## **Electronic supplementary information**

## Preparation of titania based biocatalytic nanoparticles and membranes for CO<sub>2</sub> conversion

Jingwei Hou<sup>a</sup>, Guangxi Dong<sup>a,b</sup>, Bowen Xiao<sup>a</sup>, Charly Malassigne<sup>a,c</sup> and Vicki Chen<sup>a,b\*</sup>

<sup>a</sup>UNESCO Centre for Membrane Science and Technology, School of Chemical Engineering, The University of New South Wales, Sydney, Australia. Email: v.chen@unsw.edu.au; Tel: +61-2-93854813; Fax: +61-2-93855966 

<sup>b</sup>Cooperative Research Centre for Greenhouse Gas Technologies (CO2CRC), School of Chemical Engineering, The University of New South Wales, Sydney, Australia 
<sup>c</sup>Polytech Nantes, Université de Nantes, France

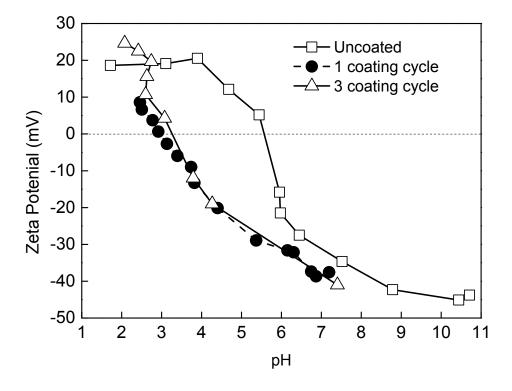


Figure S1. Membrane surface charge under different pH conditions (only 1 and 3 cycles coated membranes are presented as representatives)

Table S1.  $TiO_2$  loading on polymer membrane after different coating cycles

Sample	TiO <sub>2</sub> loading (wt %)
1 cycle coated PVDF	1.3 ± 0.2 %
2 cycle coated PVDF	3.0 ± 0.3 %
3 cycle coated PVDF	4.8 ± 0.4 %
4 cycle coated PVDF	6.2 ± 0.4 %