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 $\nu$(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**

