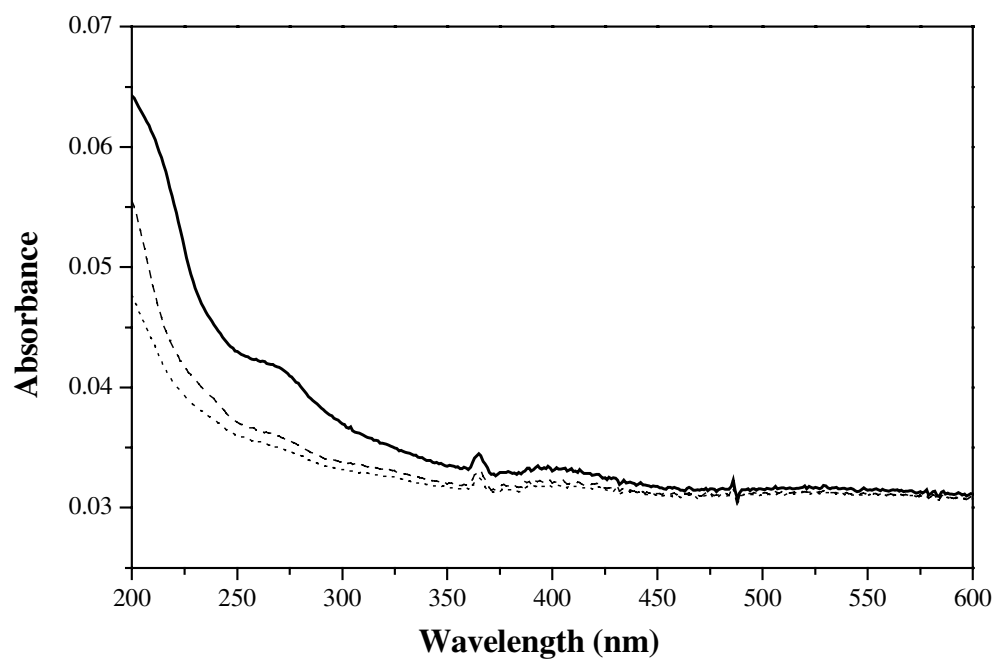
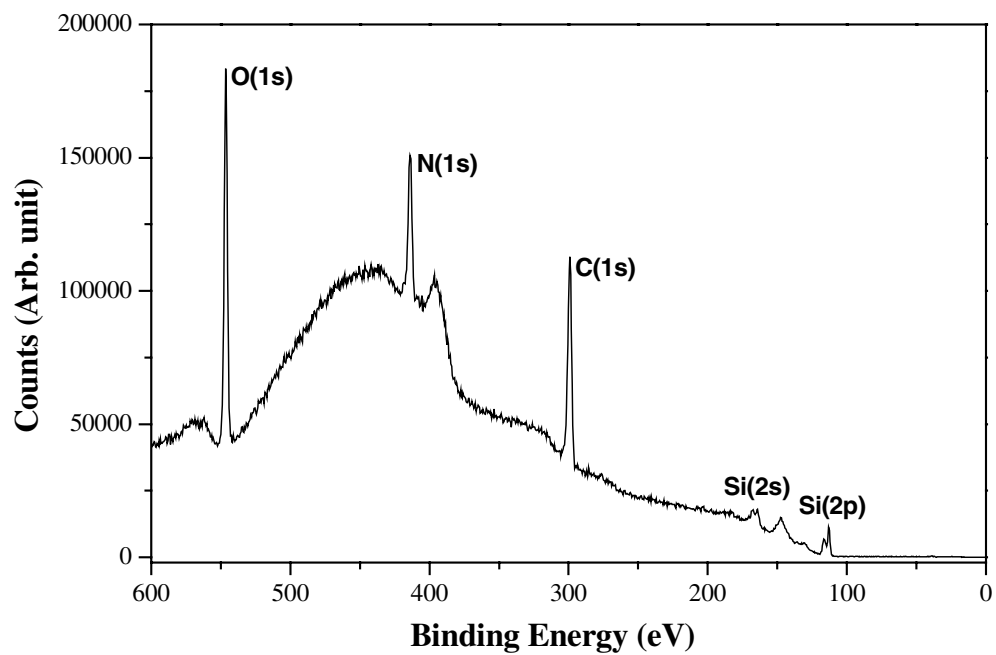


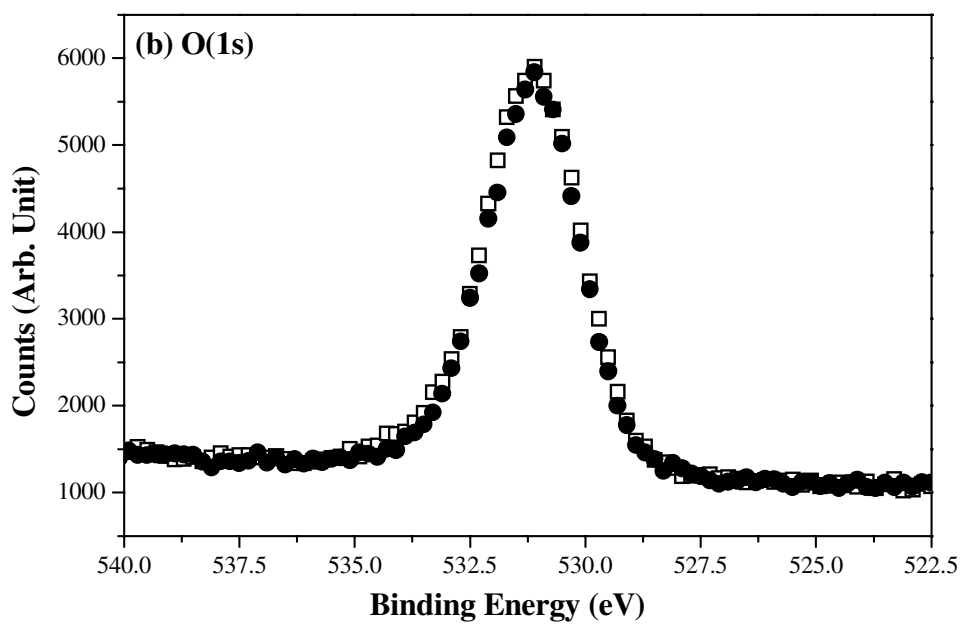
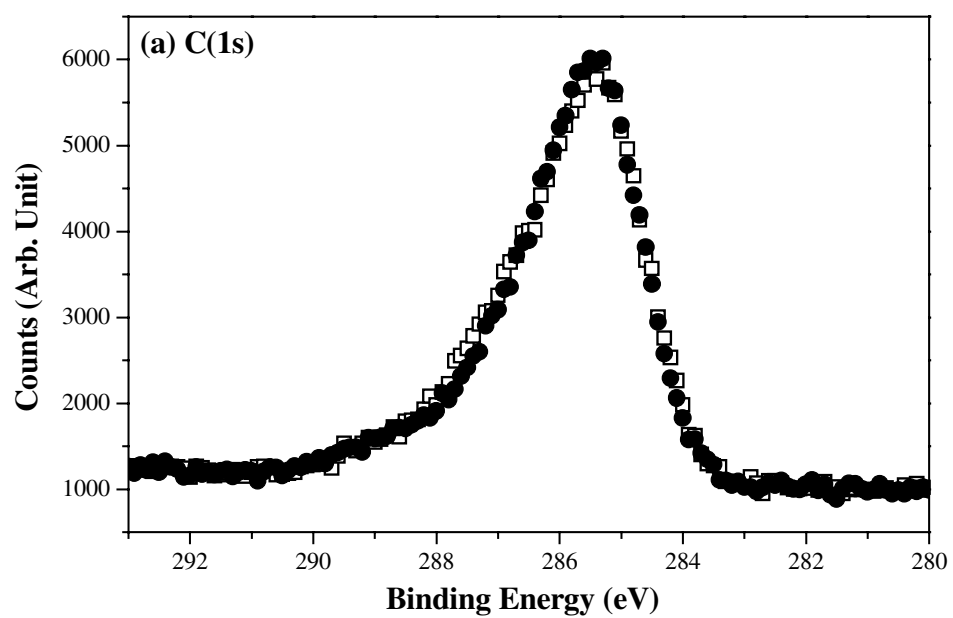
## SUPPORTING INFORMATION



**S1.** UV-vis spectrum of the clean substrate(.....), APDES-modified substrate(----), and furoxan-immobilized substrate(—).

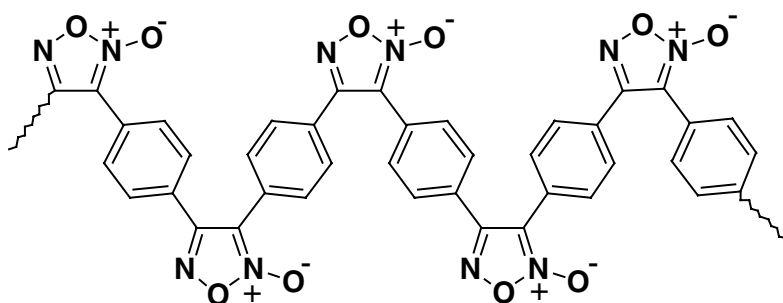


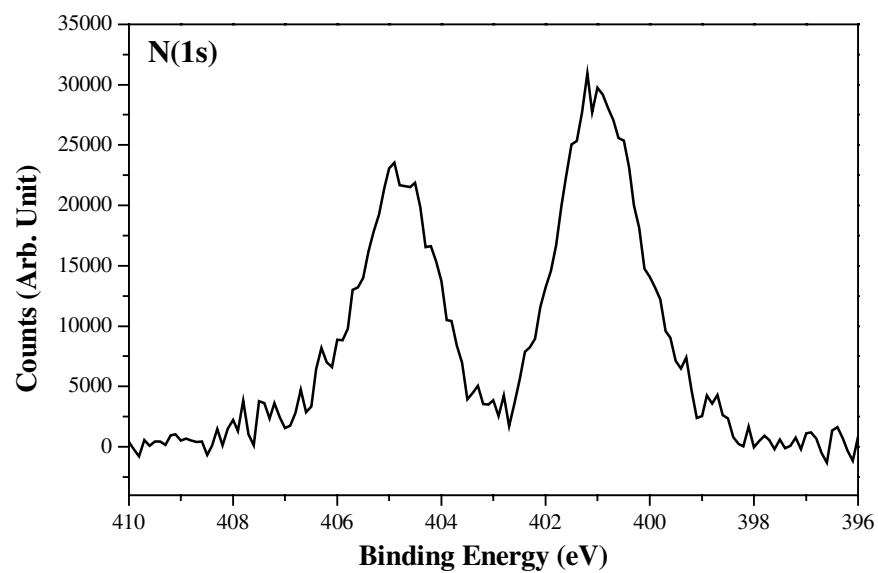
**S2.** XPS survey spectrum of furoxan-immobilized APDES monolayer.



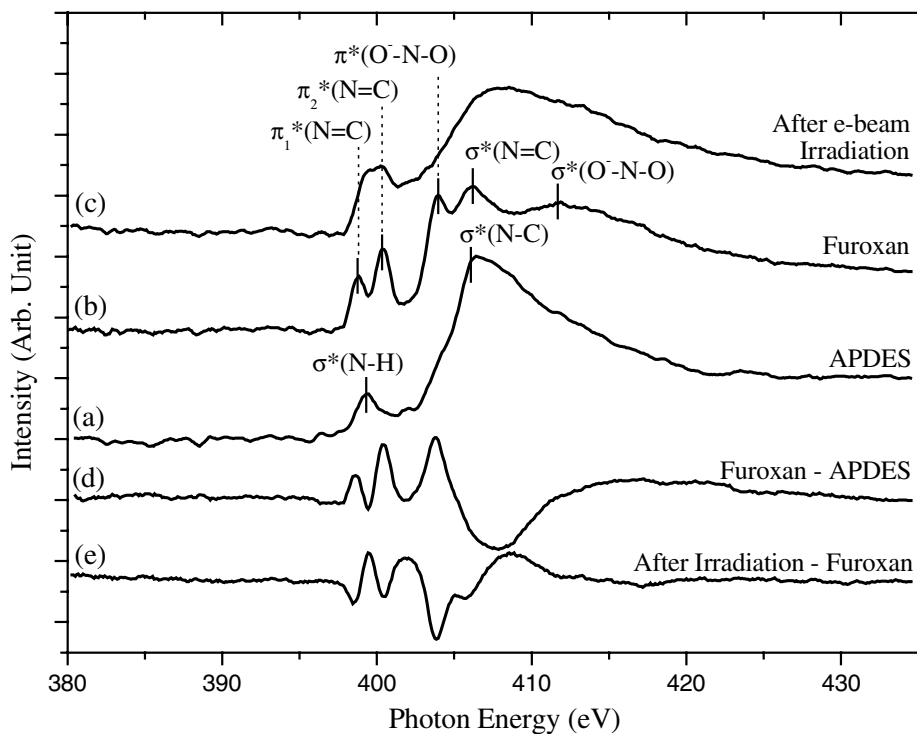
**S3.** XPS spectra of (a) C(1s) and (b) O(1s) regions for furoxan-immobilized APDES monolayer. Each spectrum was obtained before ( $\square$ ) and after ( $\bullet$ ) the exposure to e-beam.

**S4.** Structure of the polyfuroxan used for the assignment of N(1s) bands.

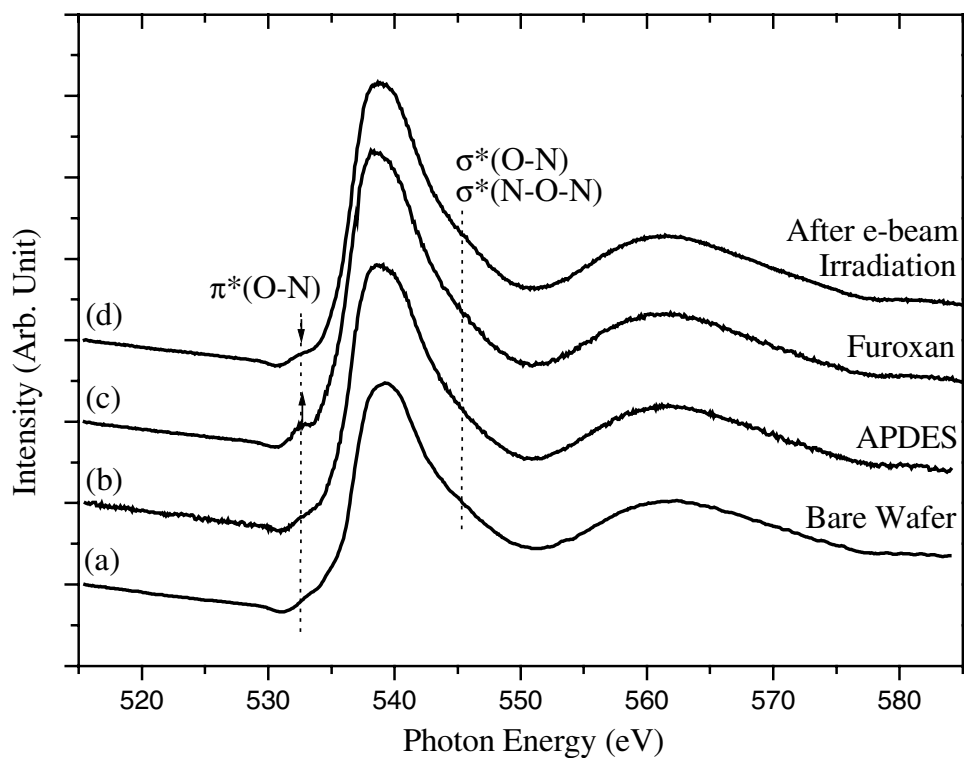




**S5.** XPS spectrum of N(1s) region of the polymeric thin film.



**S6.** Nitrogen K-edge NEXAFS spectra were obtained (a) from APDES-modified surface, (b) from furoxan-immobilized surface, and (c) after 400 eV e-beam irradiation; the measured current was divided by mesh current ( $I_0$ ), and then, the normalized spectrum was subtracted by the bare substrate spectrum. Spectrum (d) is the difference between furoxan-modified spectrum and APDES-modified one, and spectrum (e) is the difference between the spectrum after the e-beam irradiation and furoxan-immobilized one.



**S7.** Oxygen K-edge NEXAFS spectra of (a) bare surface, (b) APDES-modified surface, (c) furoxan-immobilized surface, and (d) 400 eV e-beam irradiated surface; the measured current was divided by mesh current ( $I_0$ ) measured simultaneously.