Electronic Supplementary Information

Two step and one step preparation of porous nanocomposite cellulose membranes doped with TiO_2

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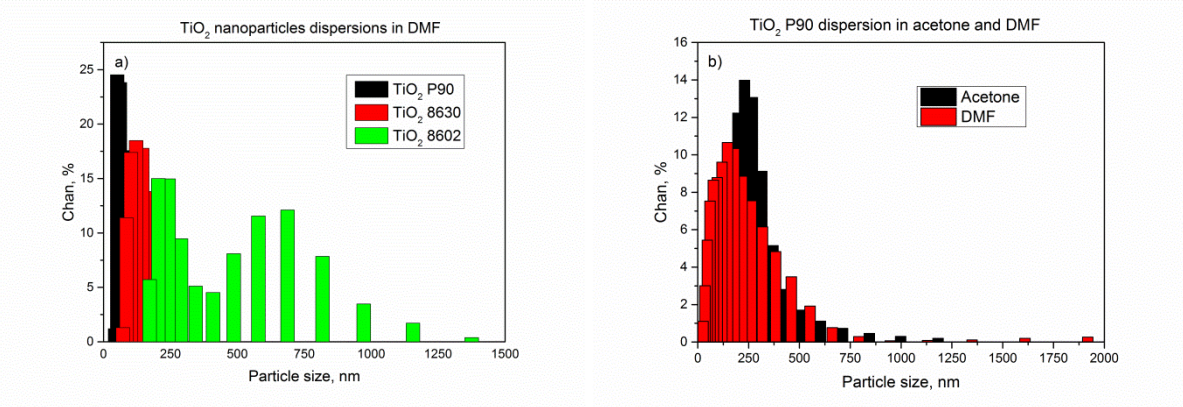

Figure SI-1. Particle size distribution (by number) for different TiO_2 nanoparticles in DMF (a) and for TiO_2 P90 in acetone and DMF (b)

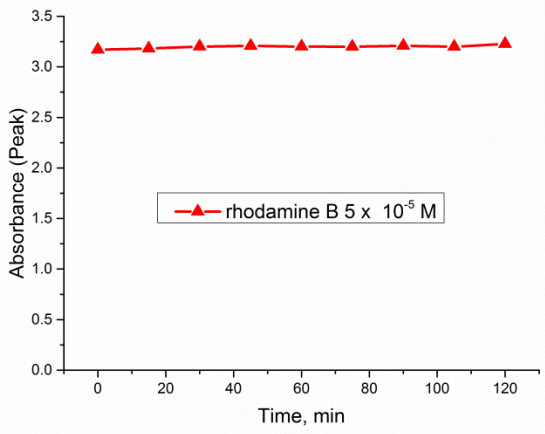

Figure SI-2. Rhodamine B degradation under UV excitation at 365 nm in the absence of catalyst

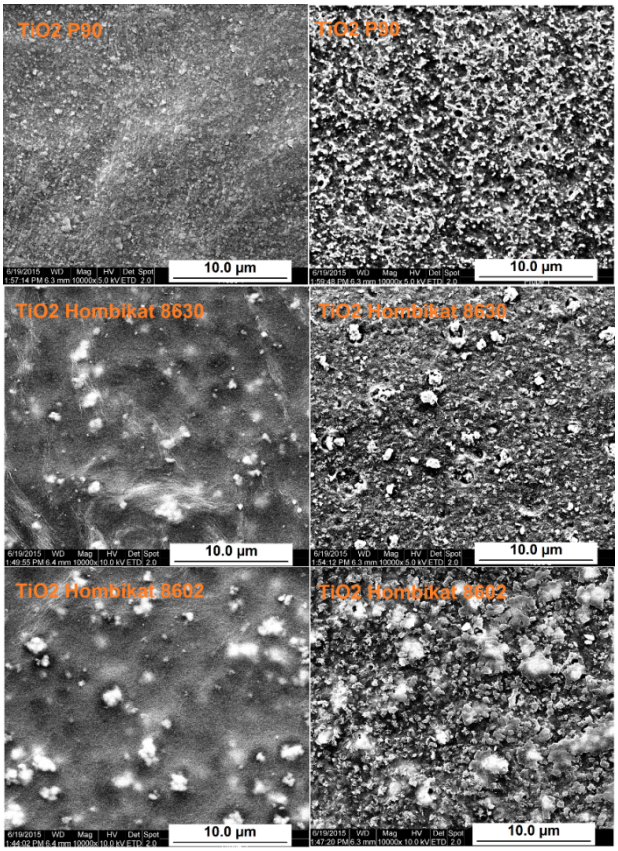

Figure SI-3. CA:TiO_2=10:2 membranes prepared from DMF solution containing different TiO_2 dopants: top surface (left) and glass surface (right),

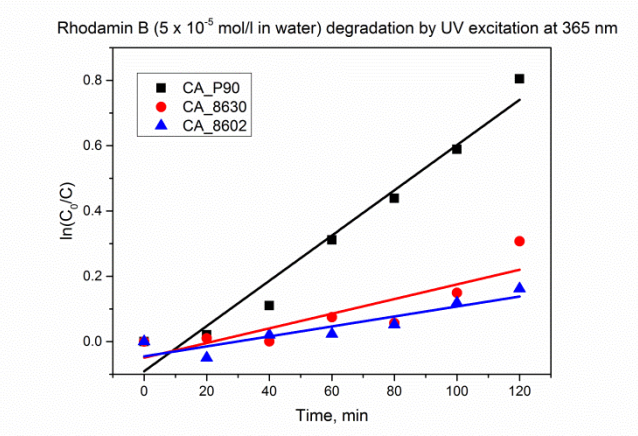

Figure SI-4. Rhodamine B degradation with CA:TiO_2 = 10:2 membranes (dried composite) containing different types of TiO_2 nanoparticles

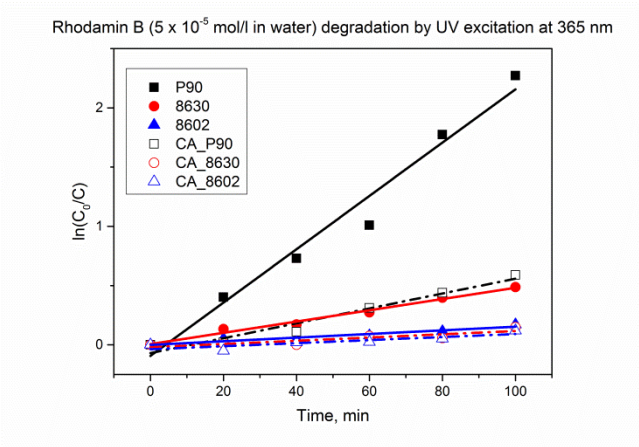

Figure SI-5. The reduction of the catalytic activity by embedment in the CA:TiO_2 = 10:2 membrane for all types of TiO_2

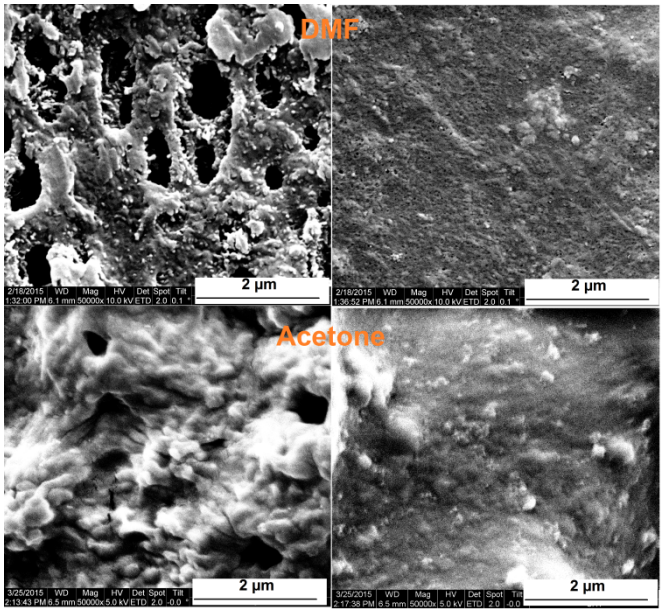

Figure SI-6. CA:TiO_2=10:1 membranes prepared from DMF and acetone solution: glass surface (left) and top surface (right)

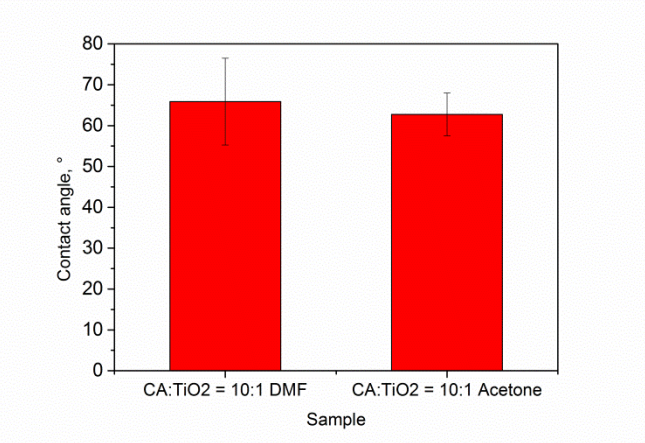

Figure SI-7. Water contact angles for the CA:TiO_2=10:1 membranes prepared from DMF and acetone solutions

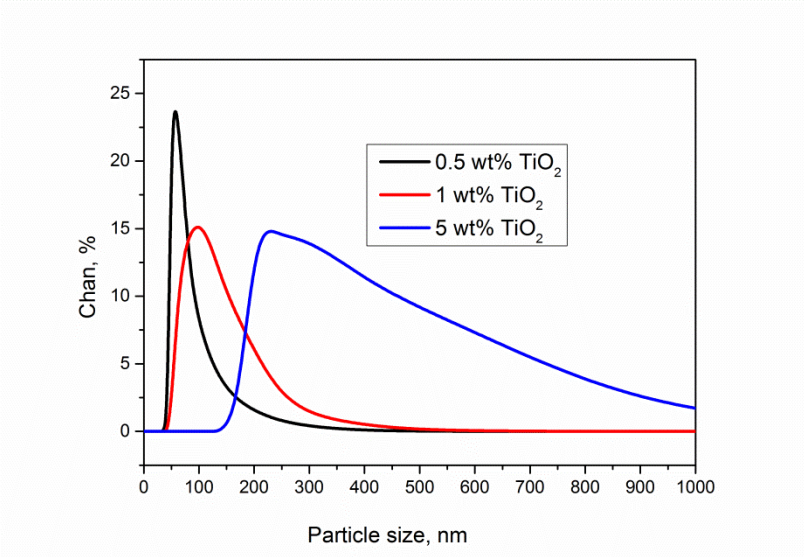

Figure SI-8. Particle size distribution of differently concentrated TiO_2 P90 dispersions in DMF

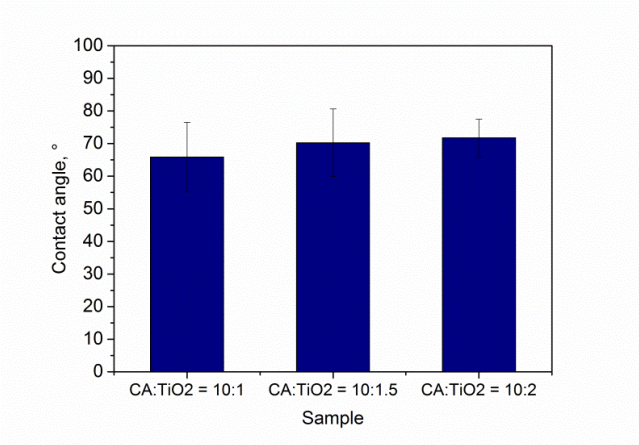

Figure SI-9. Water contact angles for CA:TiO_2 membranes with different TiO_2 contents

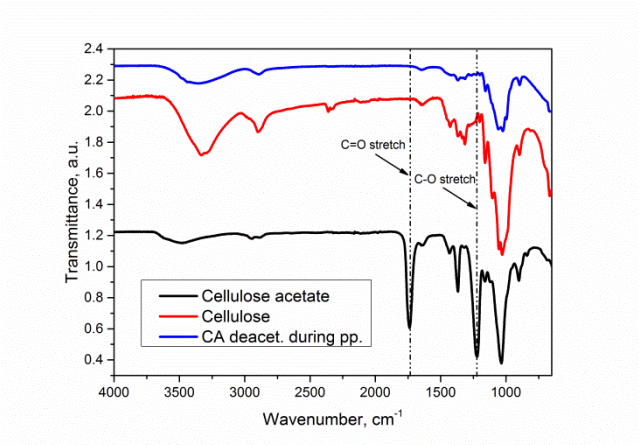

Figure SI-10. FT-IR Spectra of a CA:TiO_2 membrane before and after deacetylation

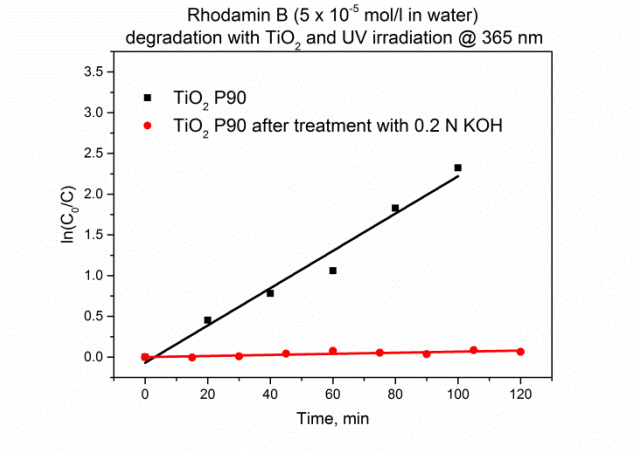

Figure SI-11. Catalytic activity of TiO_2 P90 as received and after treatment with 0.2 N KOH in H_2O

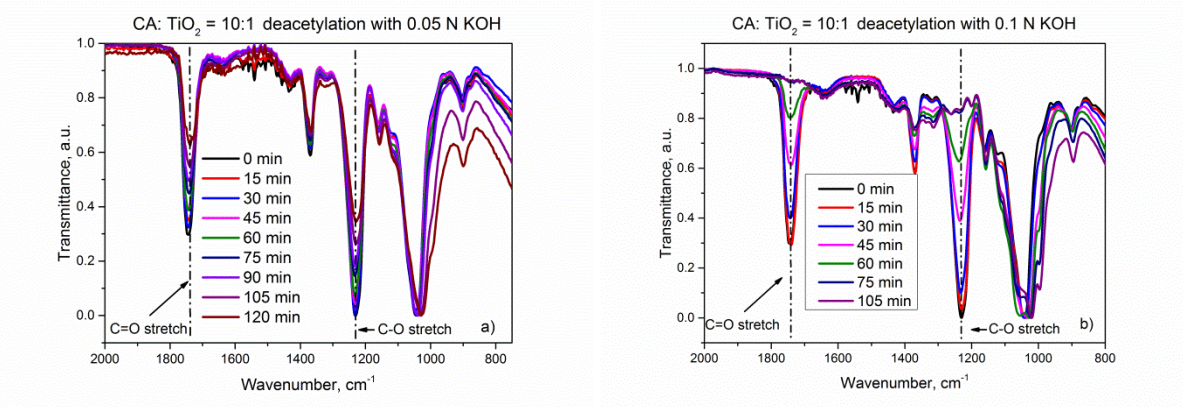

Figure SI-12. FT-IR spectra of a CA:TiO_2 =10:1 membrane after deacetylation for increasing amount of time with 0.05 N KOH (a) and 0.1 N KOH (b)