

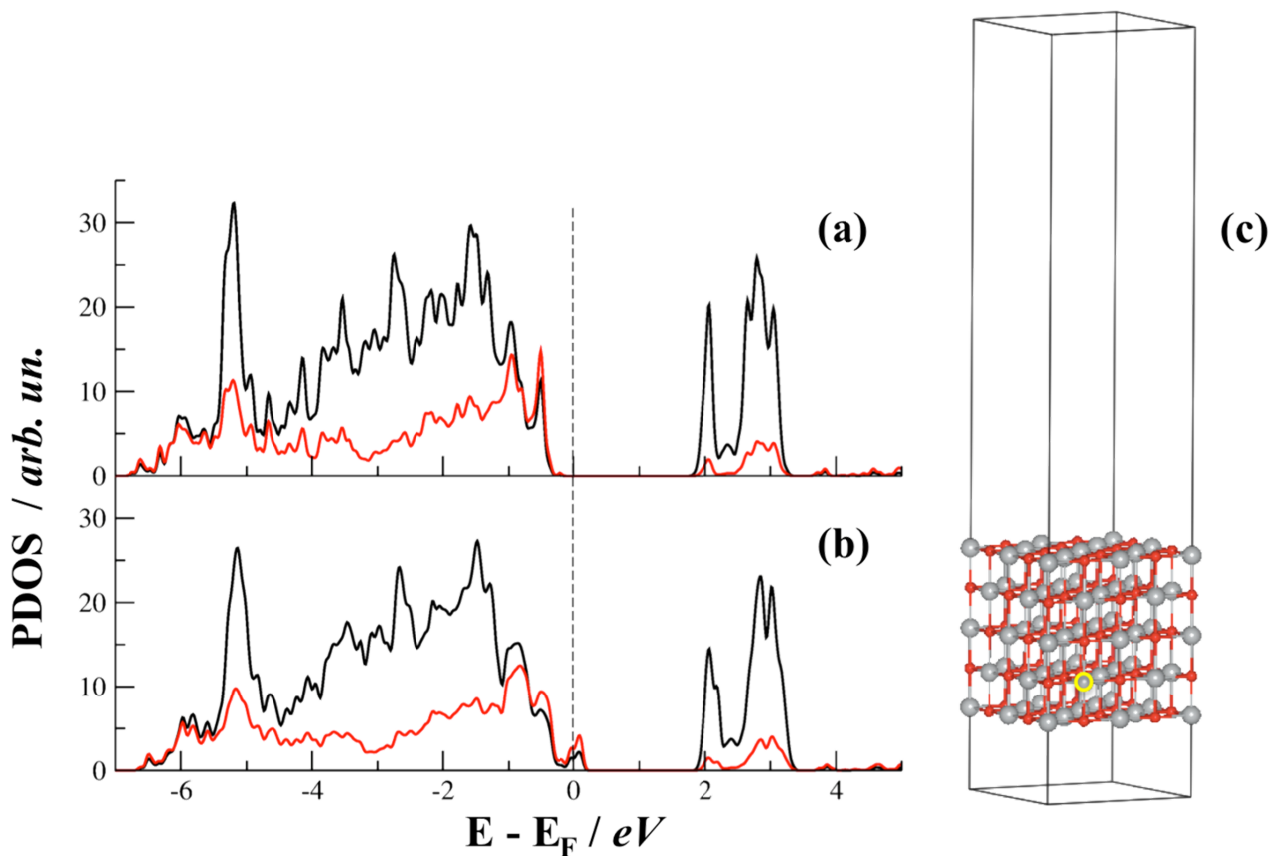
ELECTRONIC SUPPORTING INFORMATION

**Structure and energy level alignment at dye-electrode interface in p-type DSSC: new hints on the role of anchoring modes from *ab initio* calculations.**

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**Figure S1.** Atom- and angular-momentum projected density of states (PDOS) of (a) pristine NiO(100) slab and (b) p-type NiO(100) slab at the DFT+U level of theory with  $(U-J)_{\text{Ni}}=3.8$  eV. Ni d (black line) and O p (red line) states are shown; the Fermi energy ( $E_F$ ) is set to zero. (c) NiO(100) five-atomic-layer slab model, the highlighted Ni atom (in yellow) is removed for modeling p-type NiO(100); color legend: Ni (grey) O (red).



**Figure S2.** Plane-averaged electrostatic potential energy (solid line) along the  $z$  direction (i.e. the perpendicular axis to the slab surface) for the clean p-type NiO slab (a), p-NiO/CCO<sub>2</sub>-M (b), p-NiO/CCO<sub>2</sub>-B (c), p-NiO/CPO<sub>3</sub>-M (d), p-NiO/CPO<sub>3</sub>-B (e) p-NiO/CPO<sub>3</sub>-T (f); dashed lines represent the corresponding Fermi energy (i.e., the highest occupied Kohn-Sham eigenvalue).

