Interconnected graphene flake sheets by NiNws via CVD for extremely stretchable, flexible and stable transparent electrode

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We report a new method to synthesize stretchable, flexible and stable transparent electrode by conducting the CVD (Chemical Vapor Deposition) process for the mixture of graphene oxide and Nickel nano wire. In a number of researches, graphene and noble metal nano wires have been utilized for the preparation of transparent electrode with high performance. However, high price and relatively lower performance than industrial demands become bottle neck to commercialize these materials. Because Ni nanowire can bride the GO sheets and facilitate the recovery of graphene oxide to graphene, electrical and mechanical properties of prepared film can be enhanced. Furthermore, the cheap cost of Ni promises the low costs to fabricate the transparent electrode.