

## Preparation of PVA Composite Membranes for Esterification of TFEMA and their Pervaporation Properties

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For the esterification of 2,2,2-trifluoroethyl methacrylate(TFEMA) from 2,2,2-trifluoroethanol (TFEA) and methacrylic acid (MA) using pervaporation membrane reactor, poly(vinyl alcohol)(PVA) composite membranes were prepared with glutaraldehyde(GA) onto porous polyethersulfone(PES) support. The crosslinking degree and thickness of PVA coating layer of the membranes was analyzed by FT-IR, swelling test and SEM(scanning electron microscopy), respectively. Pervaporation experiment was done with three feed solutions TFEA/water, MA/water and (TFEMA). The pervaporation data were obtained as a function of content of crosslinking agent, feed composition, and operating temperature, respectively.