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**Abstract**: It is widely accepted that the interfacial properties of carbon fiber (CF) reinforced composites tend to be weak due to the poor wettability and chemically inert surface of CF, which greatly limits the reinforcement effect of CF in composites. Here, size-controllable graphene oxide sheets (GO) were grafted on CF using Poly(oxypropylene) Diamines ($D_{400}$) as the bridging agent to improve the interfacial properties of CF composites. It was found that the size and content of active functional groups on GO played important roles in controlling the surface morphology of GO grafted CF. Moreover, the interfacial shear strength (IFSS) of the middle sized GO sheets grafted CF/epoxy composites reached a maximum value of 82.2 MPa, with an enhancement of 75.6% compared with untreated CF. That is to say,