Modification of Poly(ethylene terephthalate) Surfaces by Linear Poly(vinyl amine)

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The feasibility of fixing linear poly(vinyl amine) (PVAm) onto the surface of a poly(ethylene terephthalate) (PET) foil is shown. Pretreatment of the PET foil for PVAm anchoring is UV irradiation generated by an excimer lamp ($\lambda = 222$ nm). Thereby newly formed COOH-groups are able to build up in situ an ionic double layer with PVAm by proton transfer. The properties of the modified PET foil like wetting performance and electric conductivity are significantly improved by this treatment.

Key words: Surface Modification; Poly(ethylene terephthalate); Poly(vinyl amine); Polyelectrolyte; XPS.