

SUPPORTING INFORMATION

Reduced graphene oxide nanosheets decorated with AuPd bimetallic nanoparticles: A multifunctional material for photothermal therapy of cancer cells

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The HRTEMs image of rGO nanosheets are displayed in Fig S1. The layered structure of rGO nanosheets is evident from the HRTEM images. The rGO nanosheets are observed to be non-uniformly folded, irregular and wrinkled.

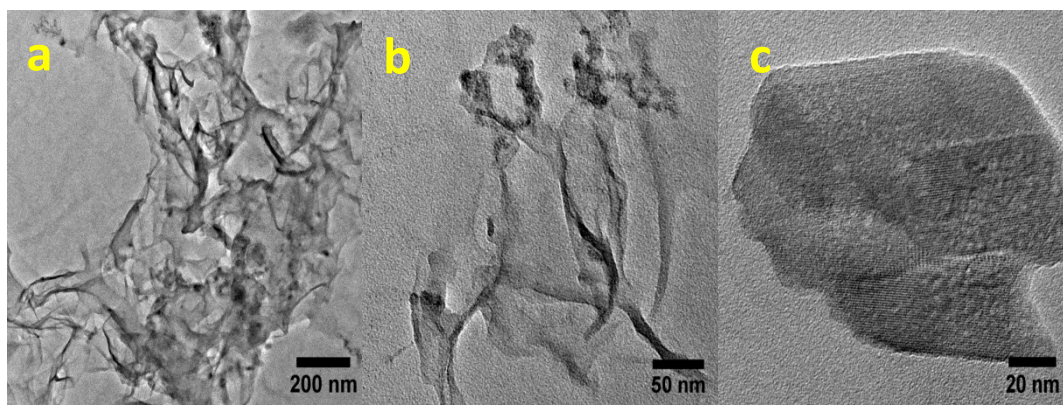


Fig. S1 HRTEM images of rGO nanosheets

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The TEM images of Au NPs-rGO-PEG and Pd NPs-rGO-PEG nanocomposites are displayed in Fig. S2 and Fig. S3, respectively along with particle size distribution and corresponding HRTEM images and SAED patterns. The TEM images of Au NPs-rGO-PEG nanocomposites clearly demonstrates formation of uniformly distributed small NPs with an average size of 3.86 ± 0.12 nm (Fig. S2a,b,c). The HRTEM images show the lattice fringe of 0.230 nm corresponding to (111) plane of Au NPs (Fig. S2d,e). Furthermore, the SAED pattern confirms the crystal structure of the as-synthesized Au NPs on rGO nanosheets (Figure S2f).

For Pd NPs-rGO-PEG nanocomposite, the size distribution curve represents Pd NPs of about 18 ± 1.23 nm decorated on rGO nanosheets with uniform distribution (Fig. S3a,b,c). The corresponding HRTEM images (Fig. S3d,e) clearly represent the lattice fringe of 0.19 nm of (200) plane of Pd NPs. The SAED pattern reflects the crystallinity of the Pd NPs (Fig. S3f).

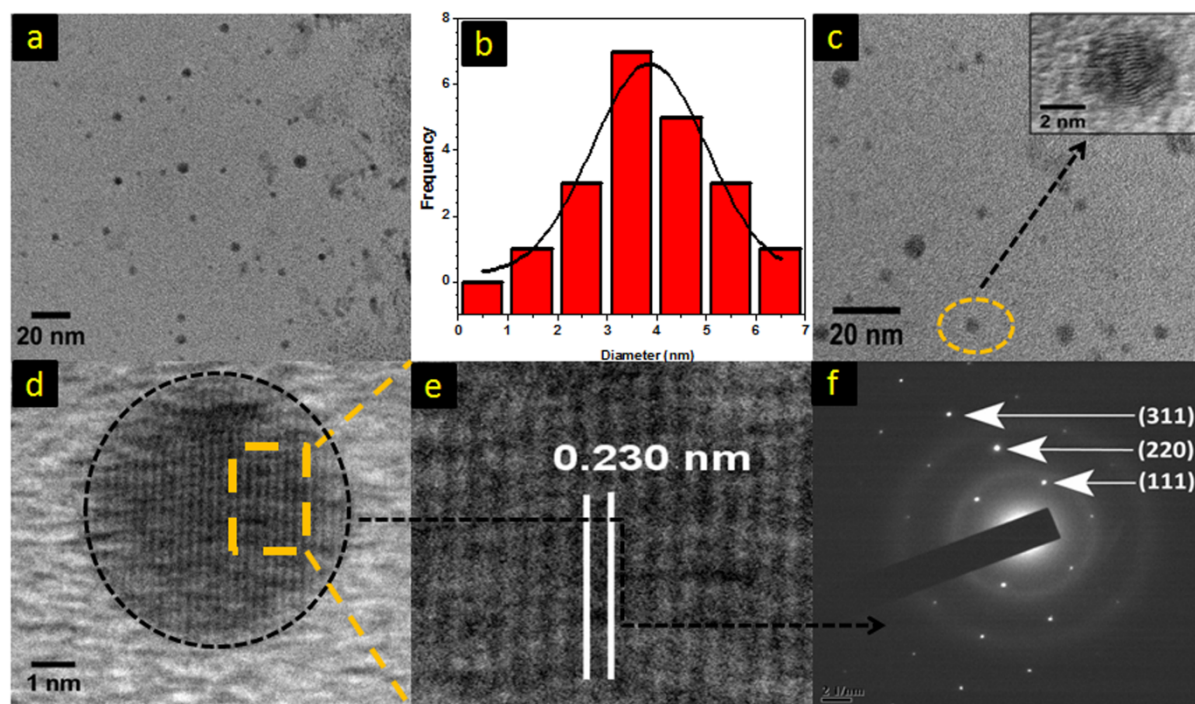


Fig. S2 (a) and (c) Low-magnified TEM images of Au NPs-rGO-PEG nanocomposite, (b) particle size distribution, (d) HRTEM image of one Au NP, (e) lattice fringes of Au NPs along with interplanar spacing, and (f) SAED pattern.

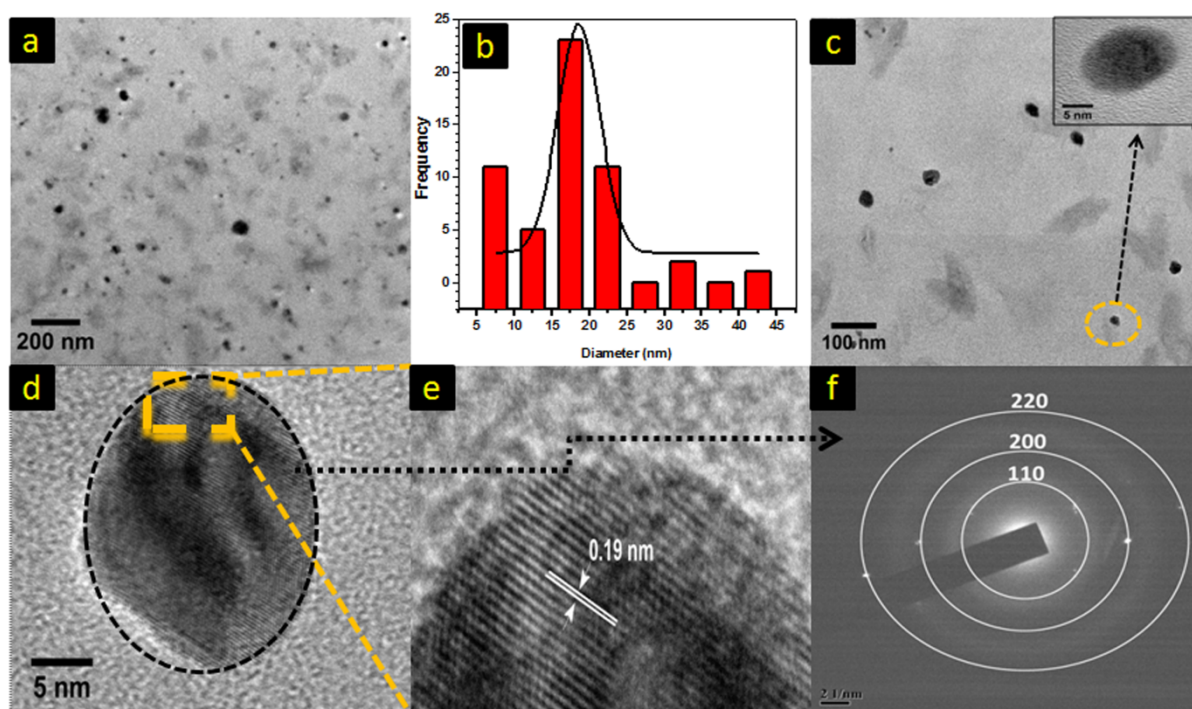


Fig. S3 (a) and (c) Low-magnified TEM images of Pd NPs-rGO-PEG nanocomposite, (b) the particle size distribution, (d) HRTEM image of one Pd NP, (e) lattice fringes of Pd NPs along with interplanar spacing, and (f) SAED pattern.

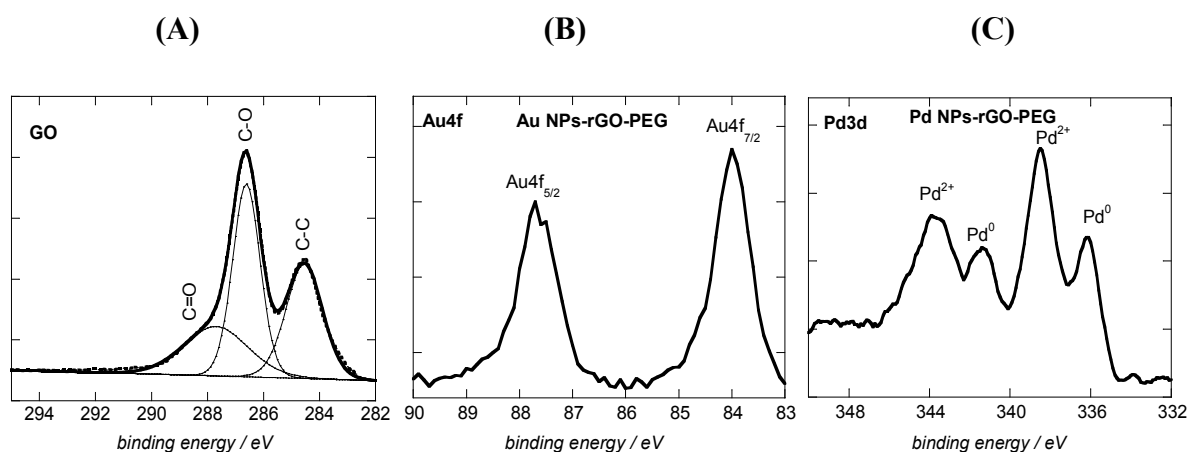


Fig. S4 (A) C_{1s} of GO; (B) Au_{4f} XPS high resolution spectrum of Au NPs-rGO-PEG nanocomposite; (C) Pd_{3d} high resolution XPS spectrum of Pd NPs-rGO-PEG nanocomposite

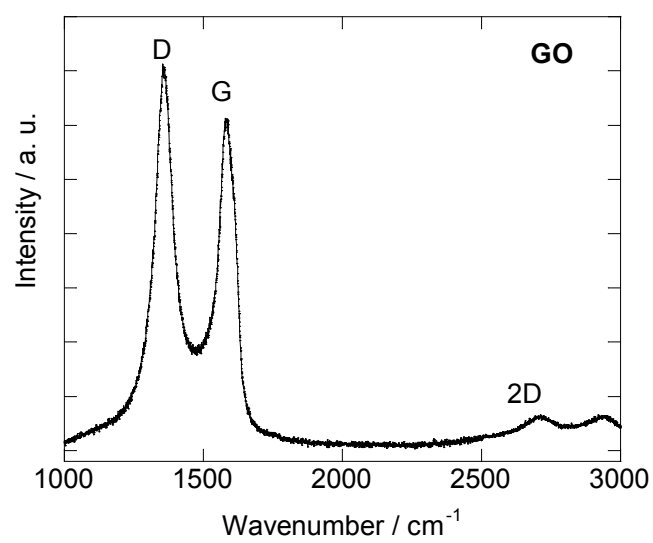


Fig. S5 Raman spectrum of GO