

Improvement of durability due to a formation of crosslinked structure in ETFE polymer electrolyte by using electron beam irradiation combined with a thermal energy

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This study tried to develop a new technology to form crosslinked polymeric structures in polymer electrolyte membrane (PEM) by combining electron beam irradiation with thermal energy. Such crosslinked PEM presented high durability on several properties, such as mechanical strength, chemical resistance, and thermal resistance when comparing to conventional crosslinking procedure. This study examined a correlation between crosslinked polymeric structure and electrical properties.