

## Supporting information

### **A simple hydrothermal route for the preparation of HgS nanoparticles and their photocatalytic activities**

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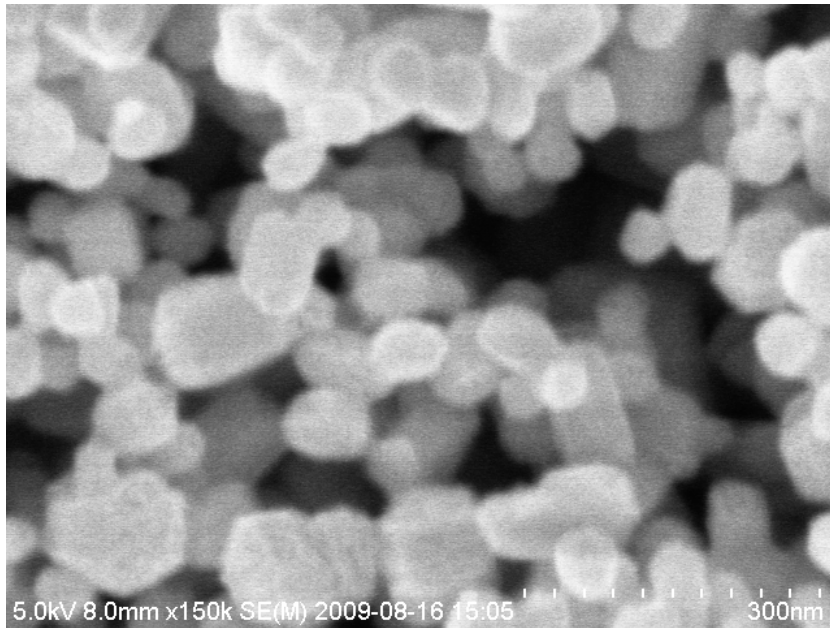
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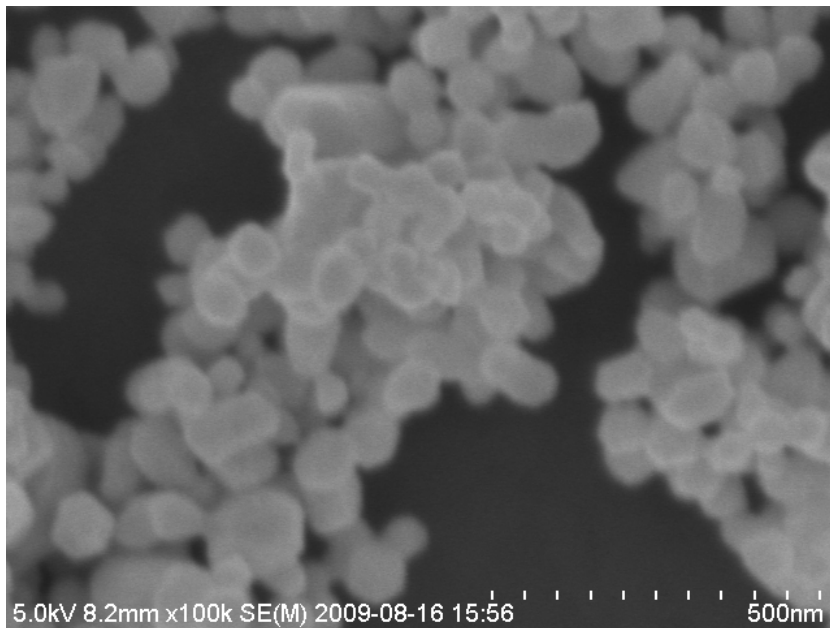
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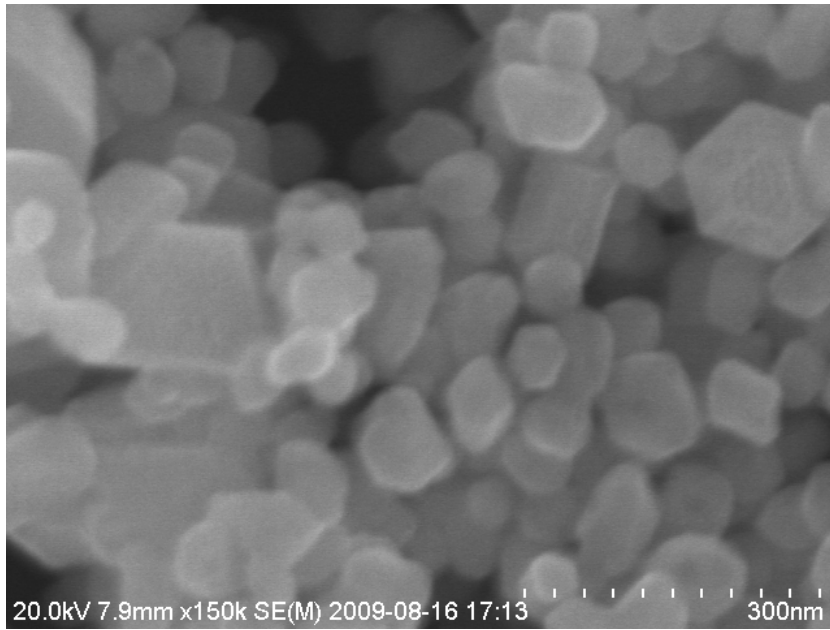
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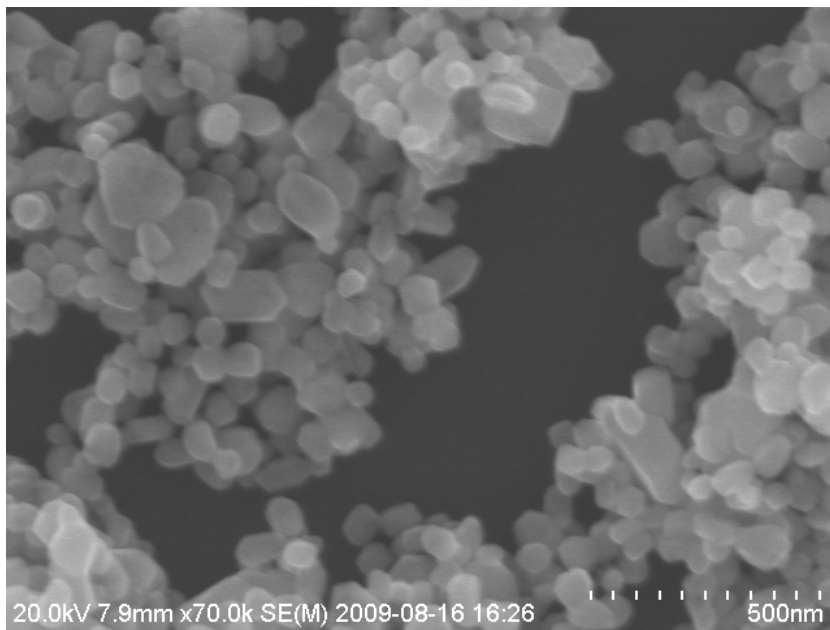
**Fig. S1.** SEM image of the as-prepared HgS products with the assistance of PEG-0.



**Fig. S2.** SEM image of the as-prepared HgS products with the assistance of PEG-2000.



**Fig. S3.** SEM image of the as-prepared HgS products with the assistance of PEG-4000.



**Fig. S4.** SEM image of the as-prepared HgS products with the assistance of PEG-6000.