The FTIR spectra in Fig. S1 further supported the presence of interstitial carbon. The small peak at 1382 cm^{-1} in the FTIR spectra was ascribed to the formation of carbonate or carboxylate species due to interstitial carbon [1] while the peak at ca. 2339 cm^{-1} was assigned to the υ(CO) mode of adsorbed CO_2, which could be due to slight change in ambient environment [2] or a likely intermediate in the formation of surface carbonate and bicarbonate species, again due to interstitial carbon [3]. That's why it is stated in the abstract that the self-doped carbon is present as both interstitial and substitutional atom in TiO_2 lattice.

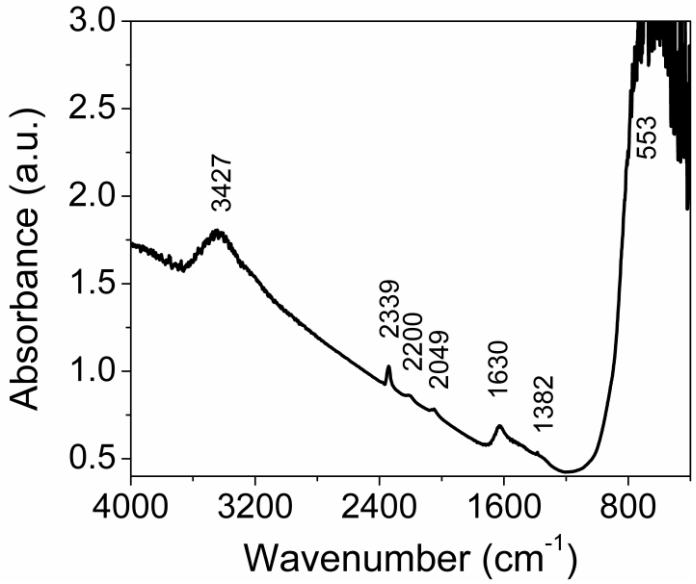

Fig. S1 FTIR spectra of Ag/C-TiO_2-5.0% with the peaks at 1382 and 2339 cm^{-1} confirming the formation of carbonate species due to interstitial carbon

References

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