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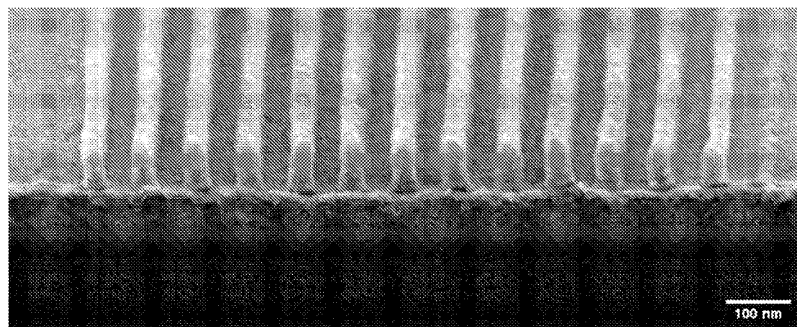


Fig. 1

(57) Abstract: A novel method to prepare crosslinked thin films without the use of catalysts is disclosed. Propiolic acid is grafted to a glycidyl or epoxy group using a phosphonium catalyst under mild conditions to yield a propiolate ester. The propiolate ester is thermally crosslinkable (and the polymer film rendered insoluble) at temperatures as low as 120°C, and some embodiments may undergo photo-induced crosslinking upon exposure to DUV light. The resulting crosslinked films are equivalent or better in stability to acid-catalyzed epoxide crosslinked films and can be used for a multitude of different applications.

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