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(54) Title: A MECHANICALLY-ENHANCED POLYOLEFIN COMPOSITE

(57) Abstract: A mechanically-enhanced polyolefin composite is provided. The mechanically-enhanced polyolefin composite comprises a matrix comprising a polyolefin, a polymer having a moiety grafted thereon, and a polymerisable linker, wherein the moiety grafted on the polymer is covalently bonded to the polymerisable linker via a chemical bond, and a filler disposed within the matrix. There is also provided a method of providing a polyolefin composite, comprising a matrix comprising a polyolefin, a polymer having a moiety grafted thereon, and a polymerisable linker, wherein the moiety grafted on the polymer is covalently bonded to the polymerisable linker via a chemical bond, and a filler disposed within the matrix, the method comprising (i) mixing a polyolefin, a polymer having a moiety grafted thereon, a polymerisable linker and a filler; (ii) melting the mixture of step (i); and (iii) kneading the mixture of step (ii).