

POLYANILINE-NIOBIUM OXIDE NANOHYBRIDS WITH PHOTOCATALYTIC ACTIVITY UNDER VISIBLE LIGHT IRRADIATION

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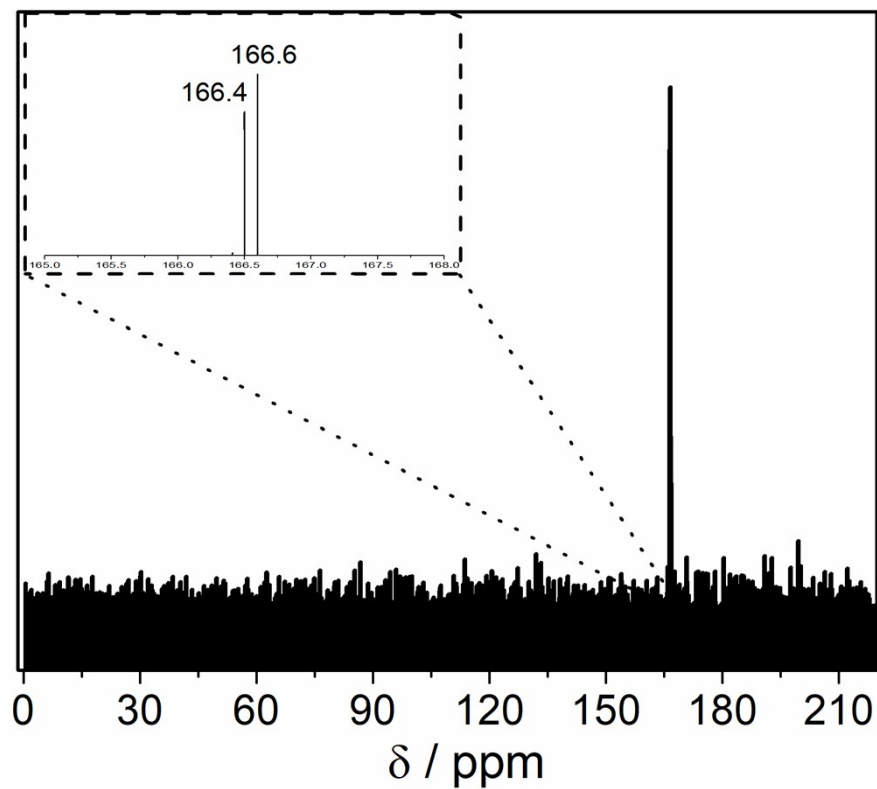


Figura 1S - ^{13}C NMR spectrum of $(\text{NH}_4)[\text{Nb}(\text{C}_2\text{O}_4)(\text{O}_2)_2(\text{H}_2\text{O})_2]$ (125 MHz in D_2O). Inset: 165– 168 ppm region, evidencing the C=O of the oxalates groups

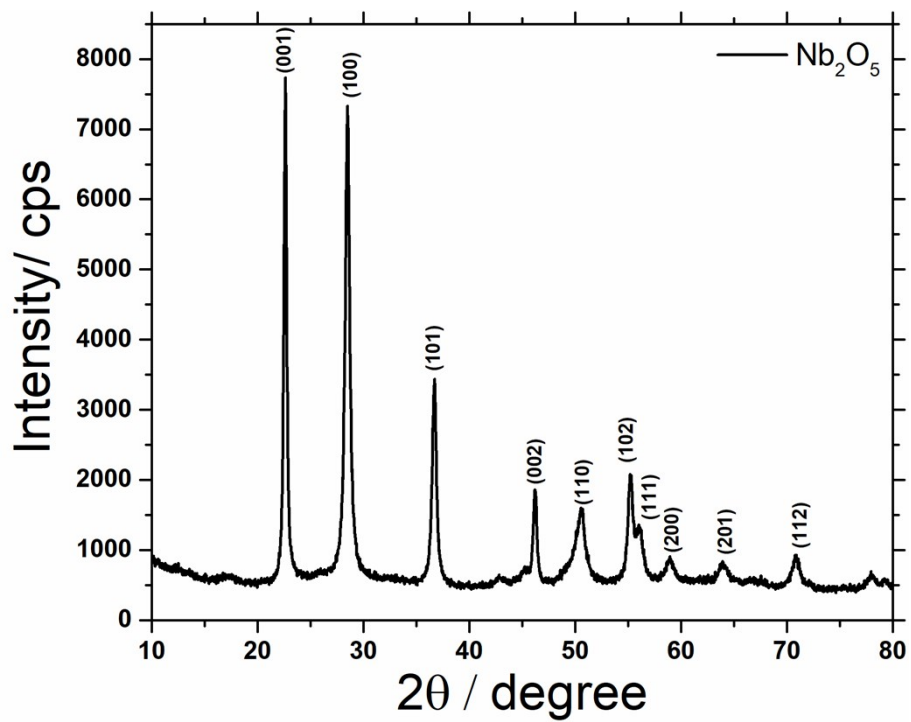


Figure 2S – XRD pattern of the residue of the TG experiment obtained for the PANI_Nb_2 sample

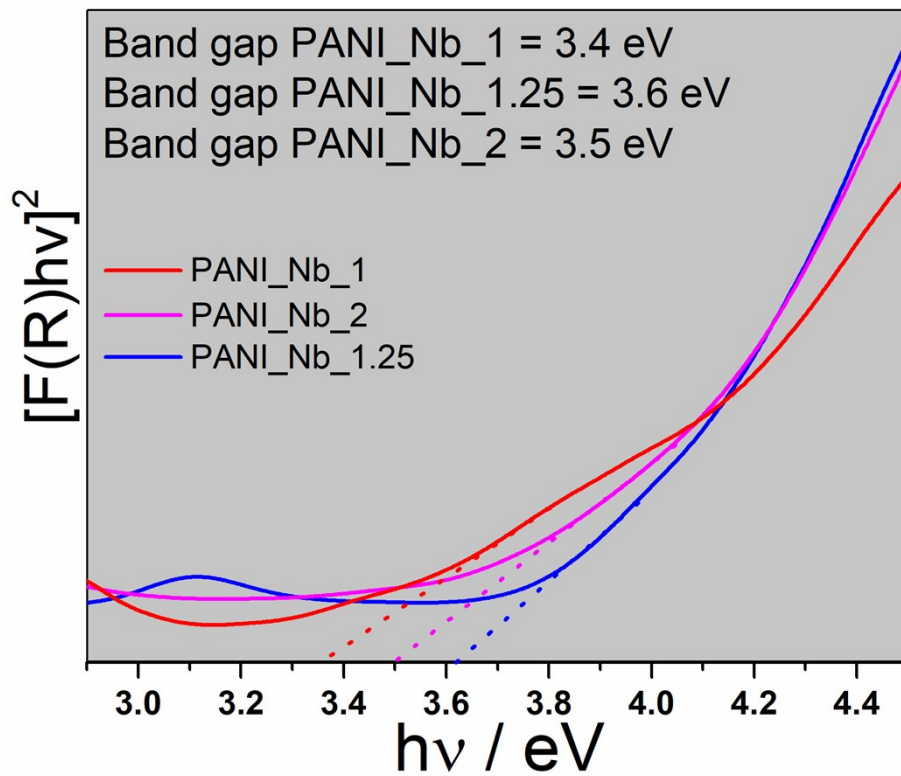
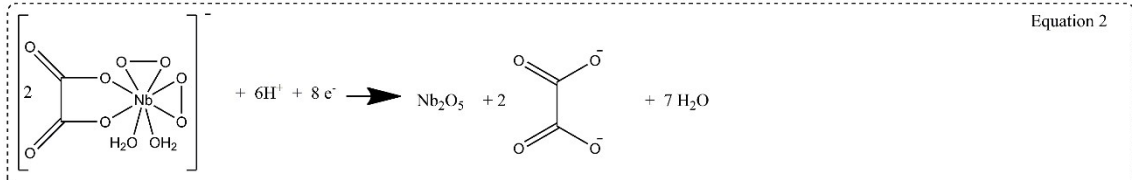
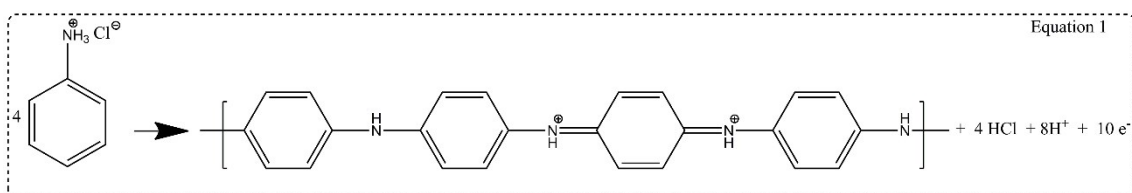


Figure 3S – Diffuse reflectance spectra in the UV-visible range of PANI_Nb_x samples



Global Equation = Eq (1) * 1.25 + Eq (2)

Figure 4S – The reduction and oxidation semi-reactions for between anilinium chloride and peroxyoxalate niobium

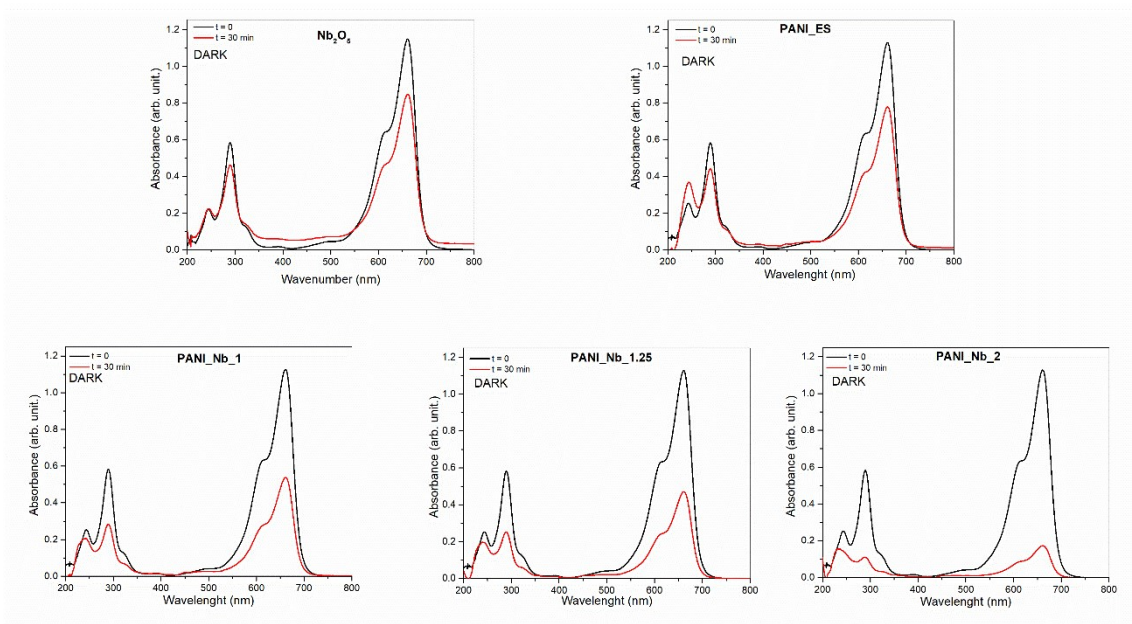


Figure 5S: UV/Vis absorption spectra of aqueous MB in the presence of the hybrids of PANI and Nb_2O_5 in dark conditions

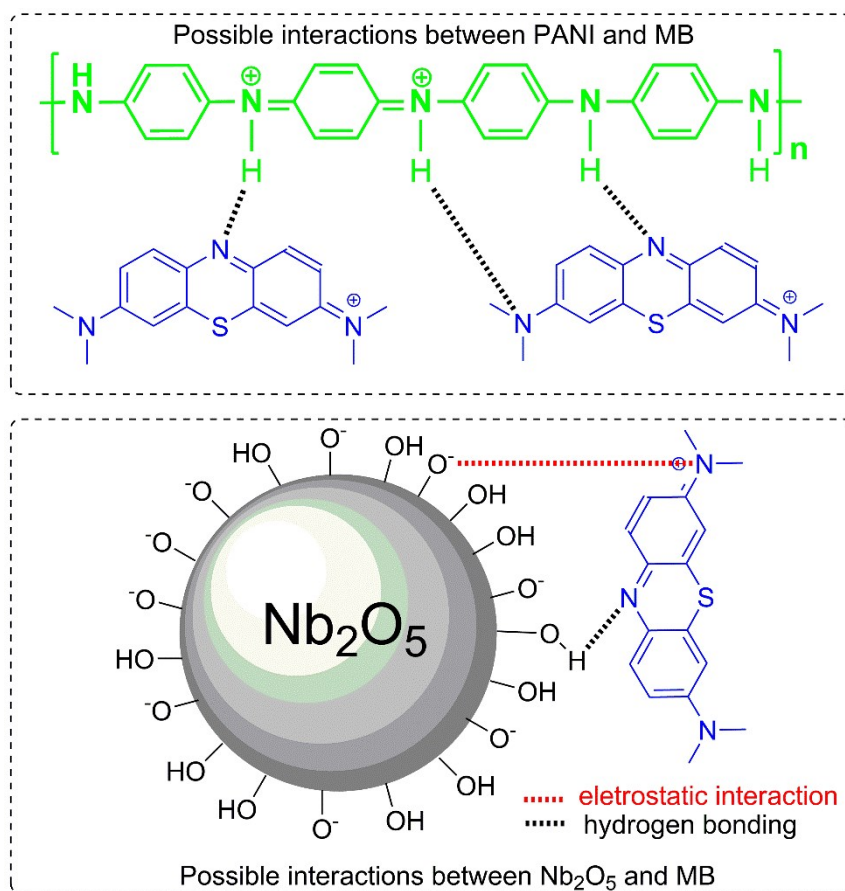


Figure 6S: Possible interactions between Nb_2O_5 , PANI and MB

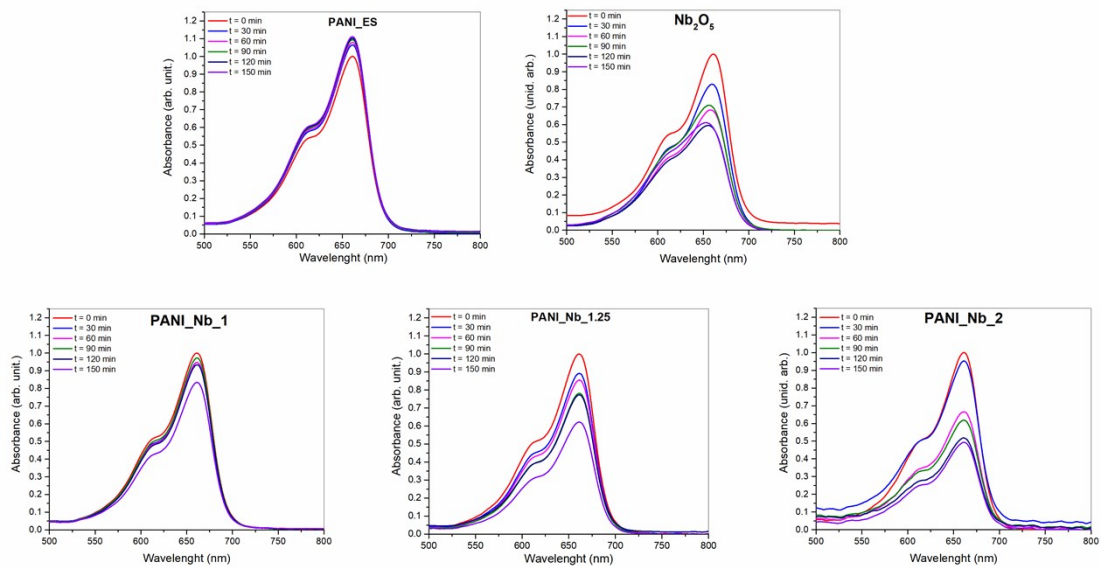


Figure 7S: UV/Vis absorption spectra of aqueous MB in the presence of the hybrids of PANI and Nb₂O₅ under visible light

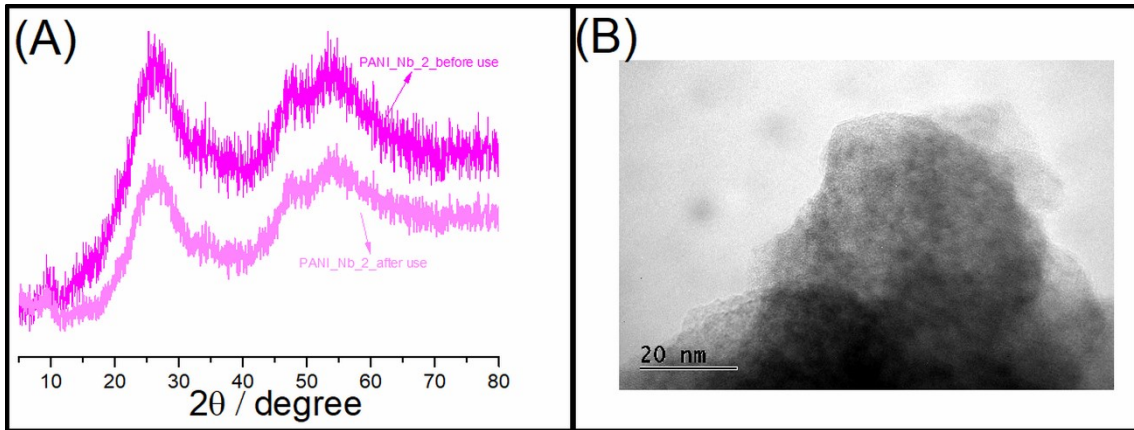


Figure 8S: DRX (A) and TEM image (B) of the PANI_Nb_2 sample after its usage in the discoloration assays