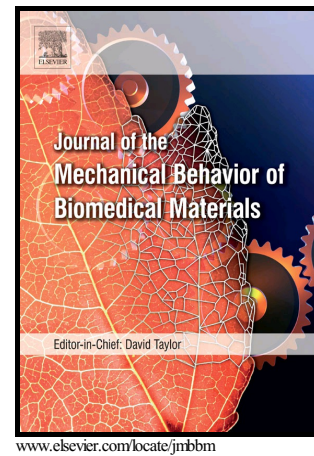


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Polymer matrix of fiber-reinforced composites: changes in the semi-interpenetrating polymer network during the shelf life

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Abstract

This laboratory study was aimed to characterize semi-interpenetrating polymer network (semi-IPN) of fiber-reinforced composite (FRC) prepregs that had been stored for up to two years before curing. Resin impregnated prepregs of everStick C&B (StickTech-GC, Turku, Finland) glass FRC were stored at 4°C for various lengths of time, *i.e.*, two-weeks, 6-months and 2-years. Five samples from each time group were prepared with a light initiated free radical polymerization method, which were embedded to its long axis in self-curing acrylic. The nanoindentation readings on the top surface toward the core of the sample were made for five test groups, which were named as “stage 1 to 5”. To evaluate the nanohardness and modulus of

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