

Preparasi Bahan Membran Sel Bahan Bakar : pengaruh Matriks Film terhadap Hasil Pencangkakan dengan Teknik Iradiasi Awal

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20305036&lokasi=lokal>

Abstrak

Membrane of fuel cell has been prepared by grafted pre-irradiation. Matrix of ETF15, PTFE, and cross-linked PTFE (PTFE(cD)) films have been irradiated by γ -ray at various total dose from 2.5 - 12.5 kGy and various dose rate at 1.9, 1.6, and 1.3 kGy/hour. Irradiated films are then grafted by styrene monomer in various solvent: ethanol, 2-propanol and toluene with various concentration from 20 - 60% volume, various grafting temperature from 30 - 90°C and various grafting time from 2 - 12 hours. Obtained the good relative condition to grafted pre-irradiation such as using 1,9 kGy/hour dose rate, 10 kGy total dose, 2-propanol solvent, 40% volume styrene 4 hours grafting time, and 70°C grafting temperature gave percent of grafting ETFE-g-S = 46.69% weight, PTFE-g-S = 11.13% weight, dan PTFE(cU-g-S = 31.07% weight.