Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

Supporting Information

The Fate of O_2 in Photocatalytic CO_2 Reduction on TiO_2 under Conditions of Highest Purity

Martin Dilla,[a] Alina Jakubowski,[a] Simon Ristig,*[a] Jennifer Strunk *[b] and Robert Schlögl [a,c]

[a.] *Max Planck Institute for Chemical Energy Conversion, 45470 Mülheim an der Ruhr, Germany.*
[b.] *Leibniz Institute for Catalysis, 18059 Rostock, Germany.*
[c.] *Fritz Haber Institute of the Max Planck Society, 14195 Berlin, Germany.*

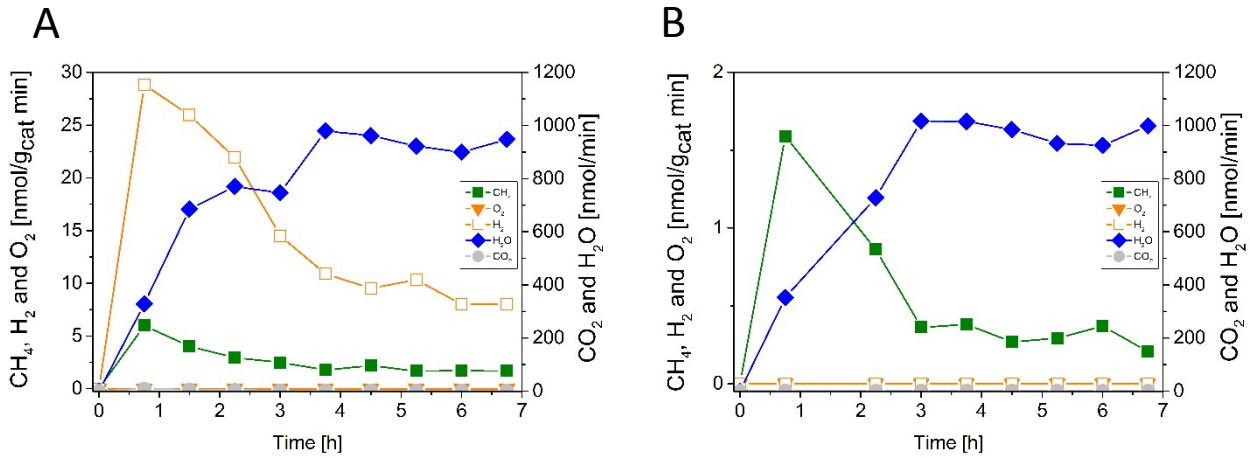

Figure SI1: Photocatalytic H_2O splitting with A: 0.05 wt.-% CoO_x/P25 calcined at 200 °C. B: 0.05 wt.-% CoO_x/P25 sample calcined at 400 °C. Irradiation time: 6.75 h. Lines are included in order to guide the eye.

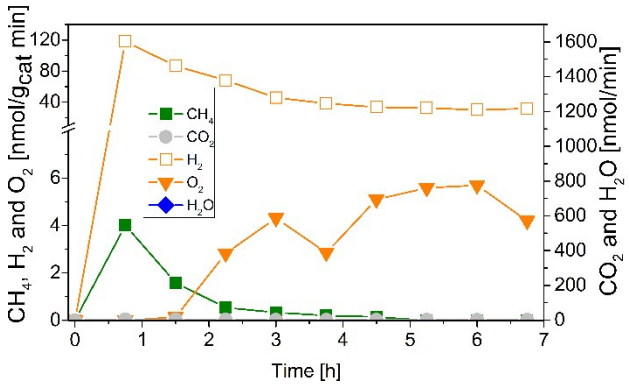

Figure SI2: Photocatalytic H_2O splitting and cleaning with 0.05 wt.-% IrO_x/P25 calcined at 200 °C. Irradiation time: 6.75 h. Lines are included in order to guide the eye.

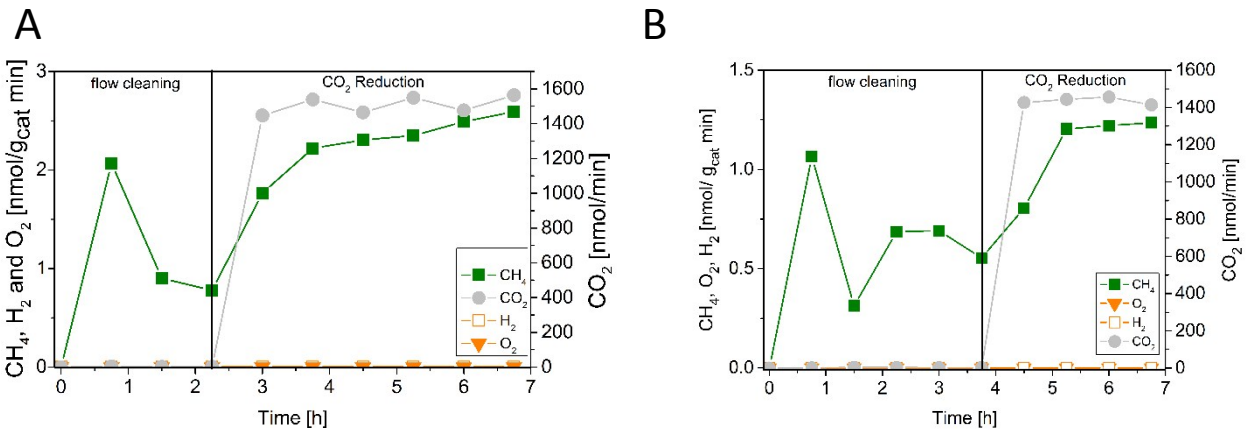

Figure SI3: Photocatalytic CO_2 reduction with A: P25 reference sample calcined at 200 °C (flow cleaning from 0 to 2.25 h, CO_2 reduction from 2.25 h to 6.75 h, ~25 nmol/min H_2O dosing from 0 to 6.75 h) and B: P25 reference sample calcined at 400 °C (flow cleaning from 0 to 3.75 h, CO_2 reduction from 3.75 h to 6.75 h, ~25 nmol/min H_2O dosing from 0 to 6.75 h). Lines are included in order to guide the eye.