

## **Supplementary Material:**

### **Tunable IR perfect absorbers enabled by tungsten doped VO<sub>2</sub> thin films**

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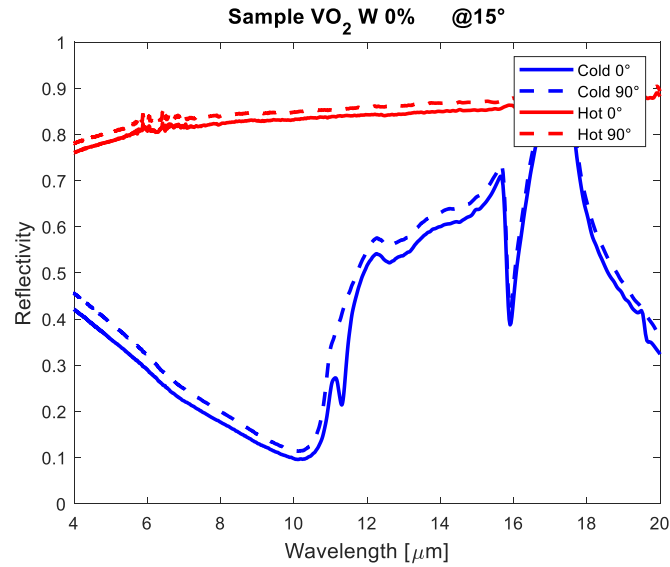
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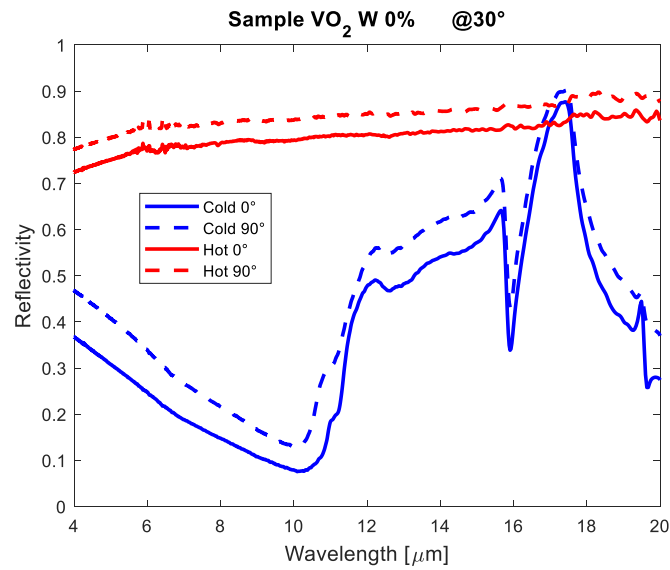
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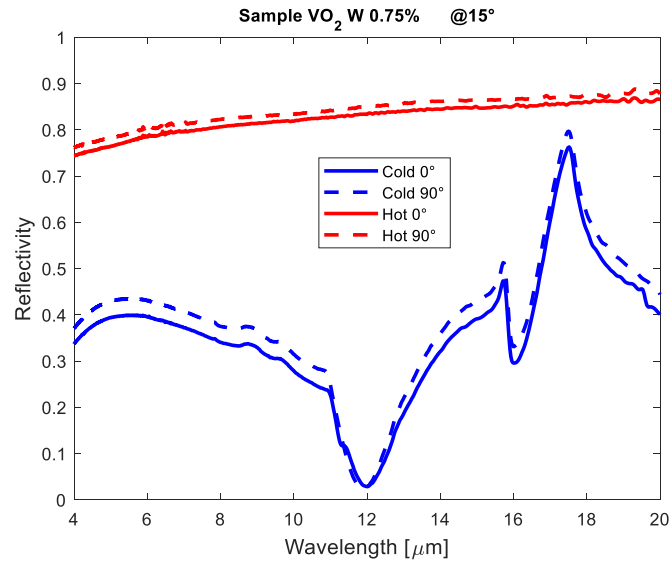
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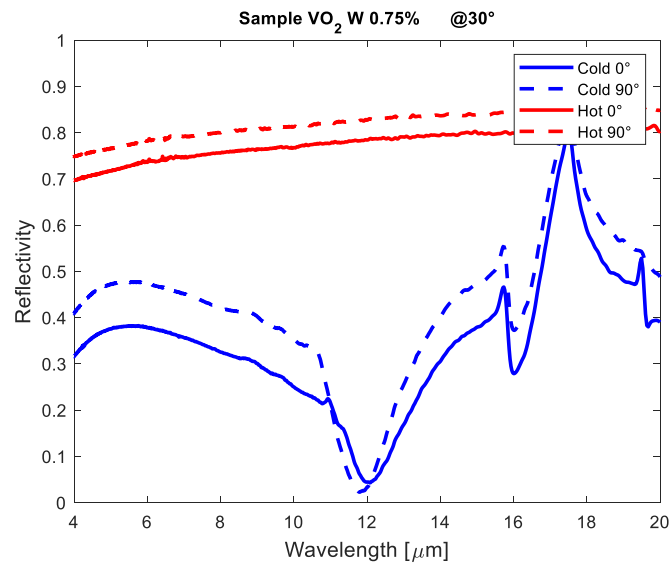
**Figure S1.** Reflectivity spectra measured at  $15^\circ$  incidence angle from an undoped  $\text{VO}_2$  film, 480 nm thick (without W doping) at different polarization states ( $0^\circ$  stands for p-polarization,  $90^\circ$  stands for s-polarization of the incident field). Temperature was fixed at room temperature (blue curves) and at  $100^\circ\text{C}$  (red curves).



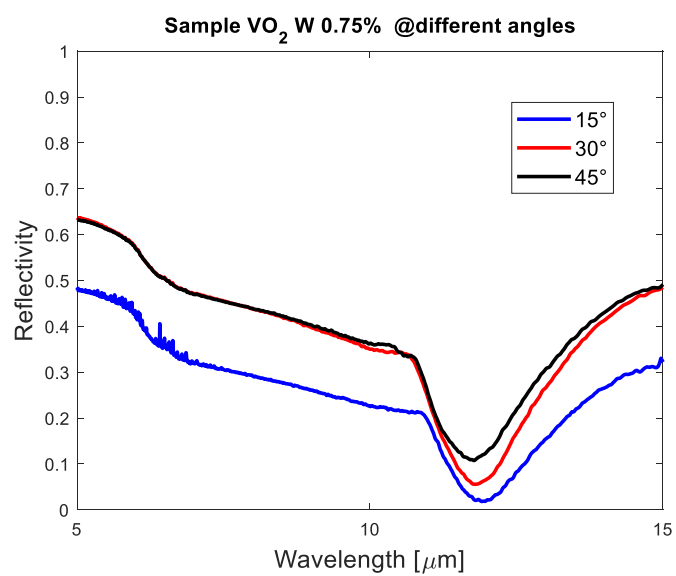
**Figure S2.** Reflectivity spectra measured at  $30^\circ$  incidence angle from an undoped  $\text{VO}_2$  film, 480 nm thick (without W doping) at different polarization states ( $0^\circ$  stands for p-polarization,  $90^\circ$  stands for s-polarization of the incident field). Temperature was fixed at room temperature (blue curves) and at  $100^\circ\text{C}$  (red curves).



**Figure S3.** Reflectivity spectra measured at  $15^\circ$  incidence angle from a  $\text{VO}_2$  film with an amount of  $W$  of about 0.75%, 480 nm thick, at different polarization states ( $0^\circ$  stands for p-polarization,  $90^\circ$  stands for s-polarization of the incident field). Temperature was fixed at room temperature (blue curves) and at  $100^\circ\text{C}$  (red curves).



**Figure S4.** Reflectivity spectra measured at  $30^\circ$  incidence angle from a  $\text{VO}_2$  film with an amount of  $W$  of about 0.75%, 480 nm thick, at different polarization states ( $0^\circ$  stands for p-polarization,  $90^\circ$  stands for s-polarization of the incident field). Temperature was fixed at room temperature (blue curves) and at  $100^\circ\text{C}$  (red curves).



**Figure S5.** FT-IR reflectivity spectra measured at room temperature, at different incidence angles (see caption) from VO<sub>2</sub> film, about 480 nm thick, with W concentration of 0.75% and s-polarization of the incident field.