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- (81) **Designated States** (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM,

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**Declarations under Rule 4.17:**

- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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- *with international search report (Art. 21(3))*

(54) **Title:** MICROFIBER AND GRAPHENE REINFORCED POLYMER MATRIX COMPOSITES AND METHODS OF PREPARATION THEREOF

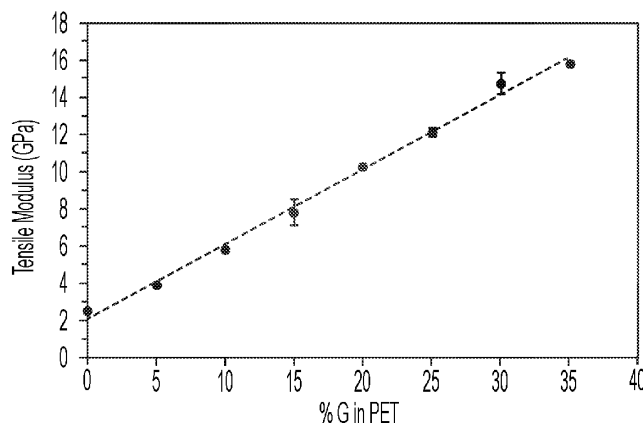


FIG. 1

(57) **Abstract:** The present disclosure provides novel microfiber and graphene reinforced polymer matrix composites and methods for producing them. The disclosed microfiber and graphene reinforced polymer matrix composites show improvements in mechanical properties, such as stiffness, tensile strength, and impact energy absorption.