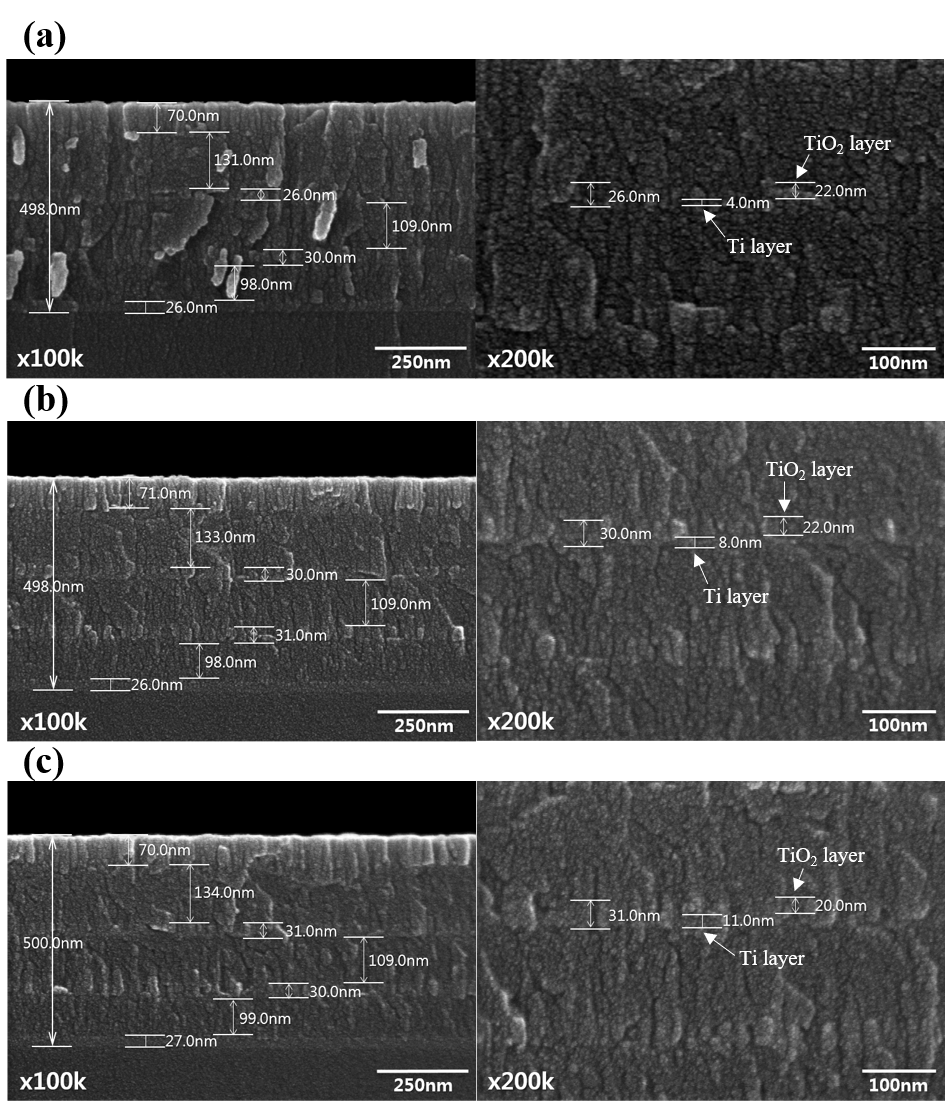
**Figure. S2.**



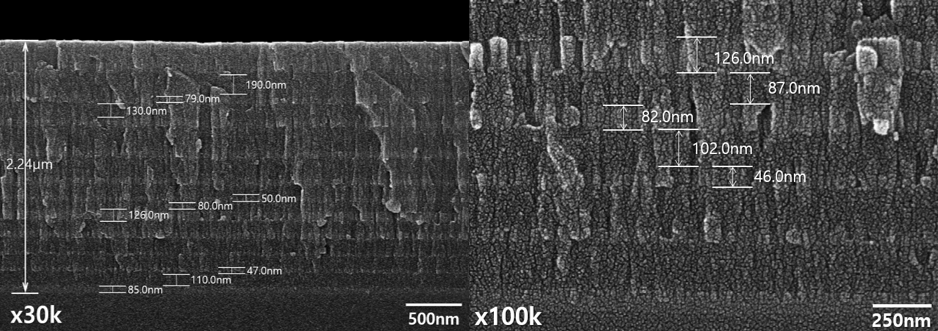
**Figure. S3.**



**Figure. S4.**



**Figure. S5.**



**Figure. S6.**

