

Supplementary information

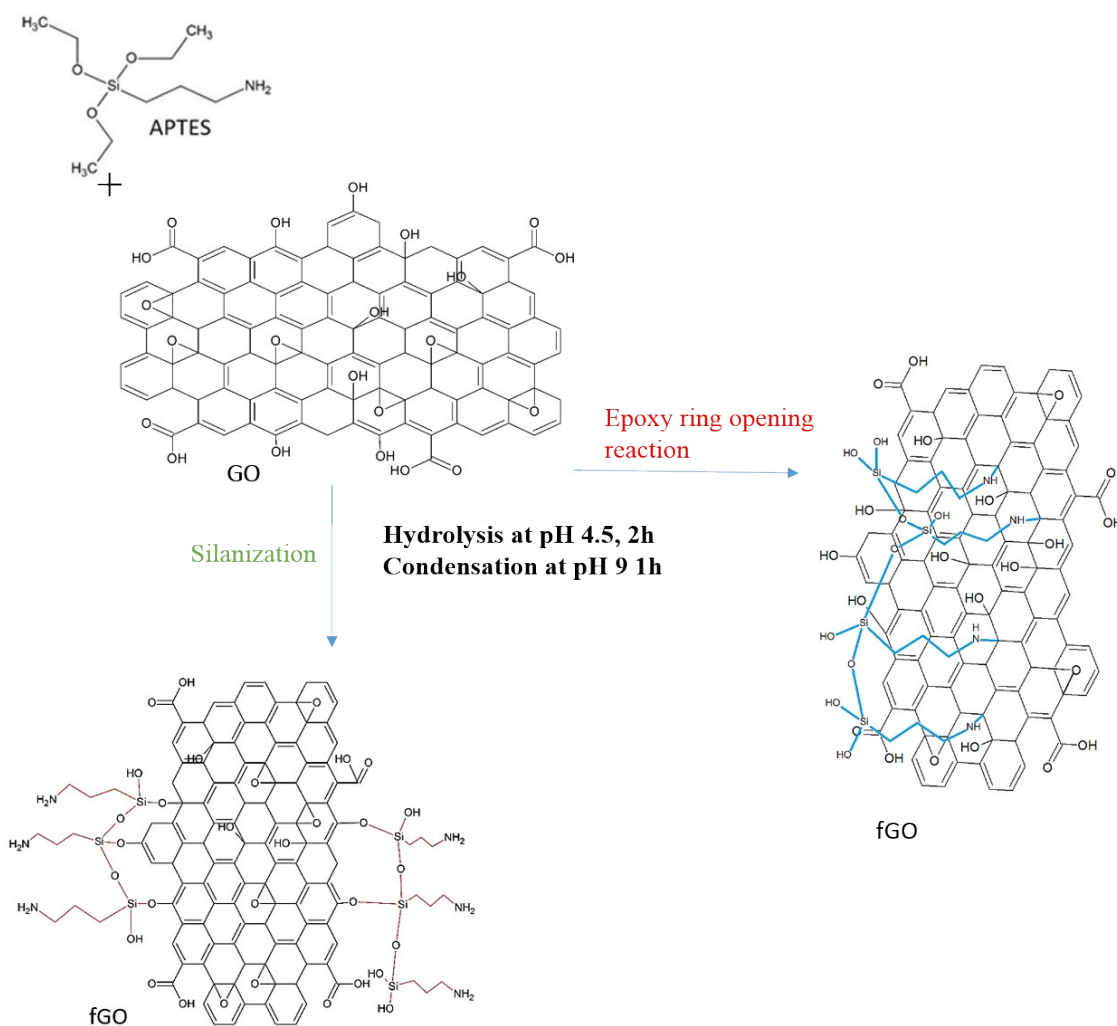


Fig. S1. Schematic of two possible mechanism for surface functionalization of GO by APTES; silanization and epoxy ring opening.

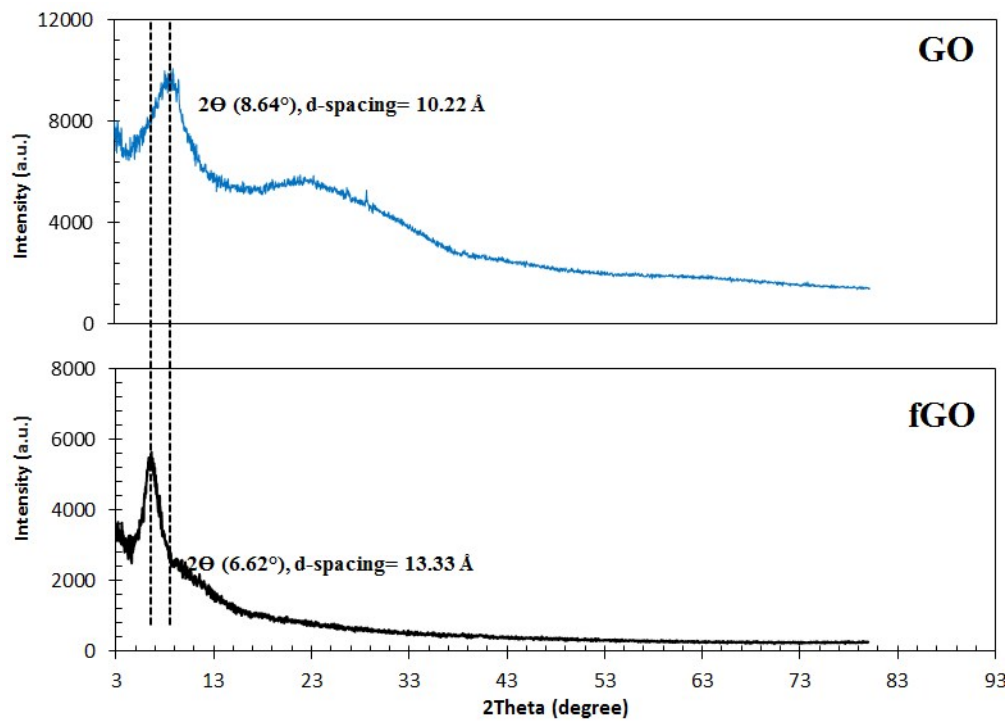


Fig. S2. XRD patterns for the GO and fGO nanosheets.

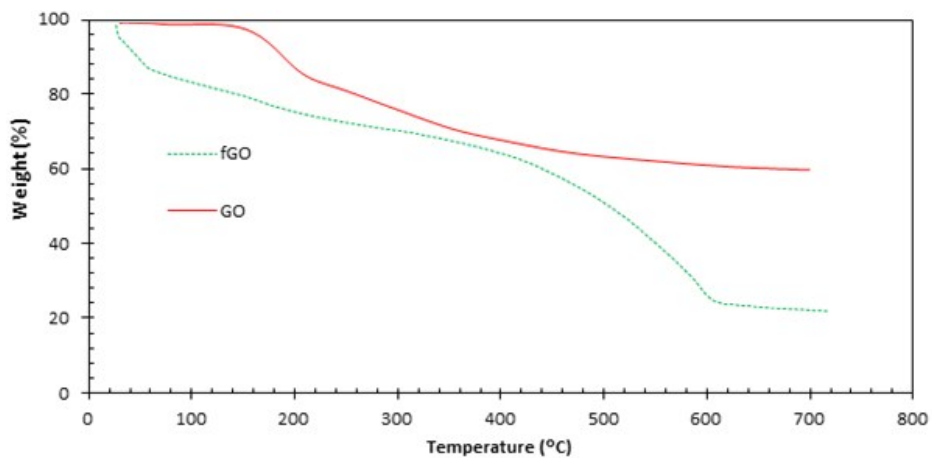


Fig. S3. TGA profiles for GO and fGO nanosheets.

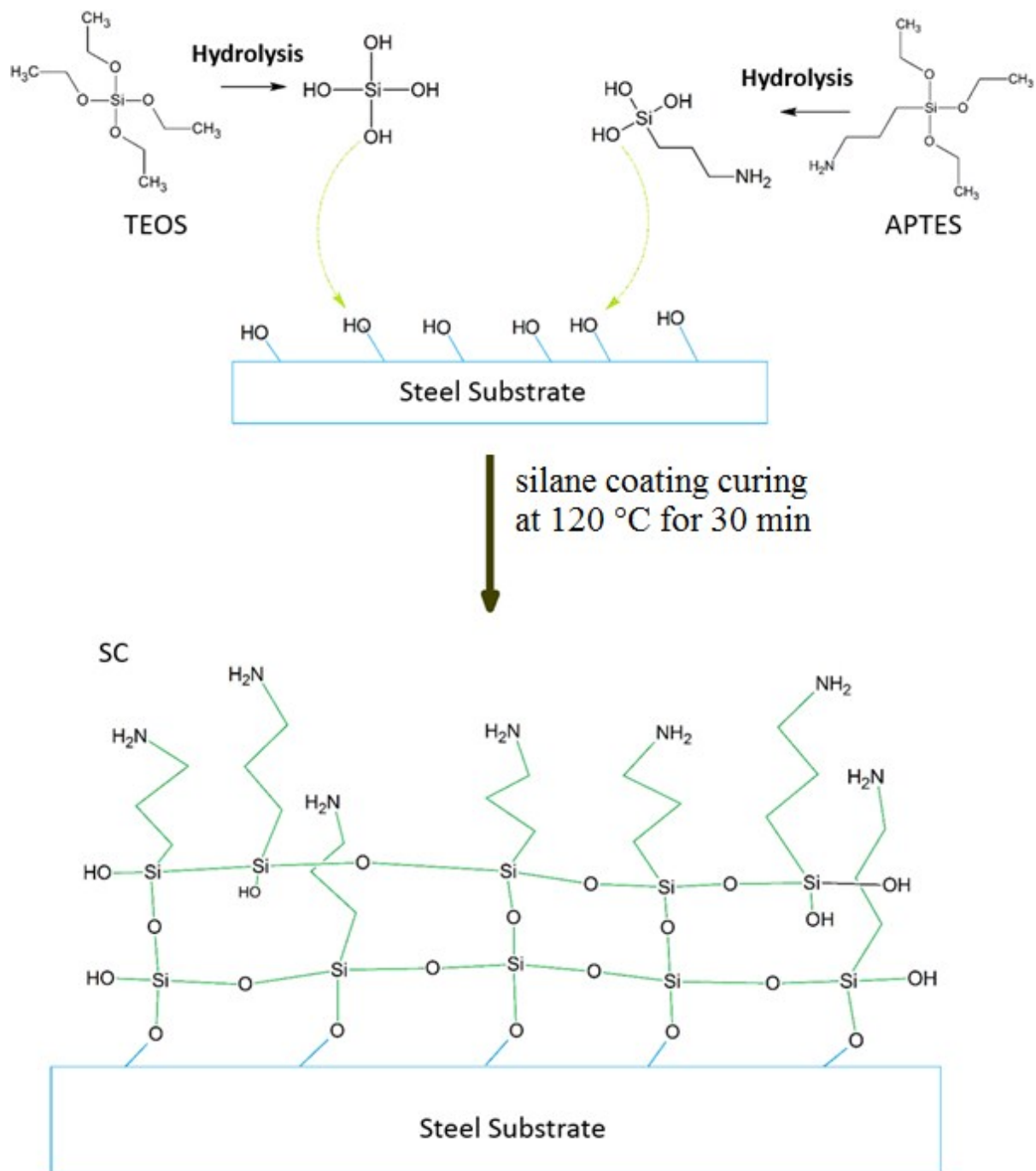


Fig. S4. Film formation of silane coating on steel substrate .

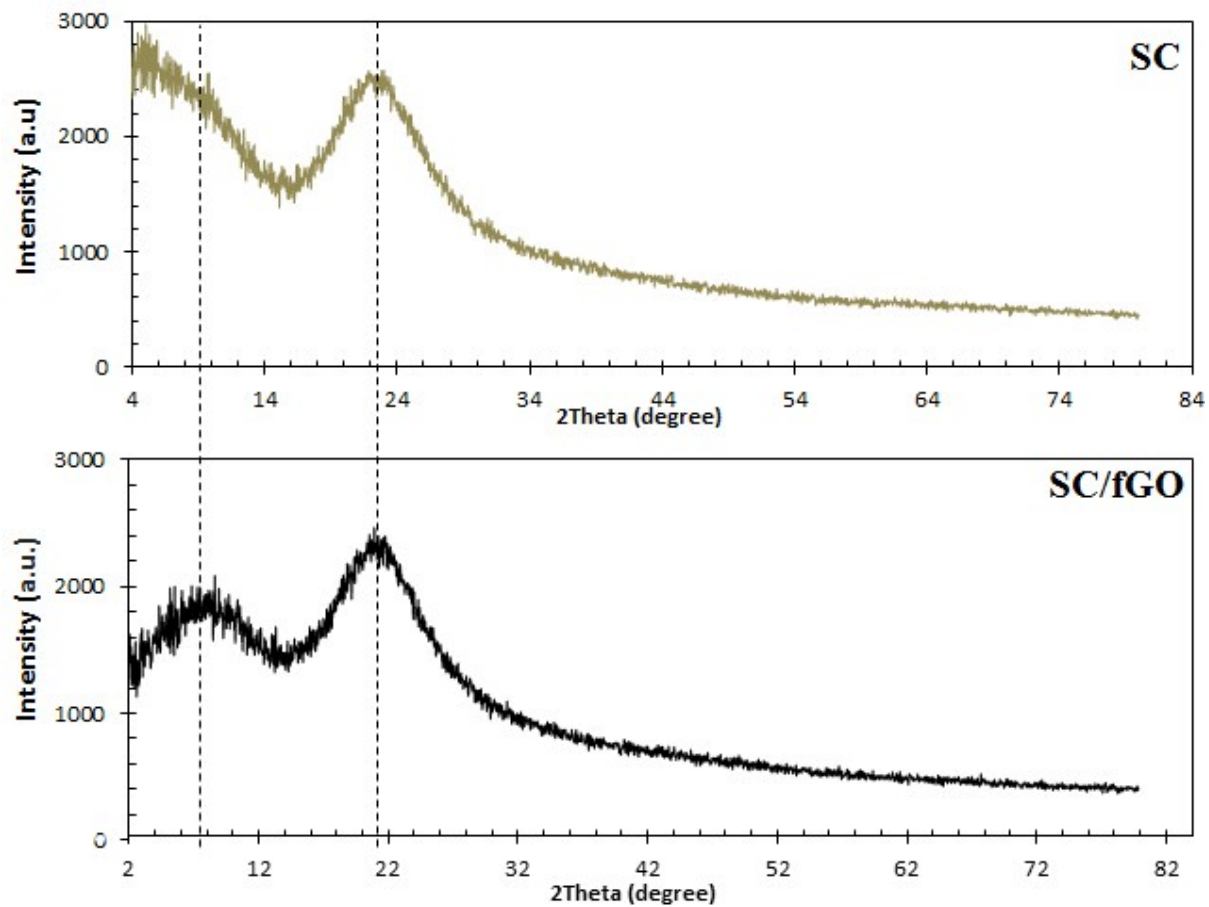


Fig. S5. XRD patterns for the SC and SC/fGO.

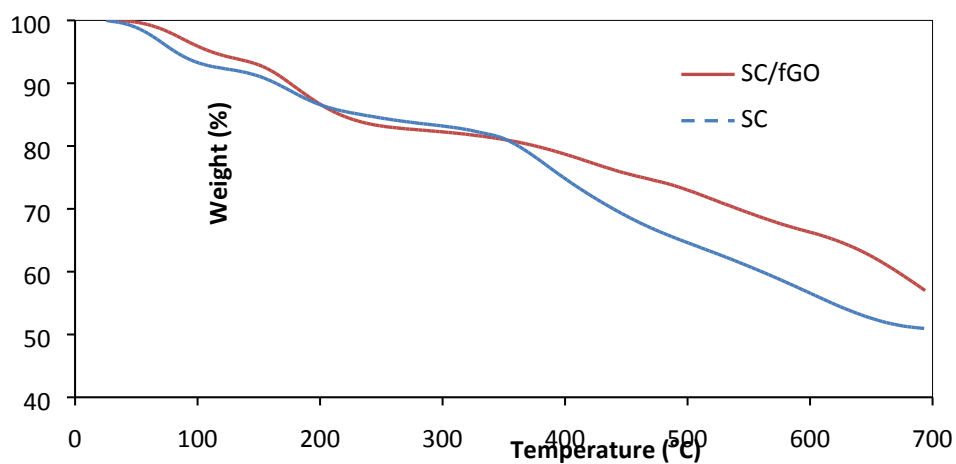


Fig. S6. TGA profiles for SC/fGO and SC.

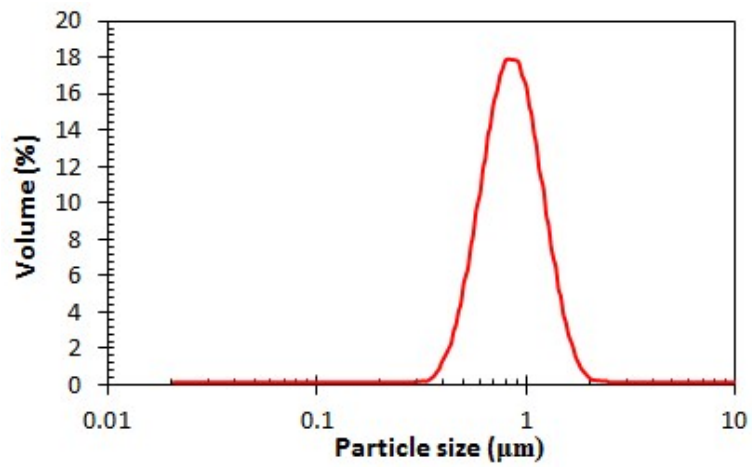


Fig. S7. Particle size distribution of fGO nanosheets in silane solution.