Electronic Supplementary Information

In situ growth of FeNi alloy nanoflowers on reduced graphene oxide nanosheets and their magnetic properties

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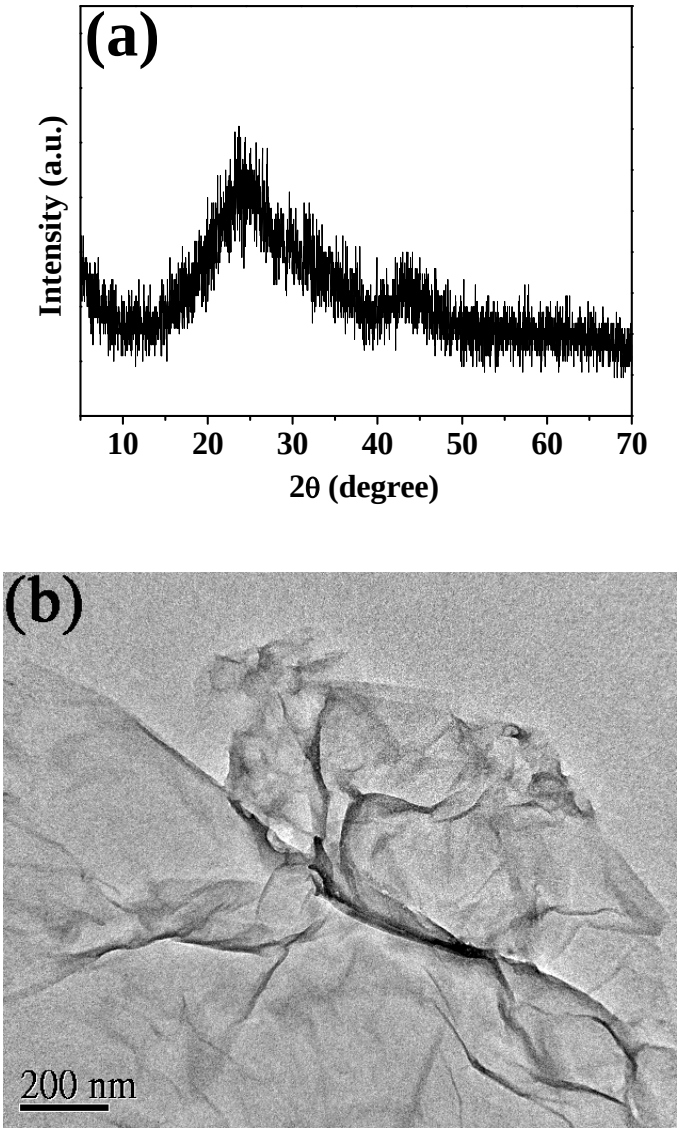

Fig. S1 (a) XRD pattern and (b) TEM image of bare RGO nanosheets prepared in the absence of $FeSO_4 \cdot 7H_2O$ and $NiCl_2 \cdot 6H_2O$ with the same procedures.

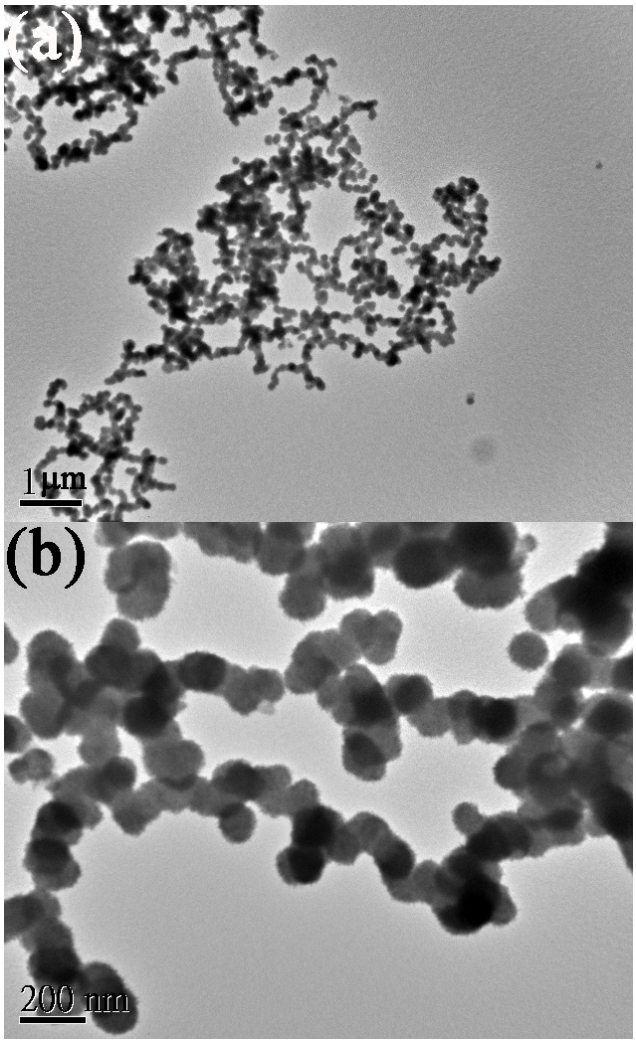

Fig. S2 TEM images of the bare $Fe_{20}Ni_{80}$ prepared with the same procedures of RGO-$Fe_{20}Ni_{80}$-2.8 nanoflowers ($[Fe^{2+}] + [Ni^{2+}] = 2.8$ mM) in the absence of GO.

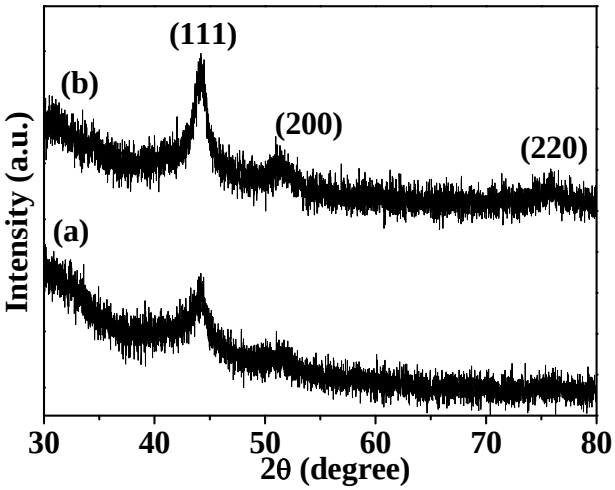

Fig. S3 XRD patterns of RGO-$Fe_{20}Ni_{80}$ composites with different metal ion concentration: (a) RGO-$Fe_{20}Ni_{80}$-1.4; (b) RGO-$Fe_{20}Ni_{80}$-5.6.

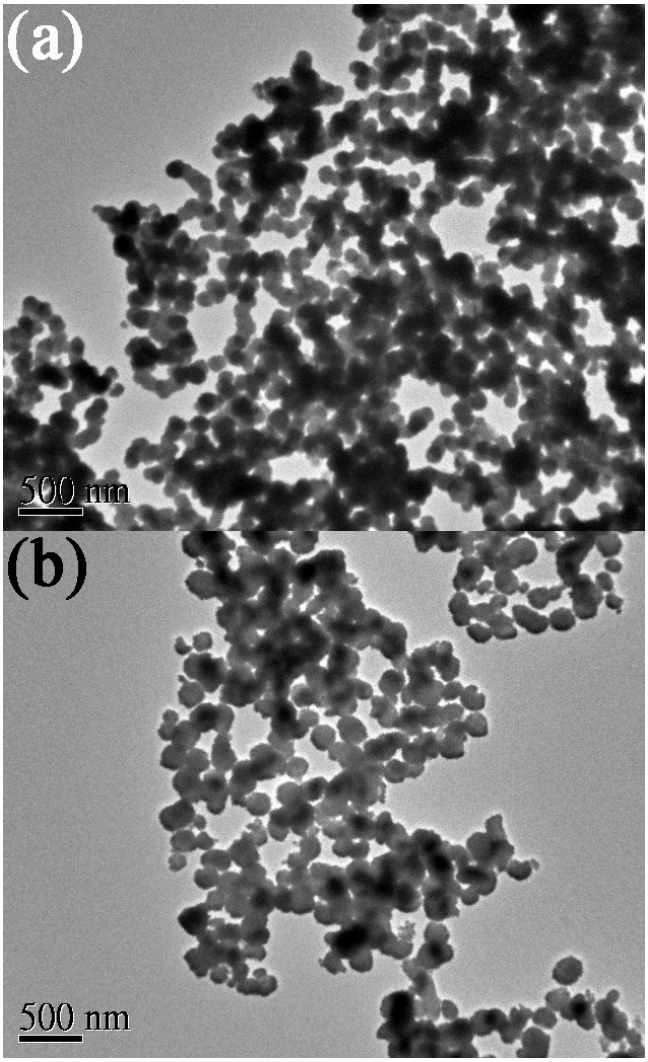

Fig. S4 TEM images of bare $Fe_{20}Ni_{80}$ prepared with different metal ion concentration: (a) $[Fe^{2+}] + [Ni^{2+}] = 2.8$ mM, (b) $[Fe^{2+}] + [Ni^{2+}] = 5.6$ mM.

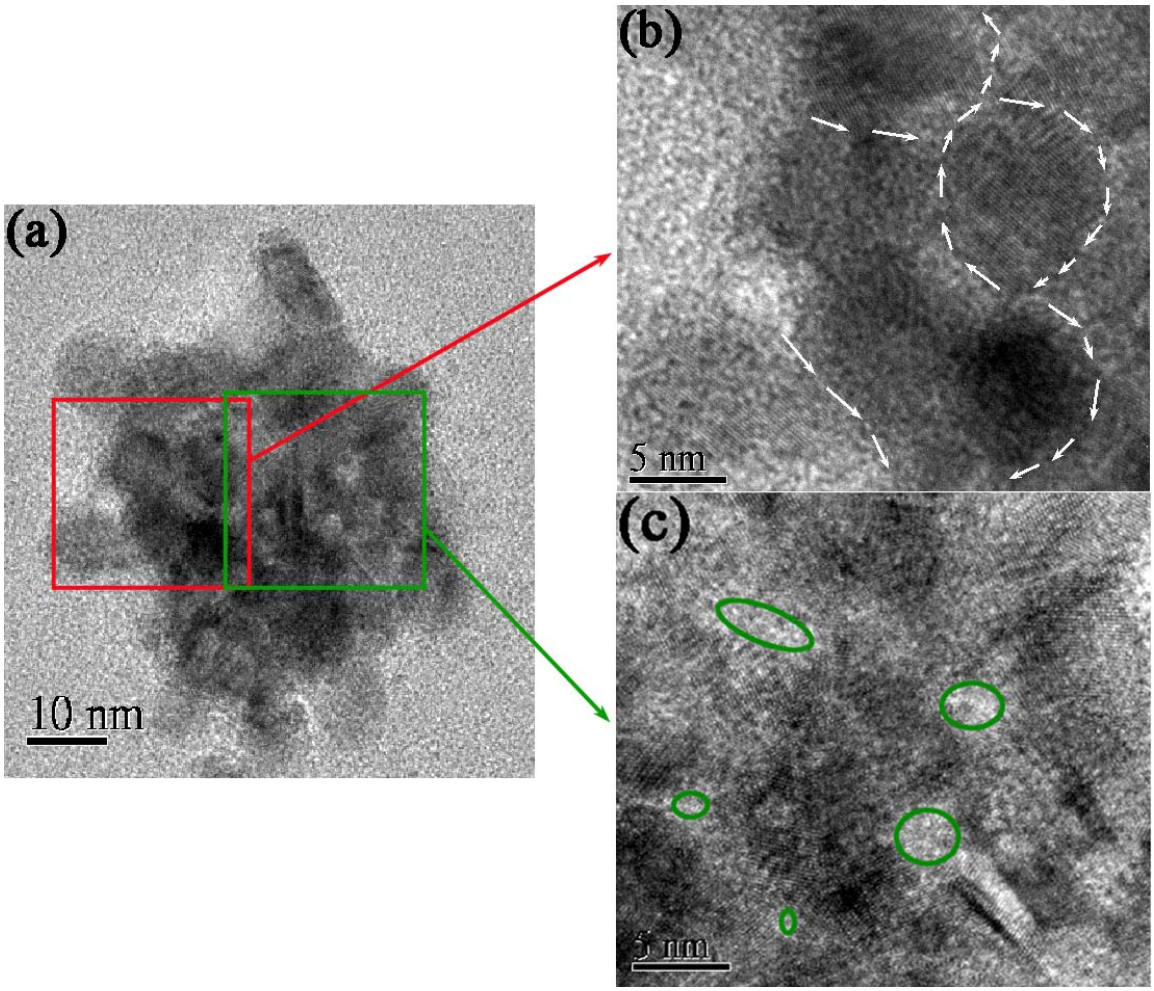

Fig. S5 (a) TEM image of a typical $Fe_{20}Ni_{80}$ nanoflower and (b,c) HRTEM images of the different selected areas.