SUPPORTING INFORMATION

Unraveling the Function of an MgO Interlayer in Both Electrolyte and Solid-State SnO_2 Based Dye-Sensitized Solar Cells

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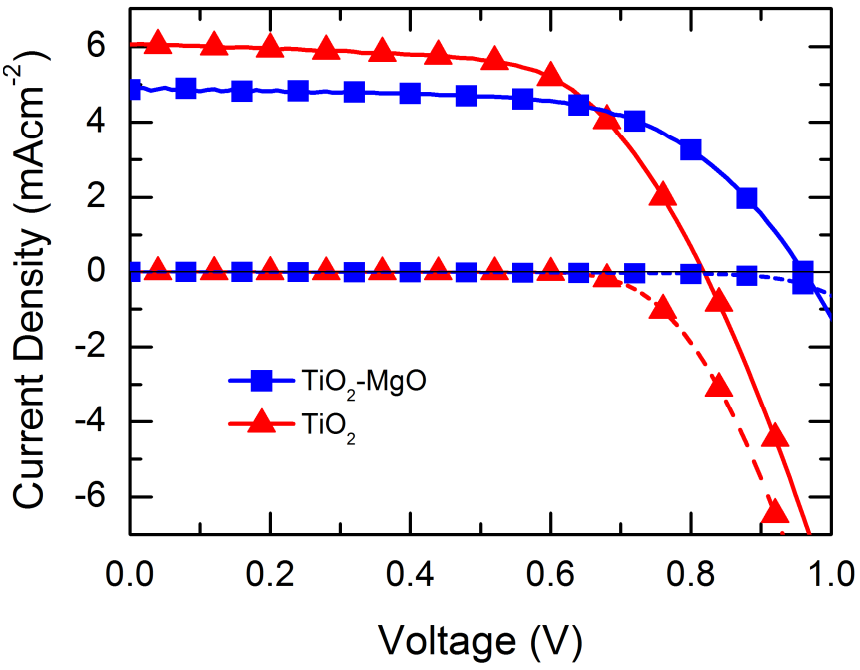
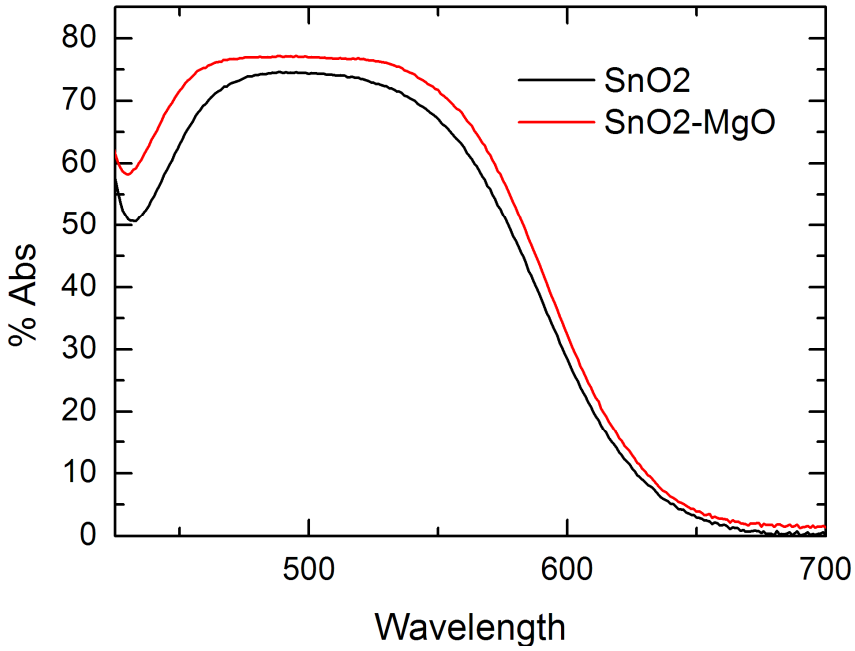
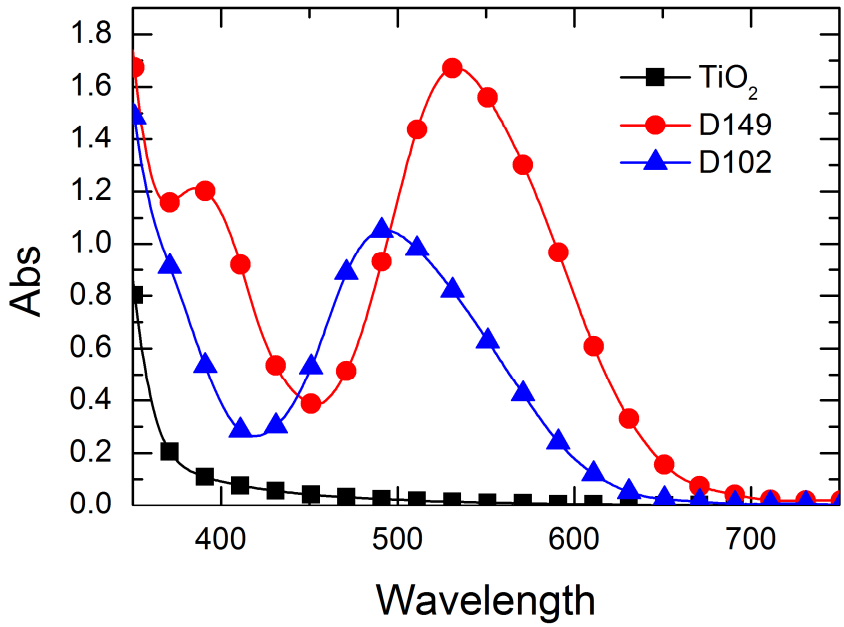


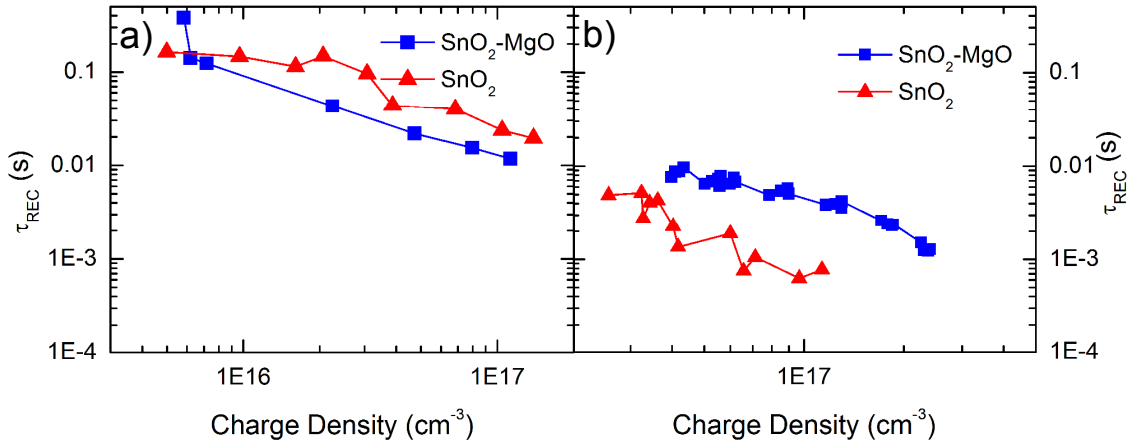
Supporting Information 1. Current voltage characteristics of solid-state TiO_2 devices, fabricated from commercially available nanoparticle paste and with the D102 dye, incorporating a thin MgO layer (blue squares) and no surface treatment (red triangles).



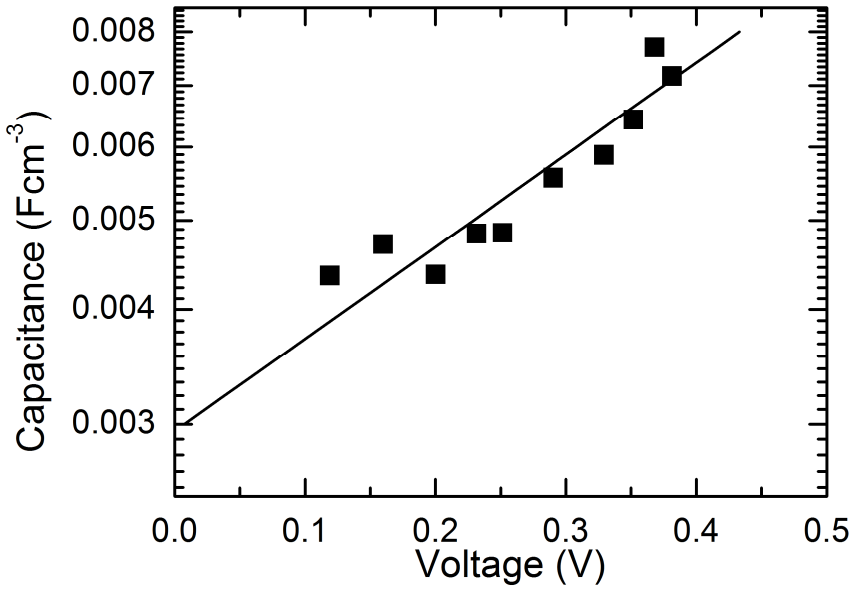
Supporting Information2. Absorption spectrum against wavelength for the films used in the solid-state devices incorporating a thin MgO layer (SnO2-MgO, red line) and films without a surface treatment (SnO2, black line).



Supporting Information3. Absorption spectrum against wavelength for mesoporous TiO_2 films of 1.5 μm in thickness (black squares), sensitized with the D149 dye (red circles) and sensitized with the D102 dye (blue triangles).



Supporting information 4. Recombination lifetimes (τ_{REC}) extracted at short circuit conditions plotted against charge density for devices incorporating a thin MgO layer (SnO_2-MgO, blue squares) and devices with no surface treatment (SnO_2, red triangles). a) corresponds to devices fabricated with a liquid electrolyte and b) to devices fabricated with a solid-state hole transporter.



Supporting information 5. Voltage against capacitance plot of a device fabricated from dye-sensitizing the compact layer used in the study.