Supporting Information

Figure S1. X-Ray Diffraction pattern of the SnO$_2$ nanopowder employed in this work.
Figure S2. SEM micrograph of the SnO$_2$ nanopowders employed in this work, magnification x 20000.

Figure S3. Plots of the Kubelka-Munk function at (i) 4000 cm$^{-1}$ and (ii) 2000 cm$^{-1}$ from the spectra in fig. 4.
Figure S4. The spectrum collected at 150 °C in fig. 4 subtracted from those taken up to 450 °C.
Figure S5. The spectrum collected at 450 °C in fig. 4 subtracted from those taken up to 600 °C.
Figure S6. Plot of the natural log of the absorbance at 2000 cm\(^{-1}\) in fig. 4 vs 1/temperature.
Figure S7. Plot of the fraction of ionised donor states $n/N_d$ vs temperature, see text for details.
Figure S8  FTIR spectra (8 cm$^{-1}$ resolution, 100 co-added and averaged scans, 2 minutes per scanset) as a function of temperature during the heating of 20 mg SnO$_2$+80 mg KBr powder. The reference spectrum was collected from pure KBr powder at 25ºC in dry N$_2$. Other spectra collected at the temperatures shown. The atmosphere was 80%N$_2$+20%O$_2$ passed through D$_2$O.
Figure S9 FTIR spectra (8 cm⁻¹ resolution, 100 co-added and averaged scans, 2 minutes per scanset) collected during the experiment depicted in fig. S7. The spectrum collected at 150 °C was subtracted from the spectra taken from 200 °C to 450 °C.