Electronic Supplementary Material (ESI) for RSC Advances.

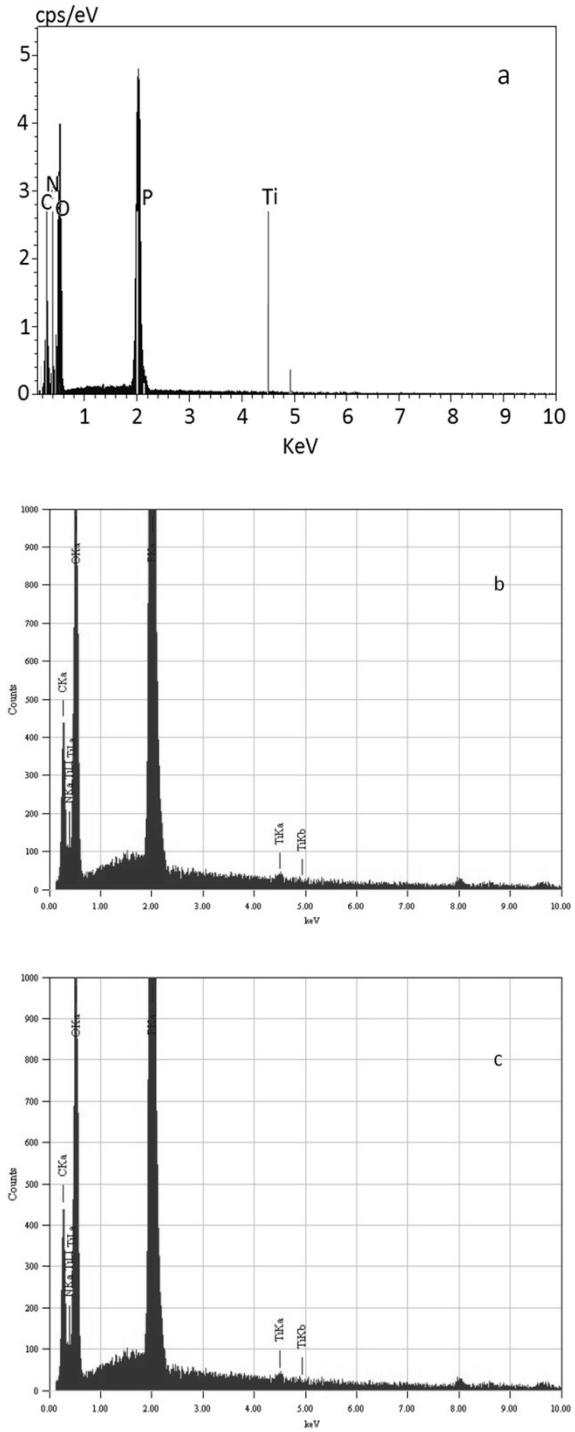


Fig. 1: Energy dispersive X-ray analysis of a) TNPAP, b) TNOAP and c)

TNDDAP.

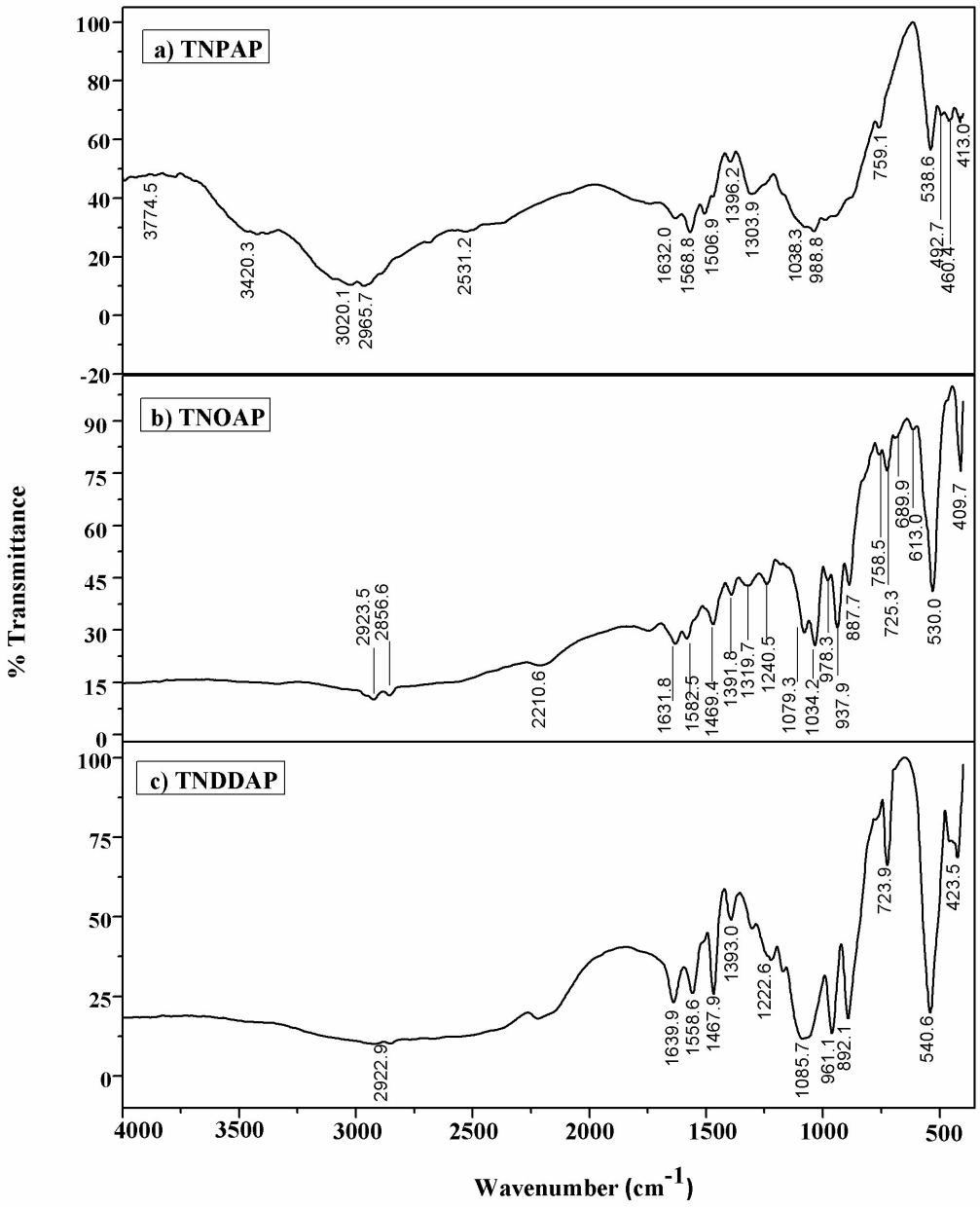


Fig. 2: Fourier transform Infrared spectra of a) TNPAP, b) TNOAP and c) TNDDAP.

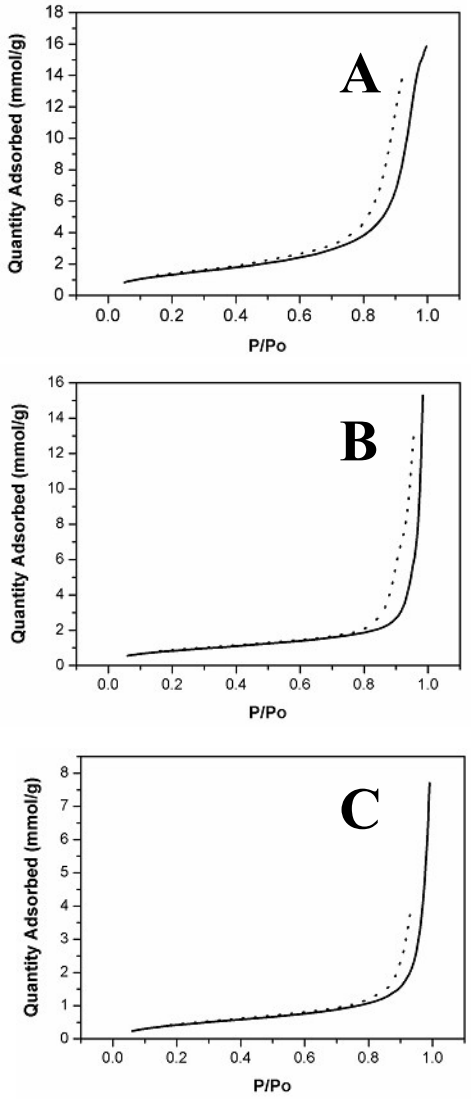


Fig. 3 BET – Adsorption isotherm of A) TNDDAP, B) TNOAP and C) TNPAP.

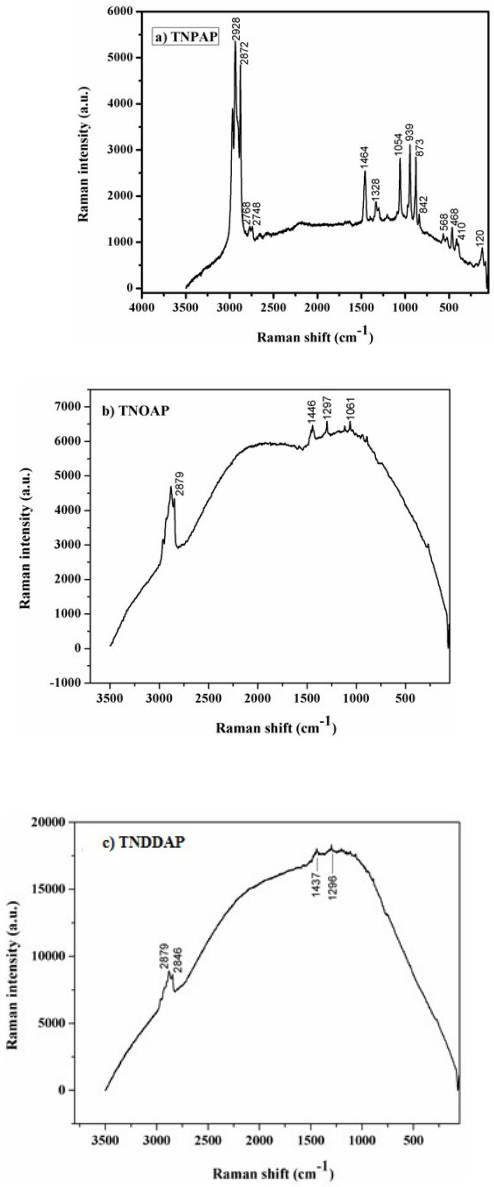
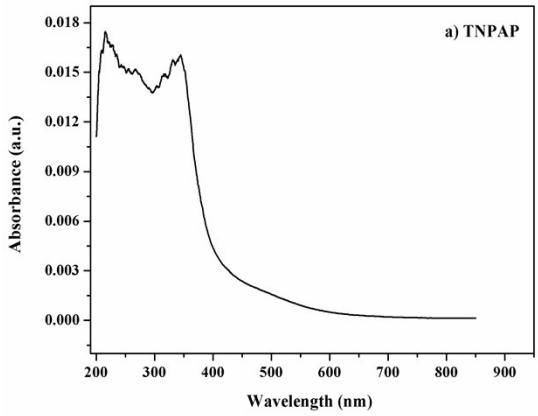
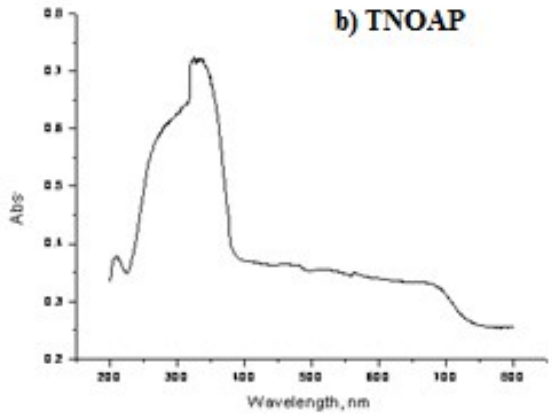


Fig. 4: Dispersive Raman spectra of a) TNPAP, b) TNOAP and c) TNDDAP.





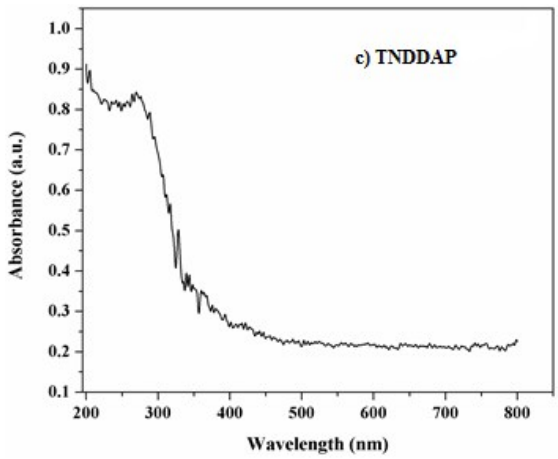


Fig. 5: Ultraviolet - vis DRS spectra of a) TNPAP, b) TNOAP and c) TNDDAP.

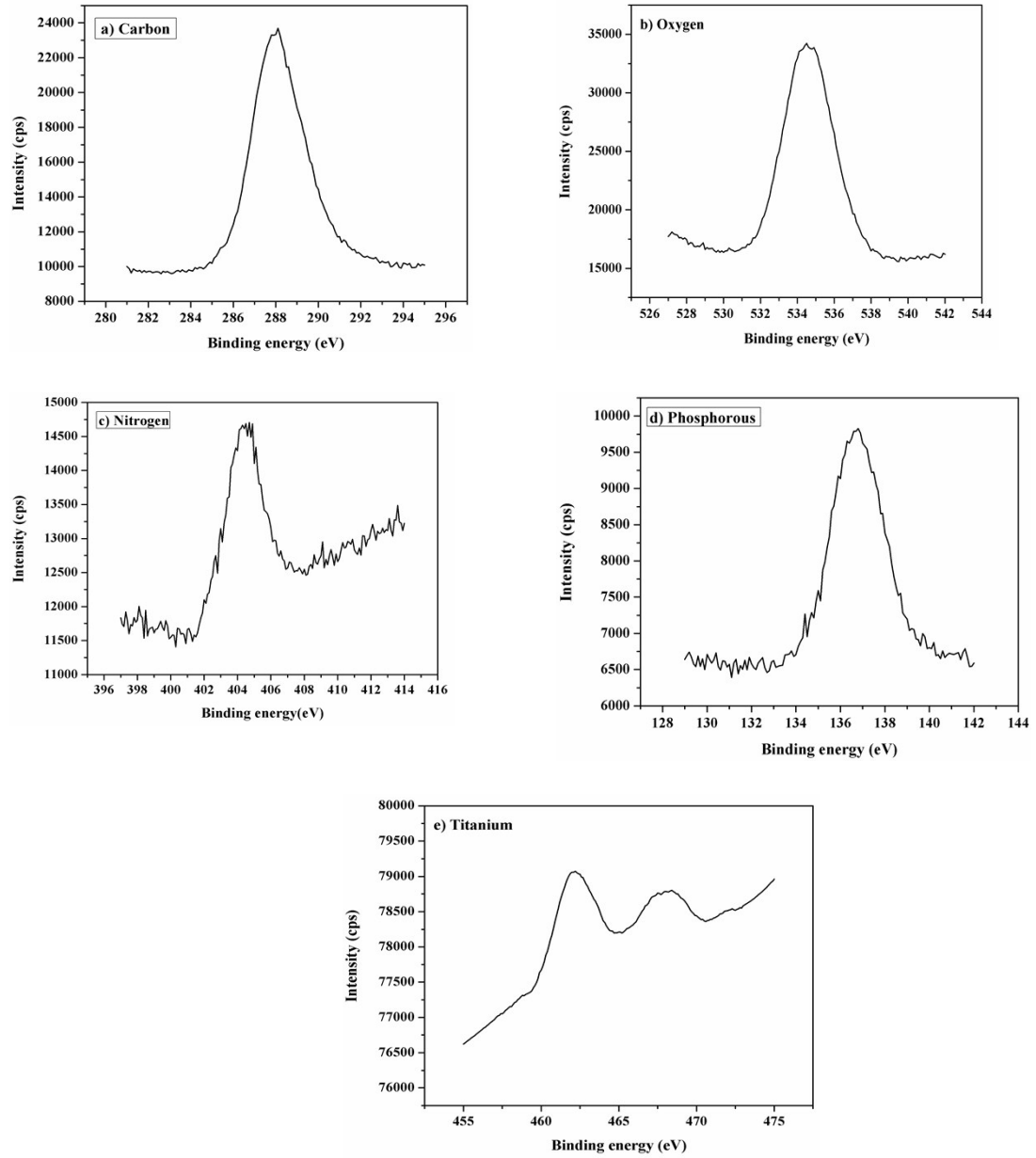


Fig. 6: X-ray photoelectron spectra of a) carbon b) oxygen c) nitrogen d) phosphorous and e) titanium ion in TNPAP.

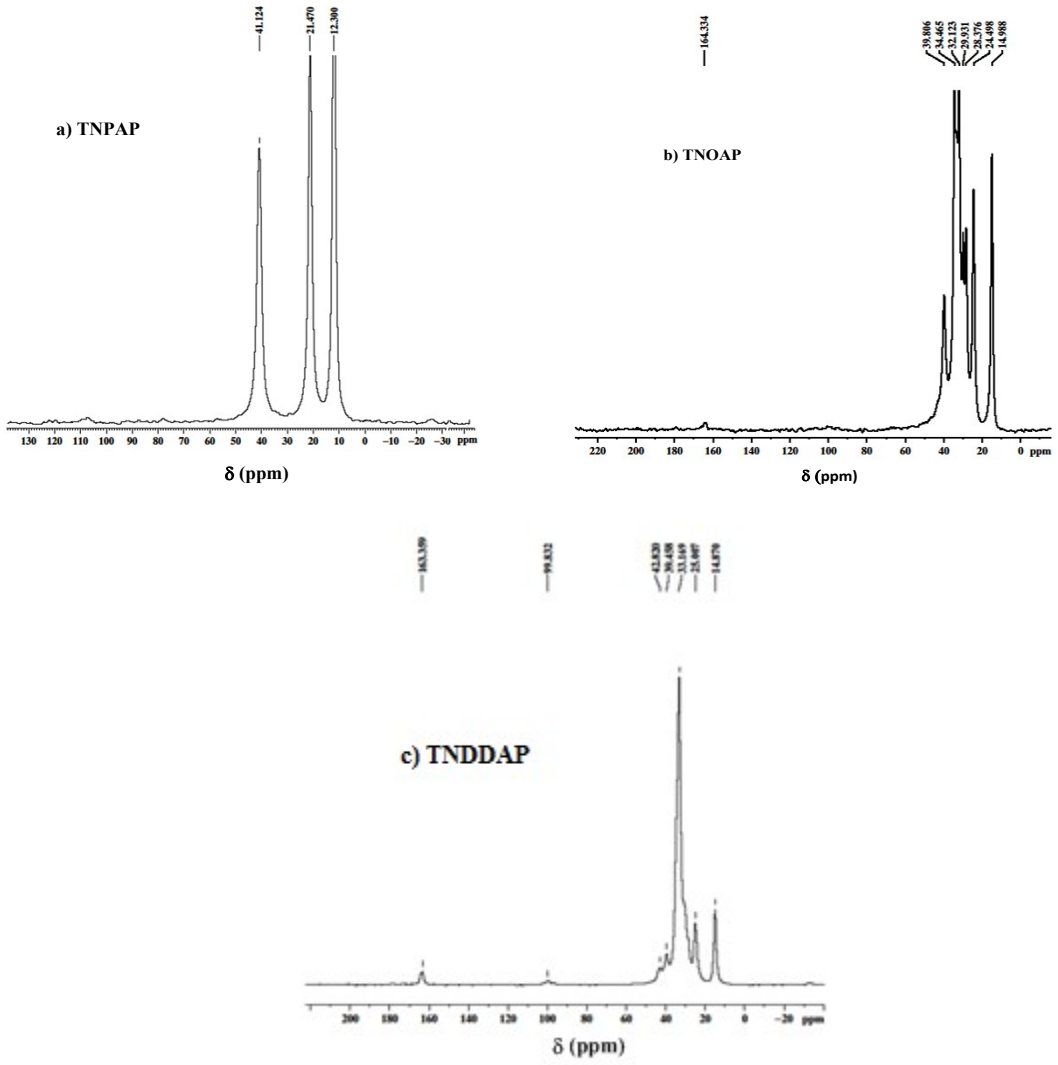


Fig. 7: **^{13}C Magic angle spinning Nuclear magnetic resonance spectra of a) TNPAP, b) TNOAP and c) TNDDAP.**

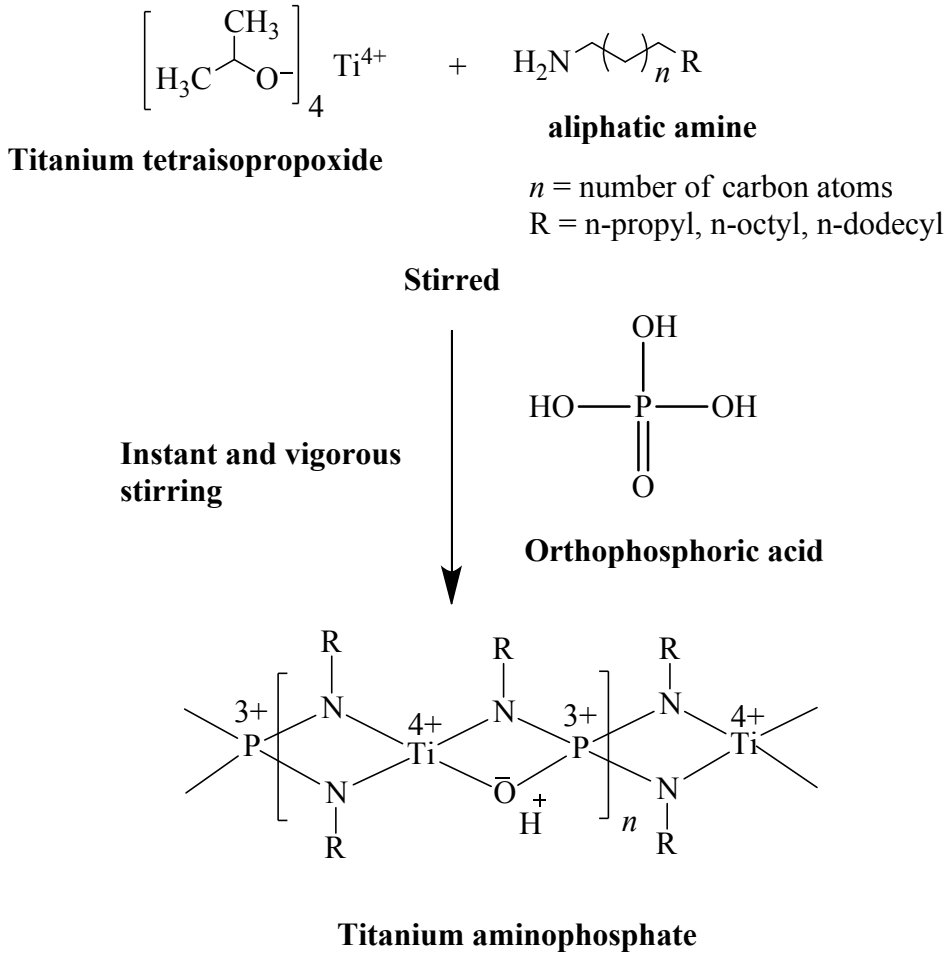


Fig. 8 : Synthesis scheme and proposed basic structure of titanium aminophosphate.

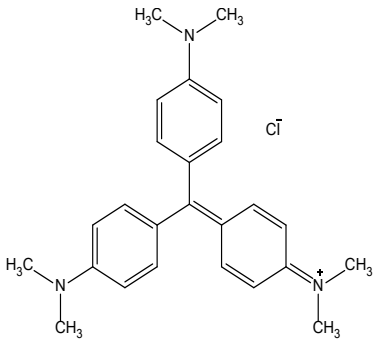


Fig. 9 : Structure of crystal violet dye.

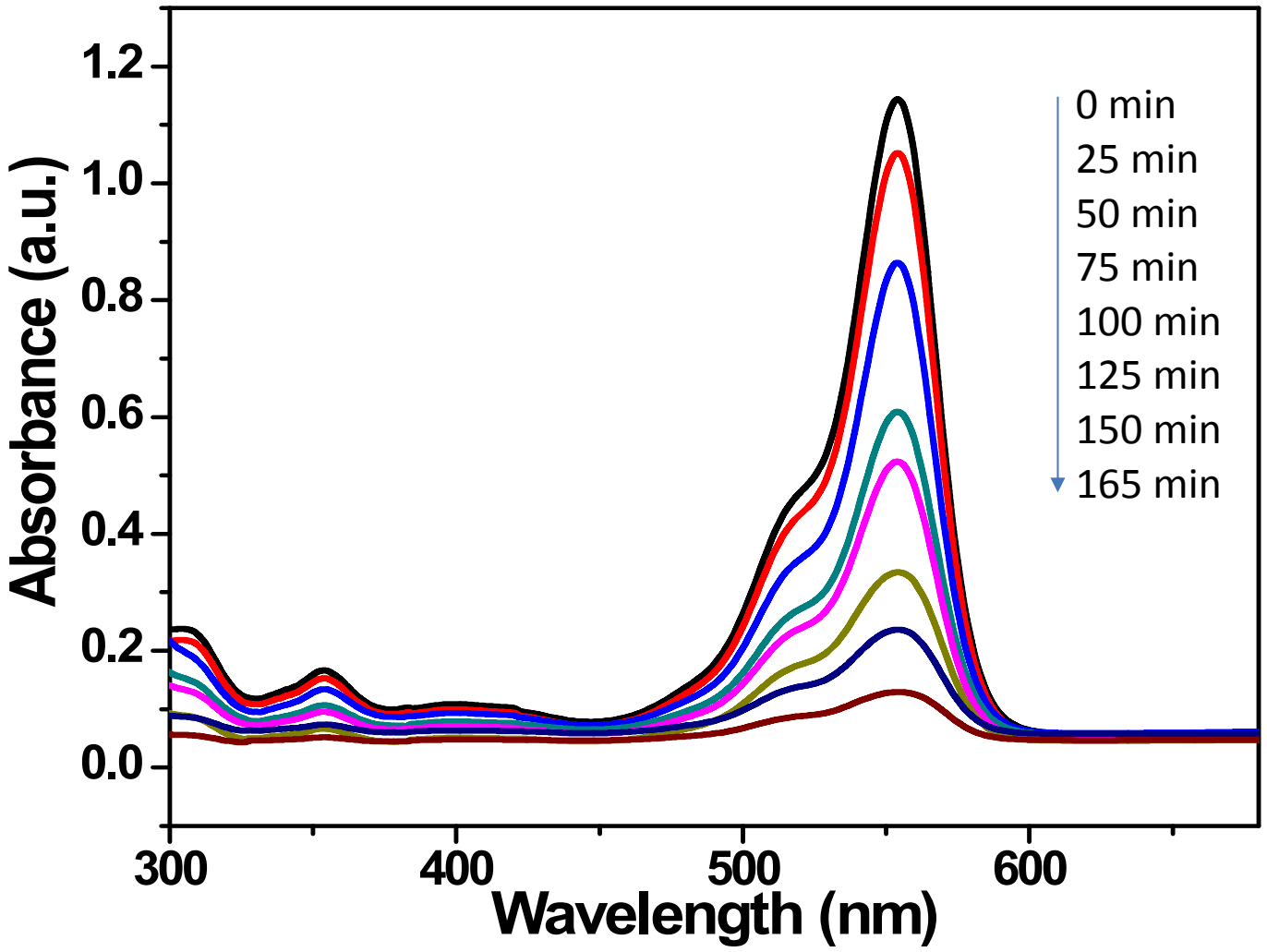


Fig. 10 : **Crystal violet degradation (%) with respect to time and wavelength.**