Electronic Supplementary Material (ESI) for Nanoscale.

Reverse Saturable Absorption and Nonlinear Refraction of Ultrathin ZrS_3 Nanobelts

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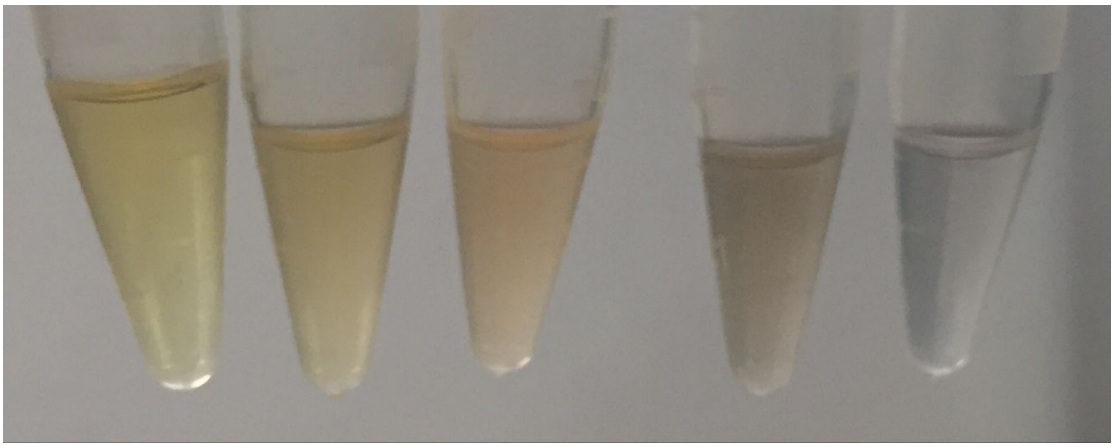

Fig.S1 Digital photographs of the sample, from left to right, GO, GO/ZrS_3, ZrS_3, Zrs_3/RGO, GRO.

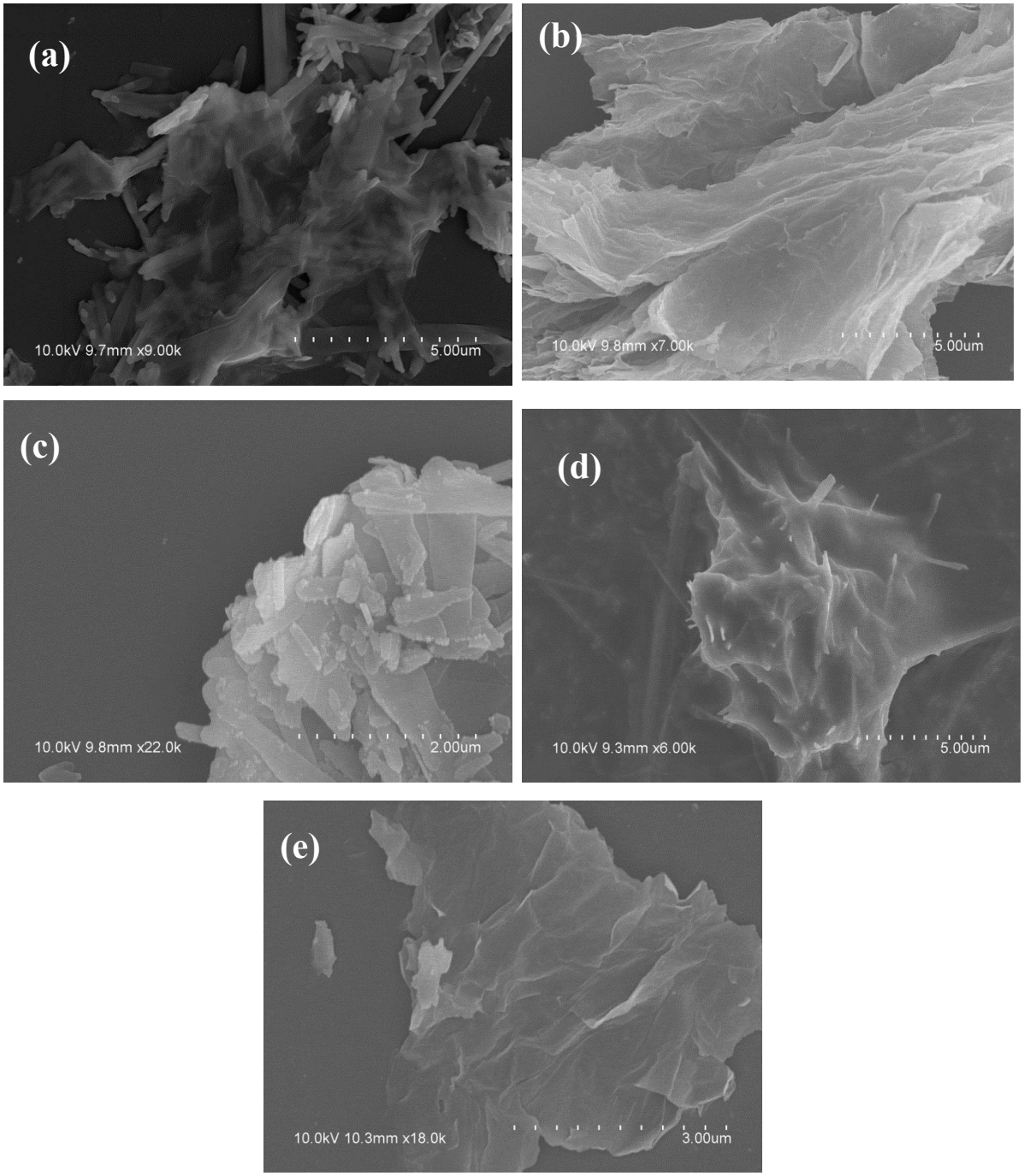

Fig.S2 Typical SEM of (a) ZrS_3/GO composites, (b) GO ,(c) ZrS_3 ,(d) ZrS_3/RGO composites, and (e) RGO.

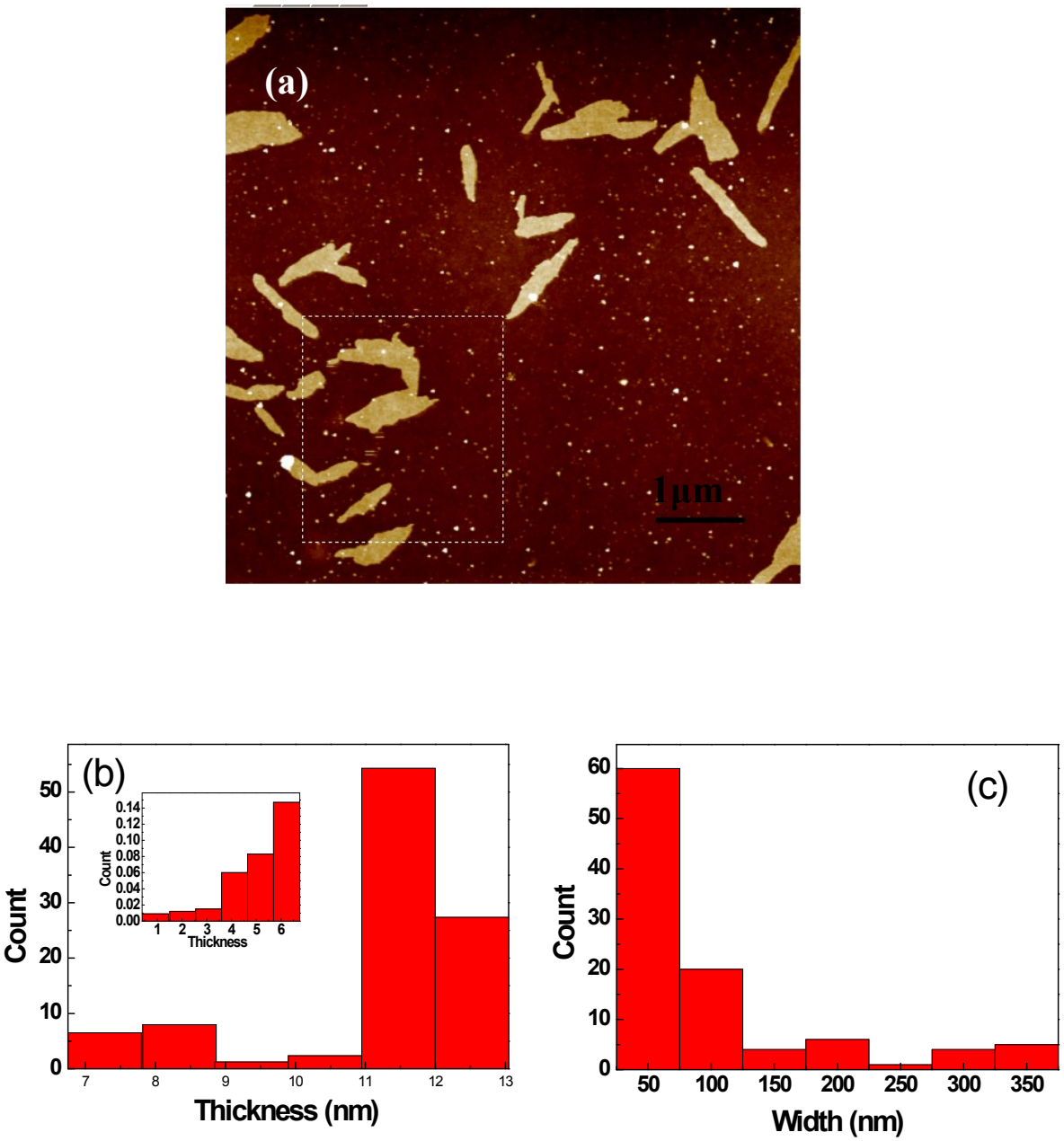

Fig.S3 (a) typical AFM image, (b) histogram of thickness (inset is histogram of thickness below 7 nm), and (c) histogram of widths of ZrS_3 nanobelts.

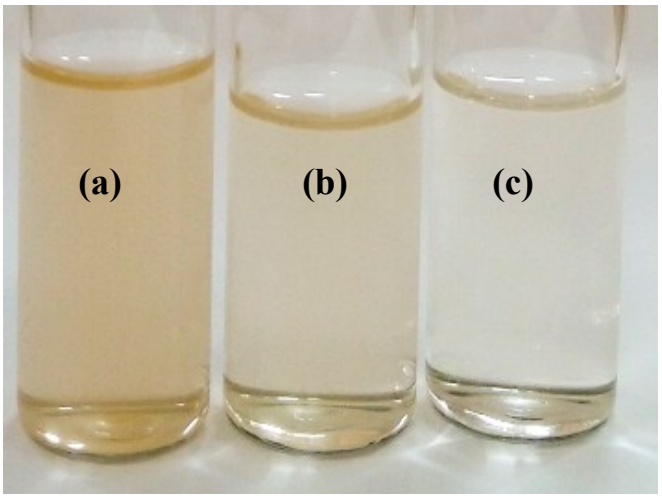

Fig.S4 Digital photographs of (a) ZrS_3 nanobelts (sample 1), (b) ZrS_3 dispersions (sample 2, the supernatant at 3000 rpm) , and (c) ZrS_3 dispersions (sample 3, the supernatant at 5000 rpm).

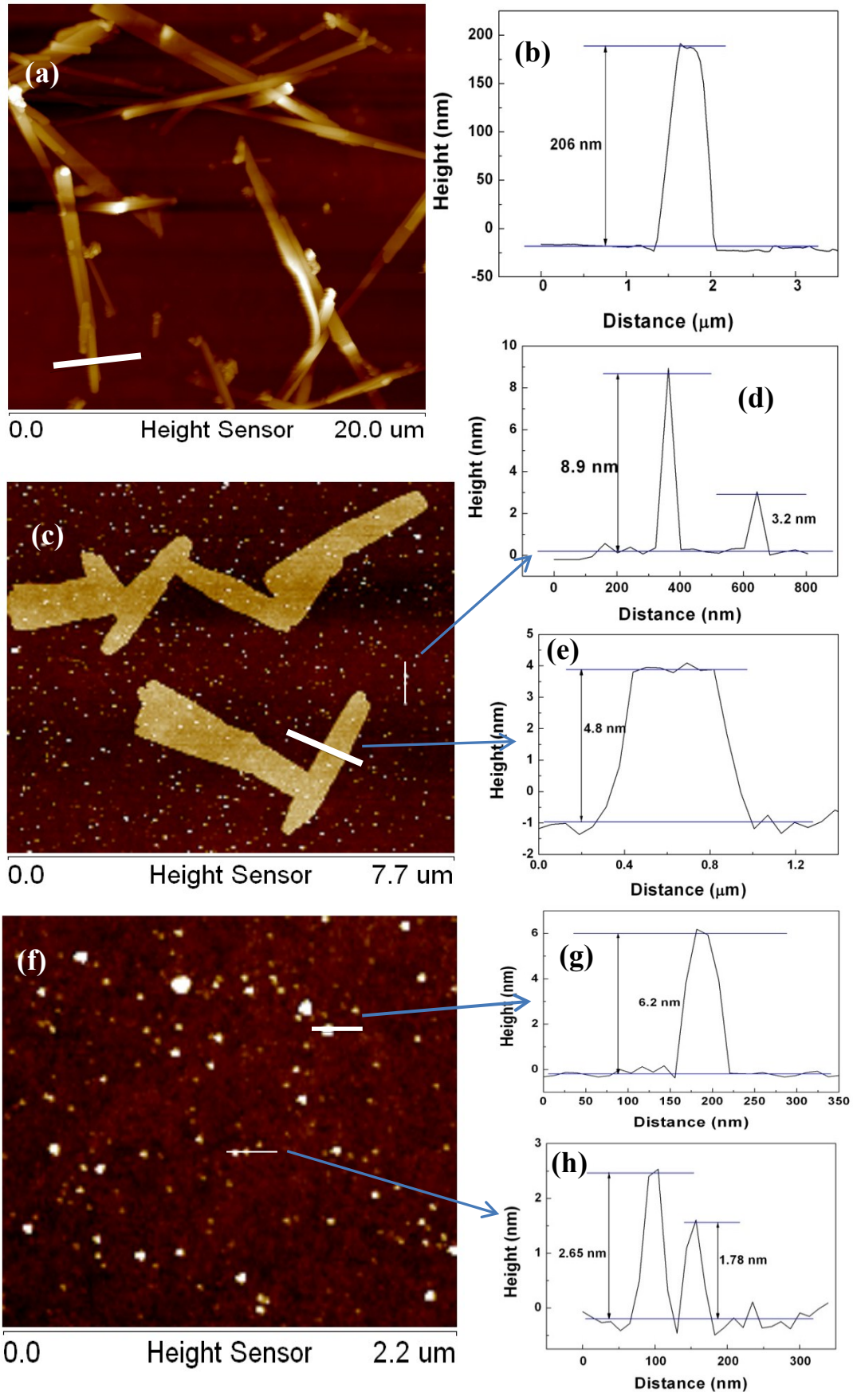

Fig. S5 (a) AFM image of ZrS_3 nanobelts (sample 1); (b) corresponding height profile of ZrS_3

nanobelt (which wide bar indicates). (c) AFM image of ZrS_3 dispersions (sample 2); (d, e) the corresponding height profiles of ZrS_3 nanobelt (which wide bar indicates) and nanoparticle (which thin bar indicates). (f) AFM image of ZrS_3 dispersions (sample 3), (g, h) the corresponding height profiles of ZrS_3 nanoparticle as wide and thin bars indicate.