

**Graft polymerization of 4-vinyl pyridine onto
polyethylene terephthalate and its application**

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Polyethylene terephthalate (PET) was grafted with 4-vinyl pyridine in emulsion, and quaternized in methanolic solution of ethylbromide. Graft yield was measured at various reaction times, temperatures, monomer concentrations, initiator concentrations, total amounts of emulsifying agent and mixing ratios of sodium lauryl sulfate (anionic surfactant) and triton X-100 (nonionic surfactant). The degree of quaternization was also measured at various reaction times, temperatures, concentrations of ethylbromide.

Grafted PET could be dyed with acid dye, and quaternized PET-g-vinyl pyridine showed anti-static and anti-microbial properties.