# 2D Materials Based on Silicon as Polymer Fillers

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Graphene and its derivates have been already widely studied as fillers for enhancement of polymer properties. However, recent progress in development of its silicon analogues enabled their preparation in higher quantities which enabled their usage as fillers as well.

In this work we describe the effect of addition of siloxene (analogue to graphene oxide), and silicene (analogue to graphene) into polymer matrixes based on polyamide 6, poly(ε-caprolactone), and polyvinyl fluoride. Effects on polymerization process, thermal properties, and mechanical properties were studied.

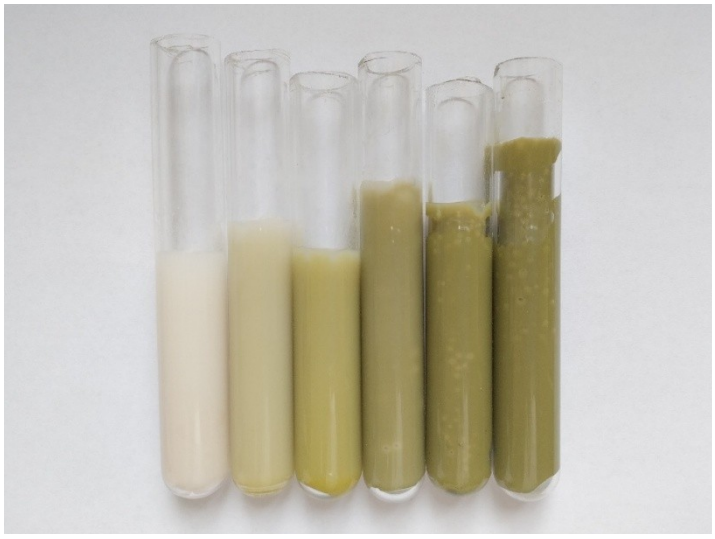

**Fig. 1 Poly(ε-caprolactone) nanocomposites with increasing siloxene content**

**Keywords:** nanocomposites, polyamide 6, polyvinyl fluoride, poly(ε-caprolactone)

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