

Supplementary Materials

Direct Synthesis of MoS₂ Nanosheets in Reduced Graphene Oxide Nanoscroll for Enhanced Photodetection

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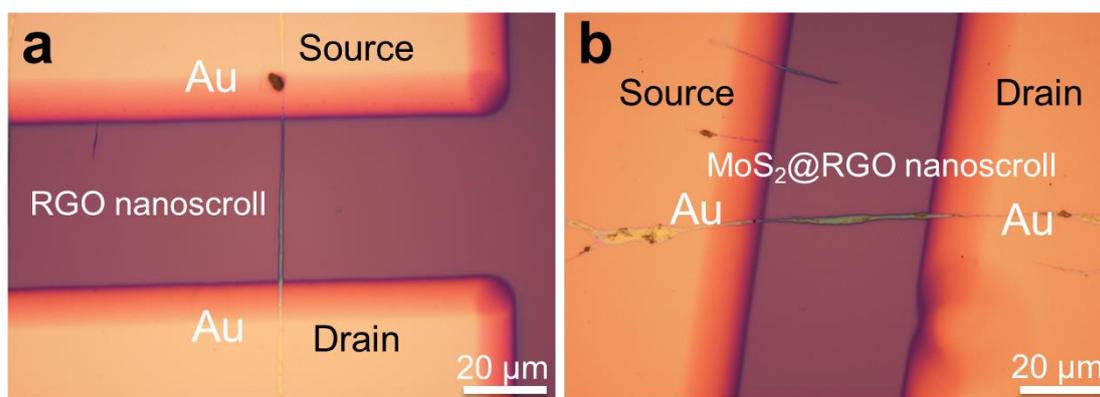


Figure S1. The optical images of photodetectors based on individual (a) RGO nanoscroll and (b) MoS₂@RGO nanoscroll with Au pads as source and drain electrodes.

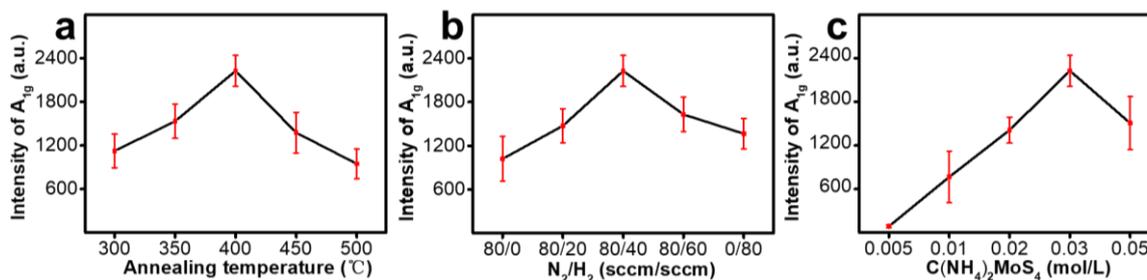


Figure S2. Plots of Raman peak intensity of A_{1g} as function of (a) annealing temperature, (b) the flow ratio of N₂ to H₂, and (c) concentration of (NH₄)₂MoS₄.

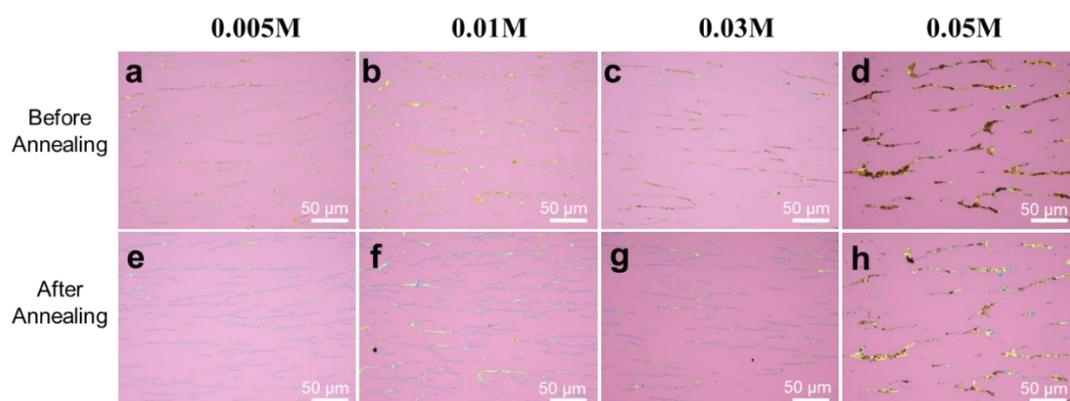


Figure S3. OM images of $(\text{NH}_4)_2\text{MoS}_4@\text{GONS}$ prepared by molecular combing $(\text{NH}_4)_2\text{MoS}_4$ solution with concentration of (a,e) 0.005 M, (b,f) 0.01 M, (c,g) 0.03 M, and (d,h) 0.05 M before and after thermal annealing.

$(\text{NH}_4)_2\text{MoS}_4@\text{GO}$ Nanoscroll $\text{MoS}_2@\text{RGO}$ Nanoscroll

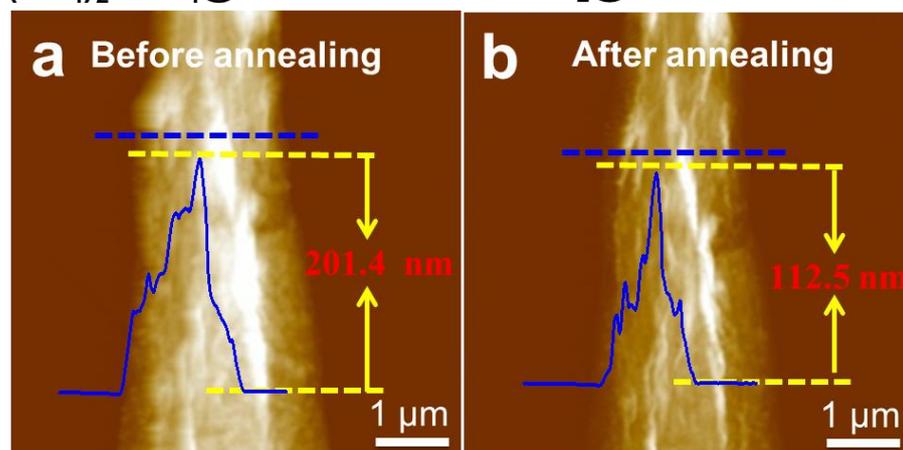


Figure S4. AFM height images of the same $(\text{NH}_4)_2\text{MoS}_4@\text{GONS}$ (a) before and (b) after thermal annealing.

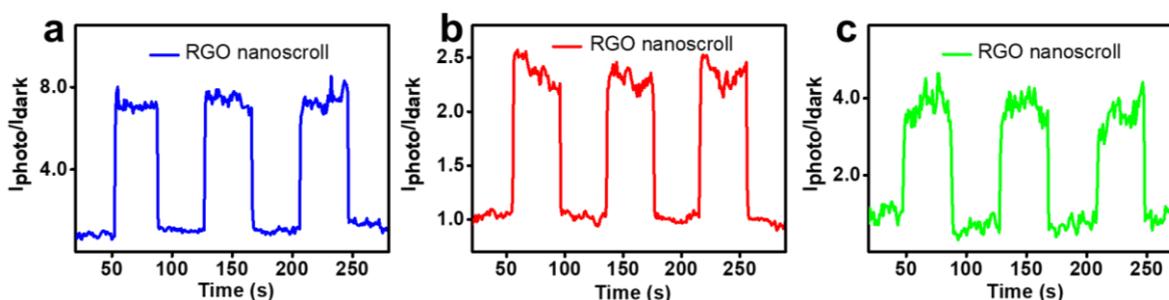


Figure S5. PDR plots of RGO nanoscrolls measured under (a) blue, (b) red, and (c) green lasers.