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Photo-induced monomer/dimer kinetics in methylene blue degradation over doped and phase controlled nano-TiO_2 film

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Supplementary Information

Fig: SI-1 (a, b)

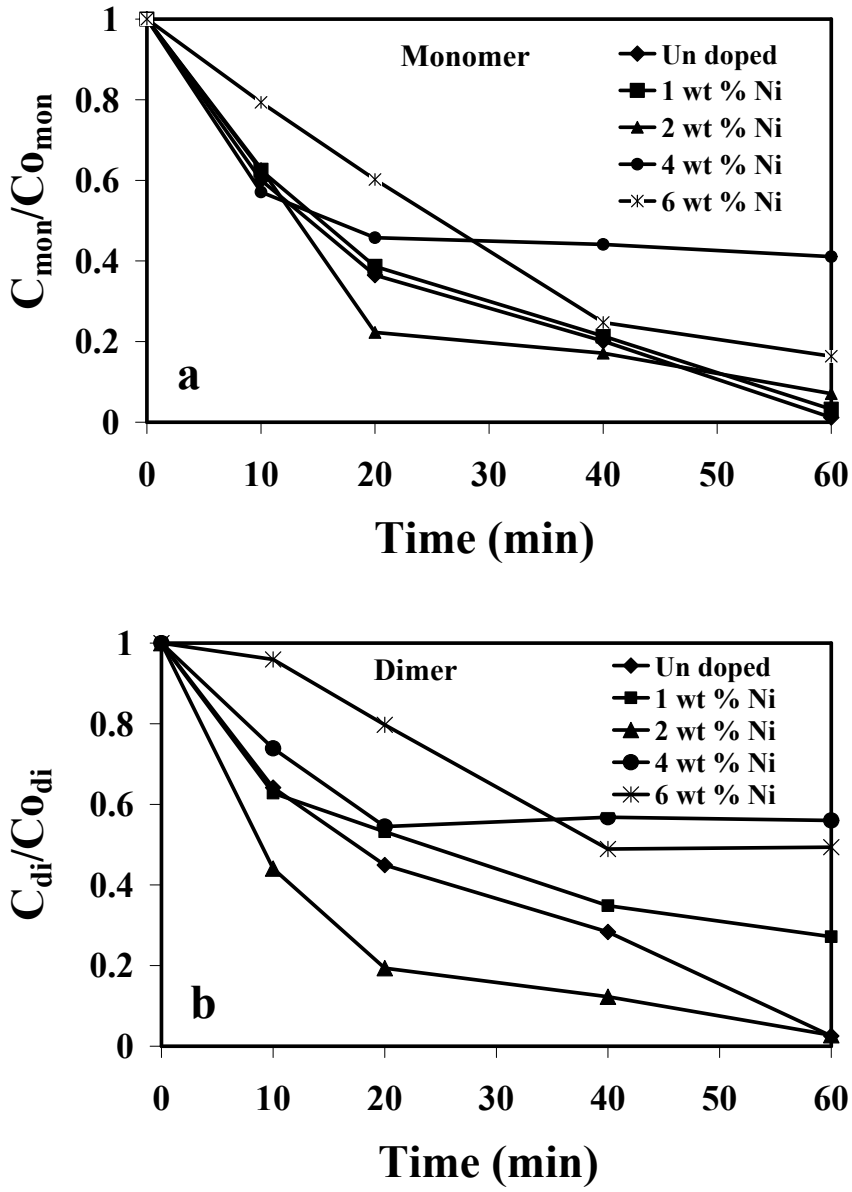

Fig. SI-1 (a, b) Variation in photocatalytic degradation activity under simulated solar irradiation on 0-6 wt% of Ni doped TiO_2 coated fused silica. a) Monomer and b) Dimer.

Fig: SI-2 (a, b)

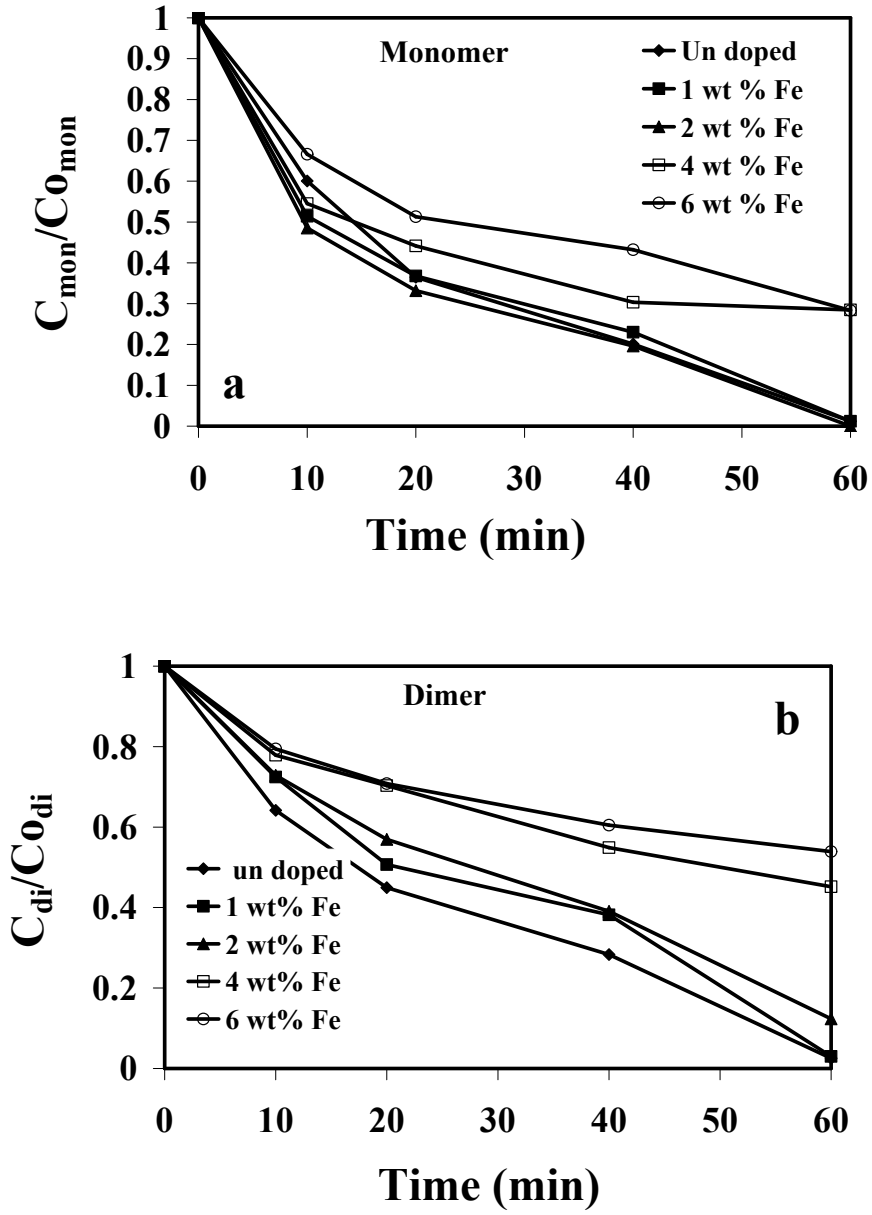

Fig. SI-2 (a, b) Variation in photocatalytic degradation activity under simulated solar irradiation on 0-6 wt% of Fe doped TiO_2 coated fused silica. a) Monomer and b) Dimer.

Fig: SI-3 (a, b)

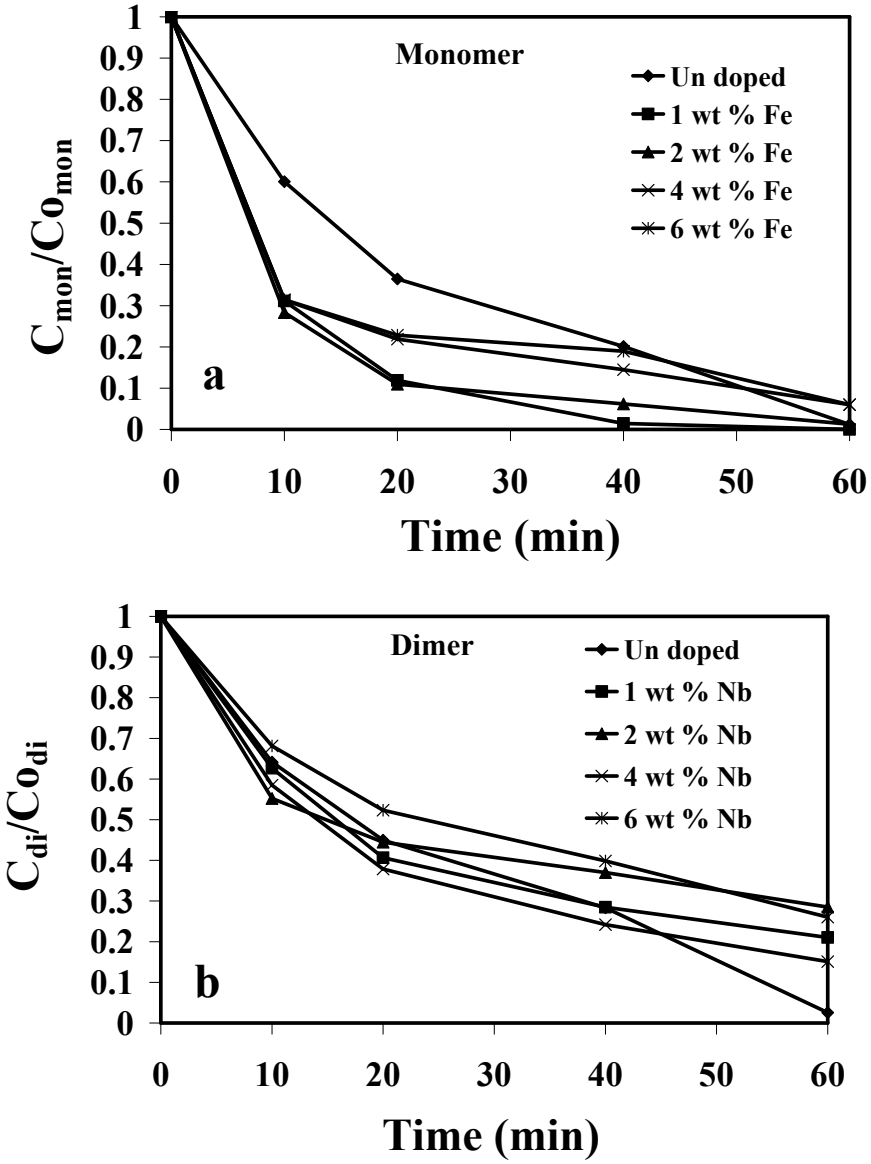

Fig. SI-3 (a, b) Variation in photocatalytic degradation activity under simulated solar irradiation on 0-6 wt% of Nb doped TiO_2 coated fused silica. a) Monomer and b) Dimer.

Fig: SI-4 (a-d)

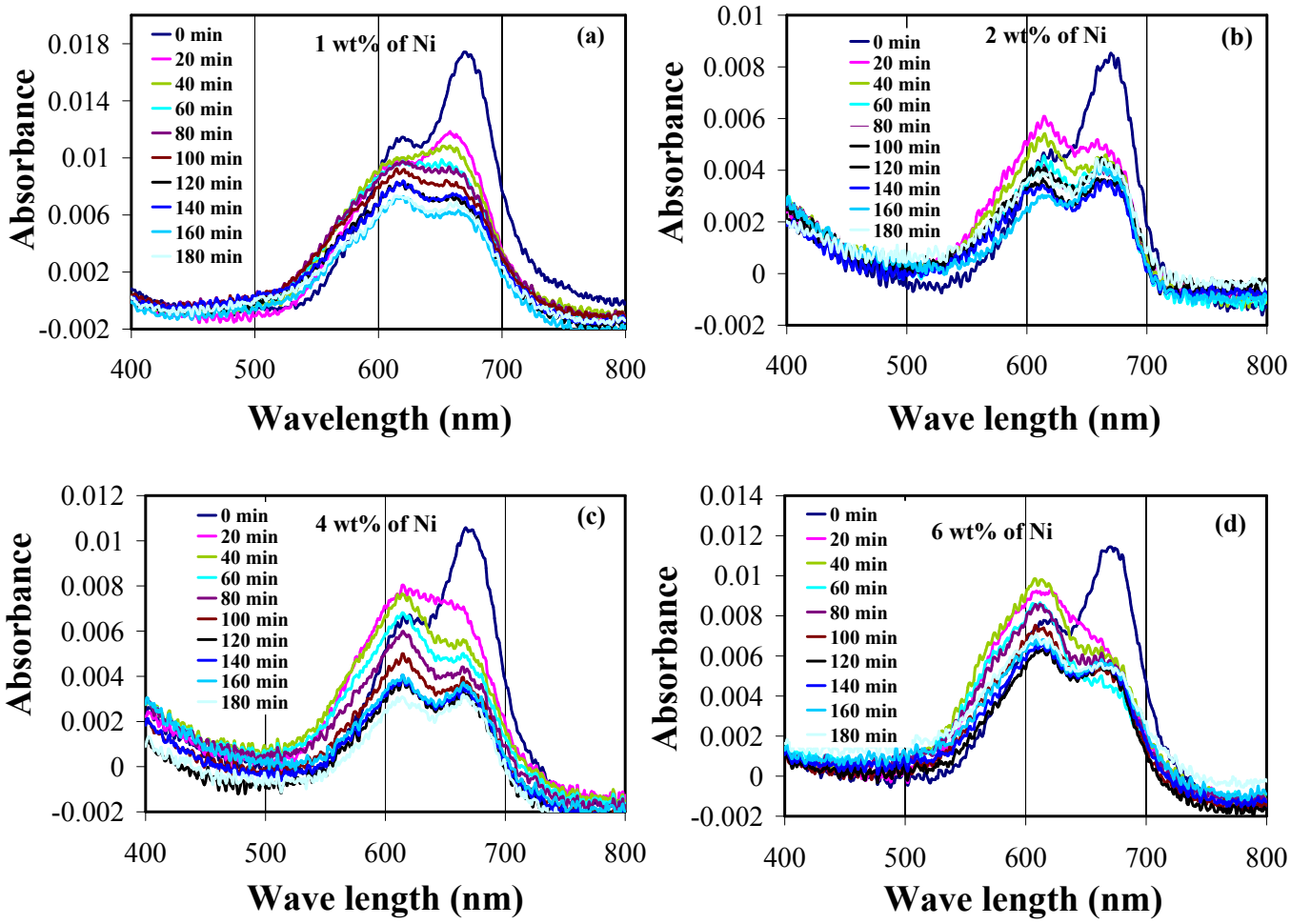

Fig. SI-4 (a- d) Change in concentration due to visible light (420nm) photocatalytic degradation of bounded MB on 1-6 wt.% of Ni doped TiO_2 on fused silica. a) 1, b) 2, c) 4 and d) 6 wt.% of Ni.

Fig: SI-5 (a-d)

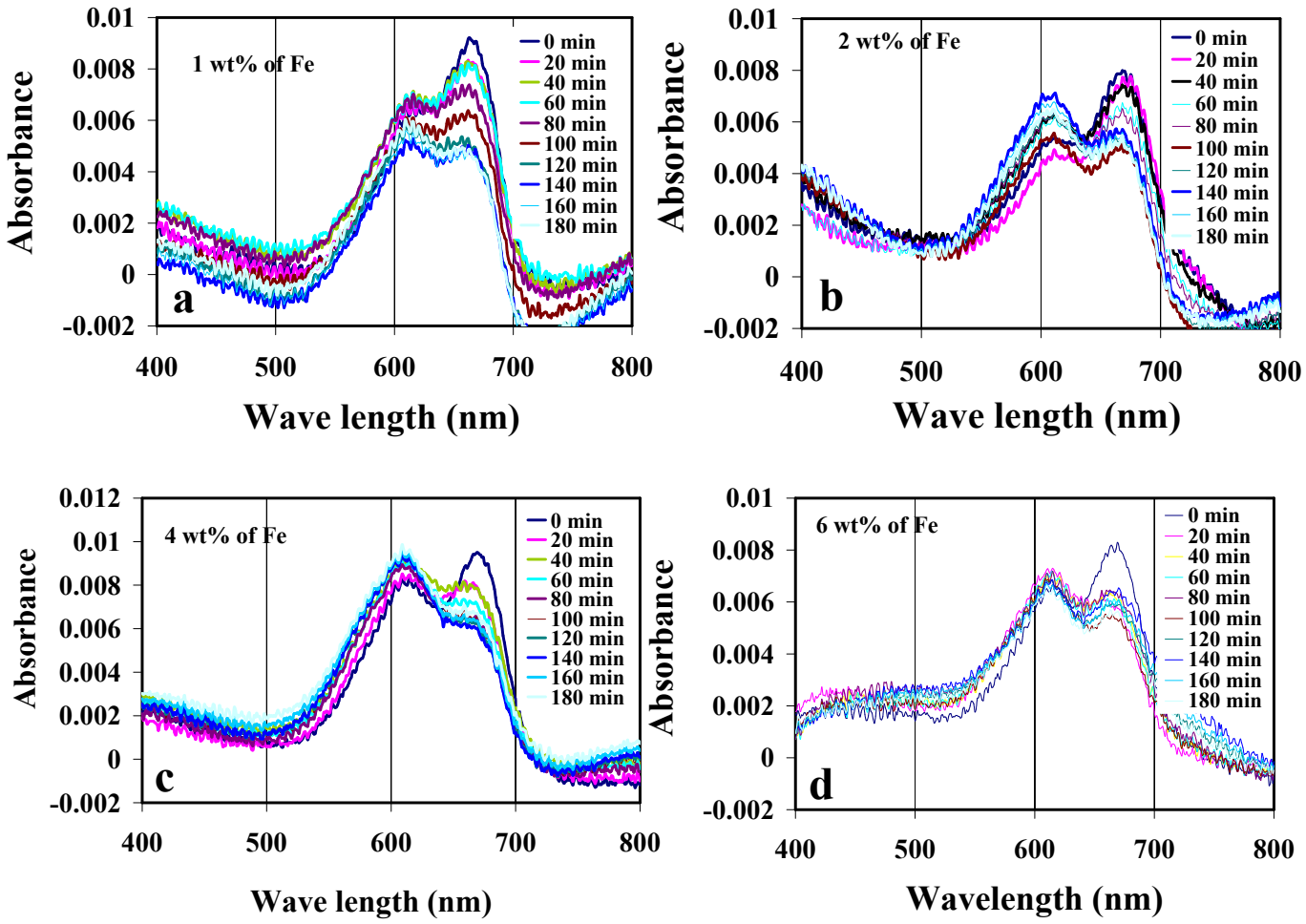

Fig. SI-5 (a- d) Change in concentration due to visible light (420nm) photocatalytic degradation of bounded MB on 1-6 wt.% of Fe doped TiO_2 on fused silica. a) 1, b) 2, c) 4 and d) 6 wt.% of Fe.

Fig: SI-6 (a-d)

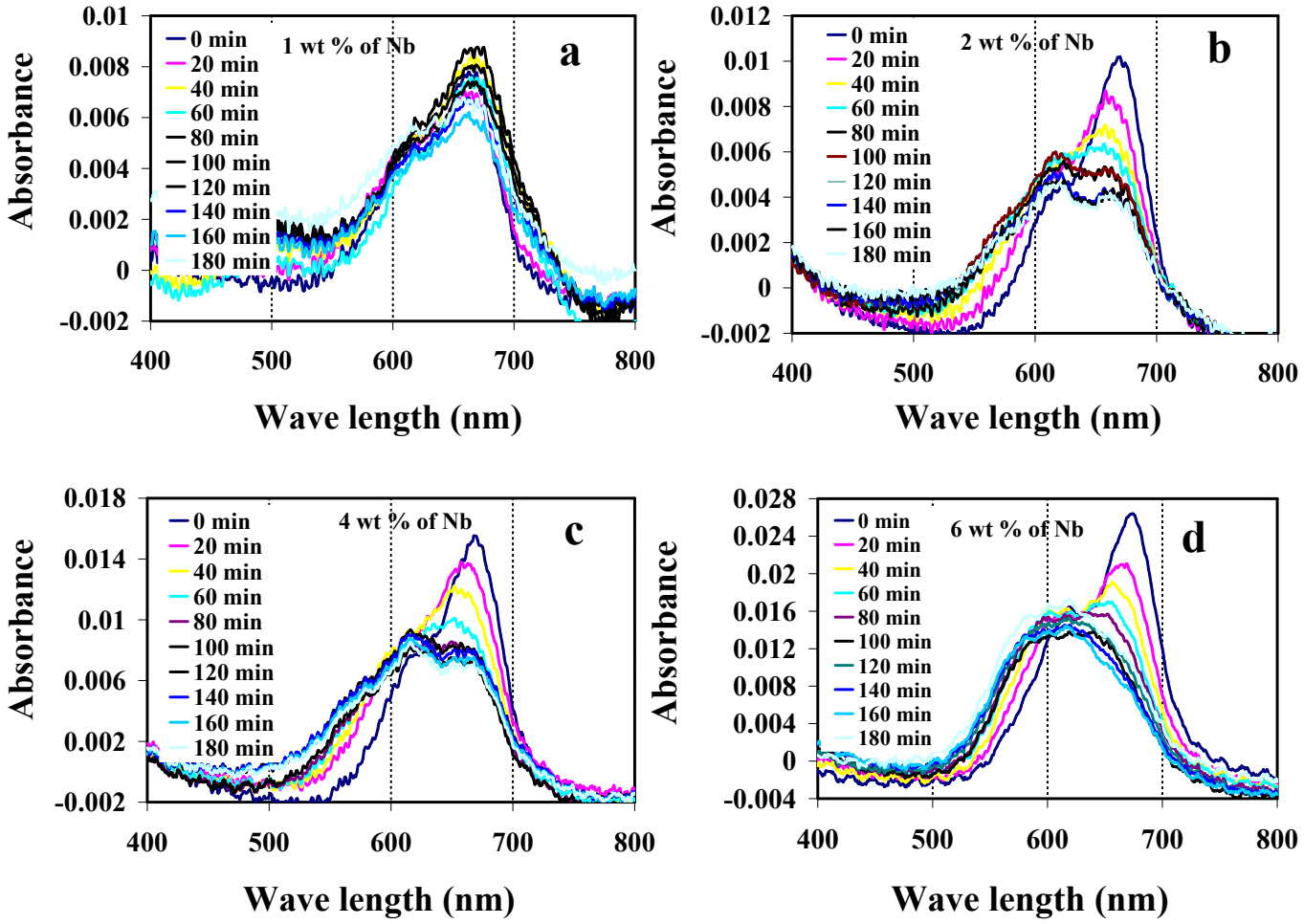

Fig. SI-6 (a- d) Change in concentration due to visible light (420nm) photocatalytic degradation of bounded MB on 1-6 wt.% of Nb doped TiO_2 on fused silica. a) 1, b) 2, c) 4 and d) 6 wt.% of Nb.

Fig: SI-7 (a, b)

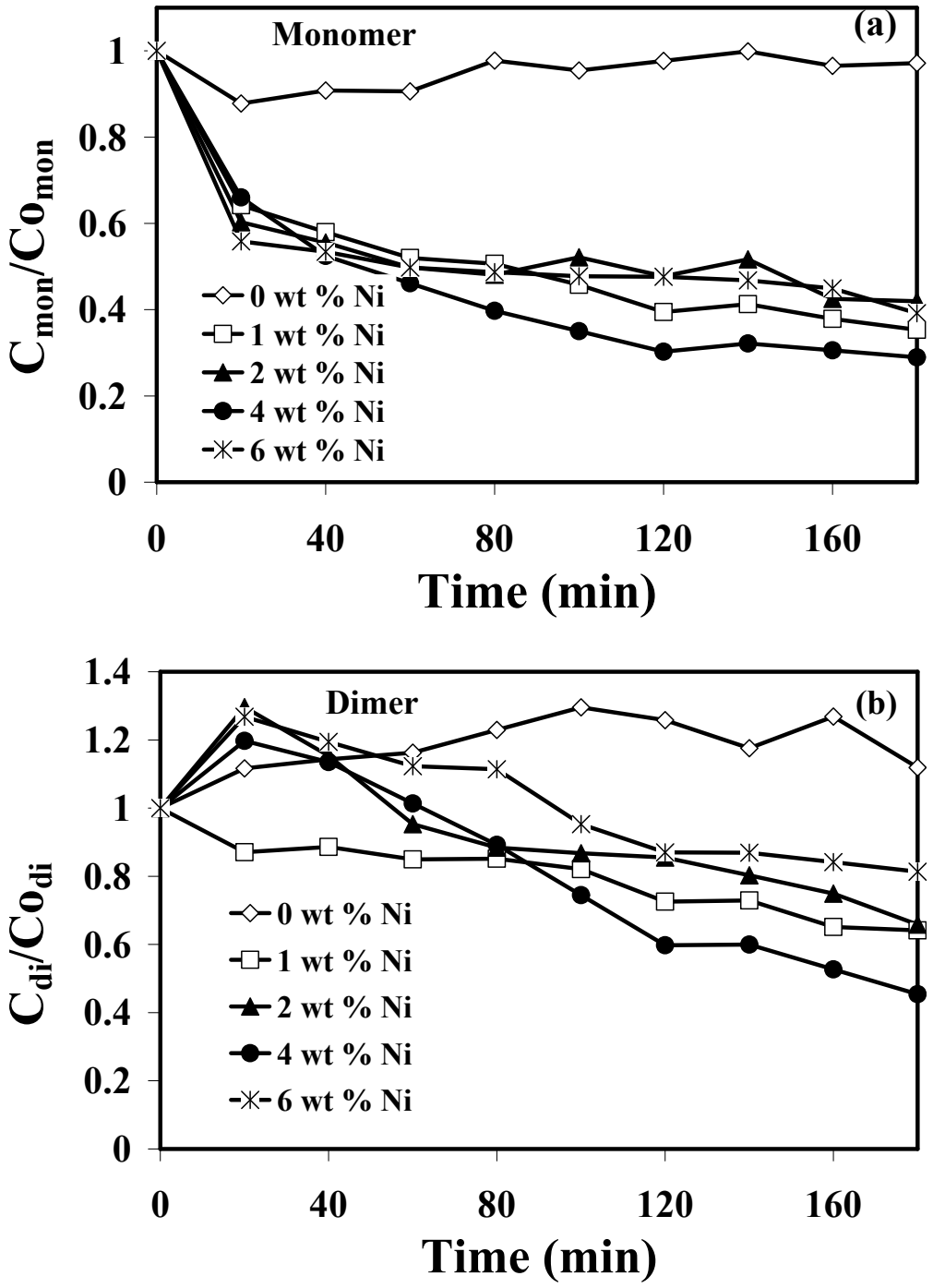

Fig. SI-7 (a, b) Variation in the visible light photocatalytic degradation activity on various wt.% of Ni doped TiO_2 coated fused silica. a) Monomer and b) Dimer.

Fig: SI-8 (a, b)

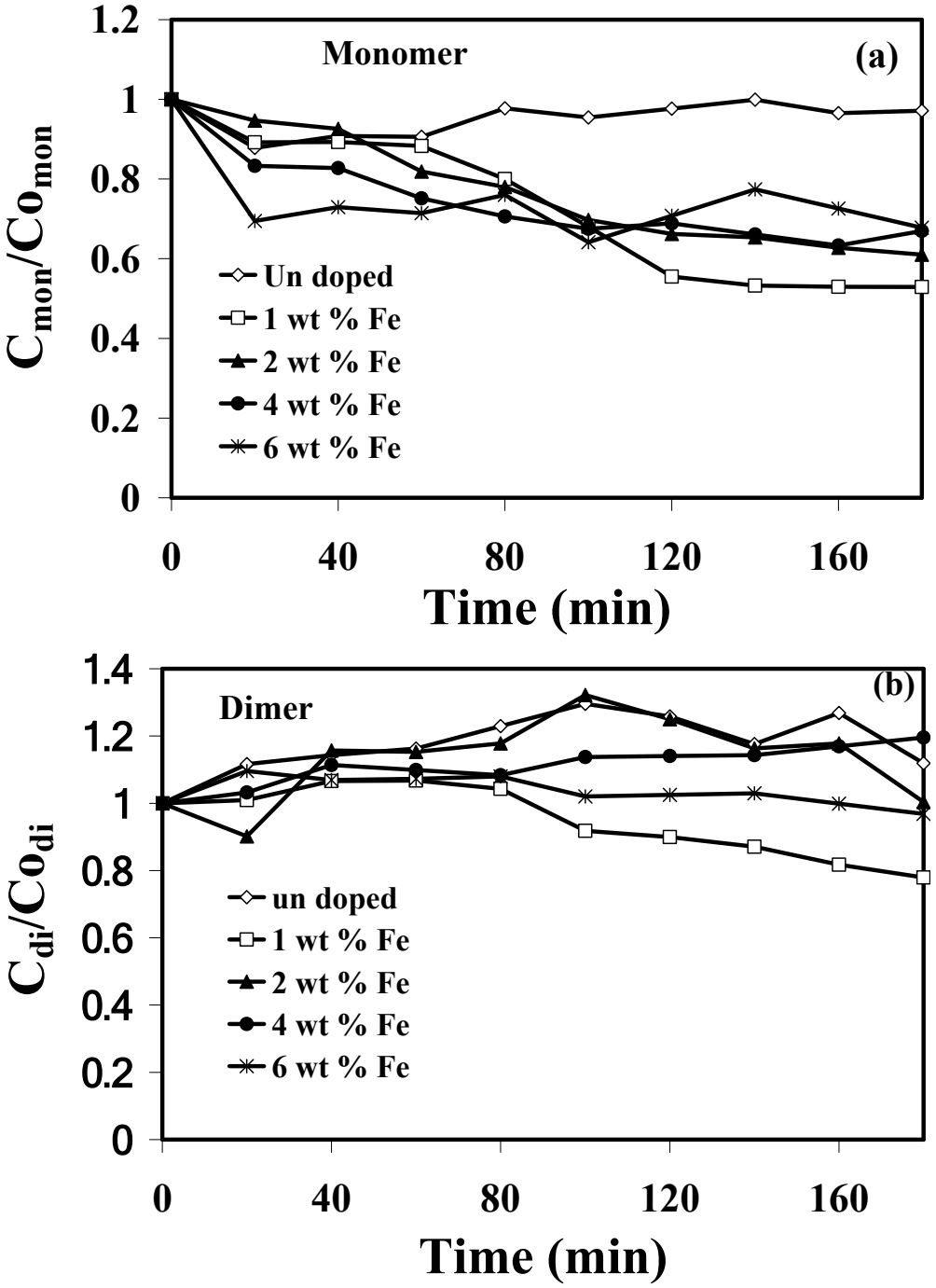

Fig. SI-8 (a, b) Variation in the visible light photocatalytic degradation activity on various wt.% of Fe doped TiO_2 coated fused silica. a) Monomer and b) Dimer.

Fig: SI-9 (a, b)

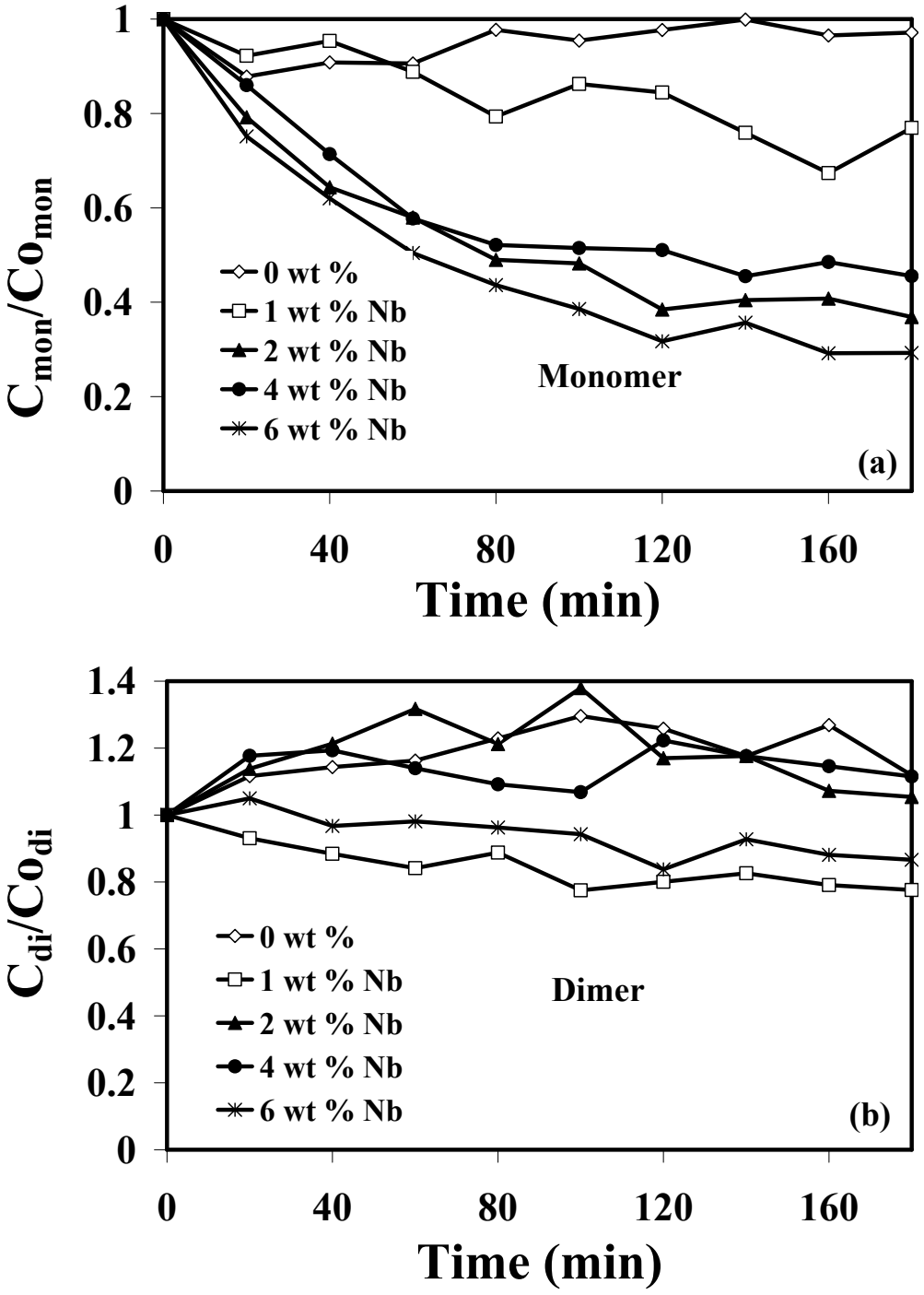

Fig. SI-9 (a, b) Variation in the visible light photocatalytic degradation activity on various wt.% of Nb doped TiO_2 coated fused silica. a) Monomer and b) Dimer.

Fig: SI-10 (a-c)

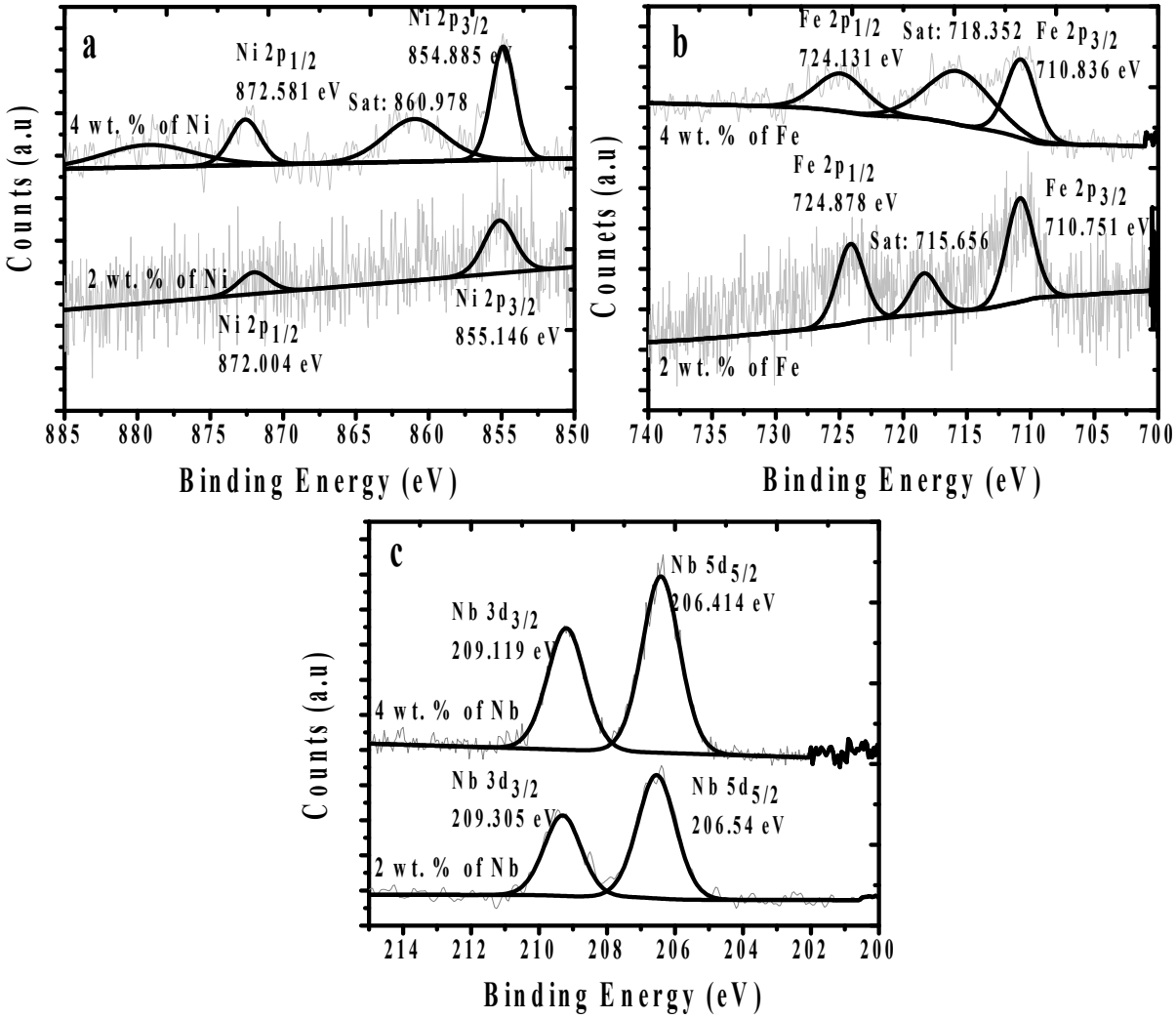

Fig. SI-10 High resolution XPS core level spectra of 2 and 4 wt.% doped TiO_2 thin film on fused silica. a) Ni doped, b) Fe doped and c) Nb doped.

Figure: SI-11 (a-c)

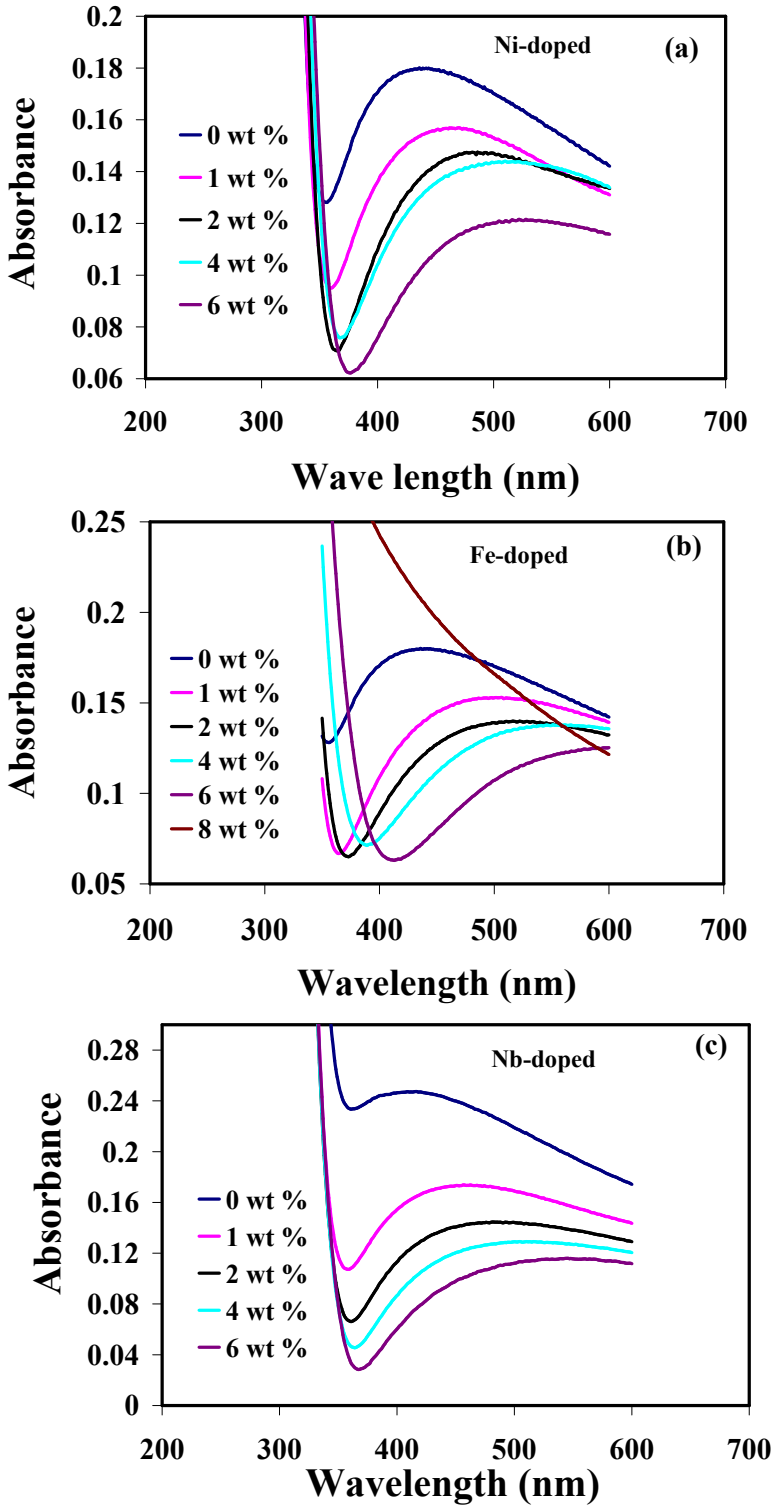

Fig. SI-11 Visible absorbance spectrum of 0 to 6 wt.%. a) Ni doped, b) Fe doped and c) Nb doped