Supplementary Information

Growth of photoluminescent Ag_2Se nanowires from a simple precursor solution

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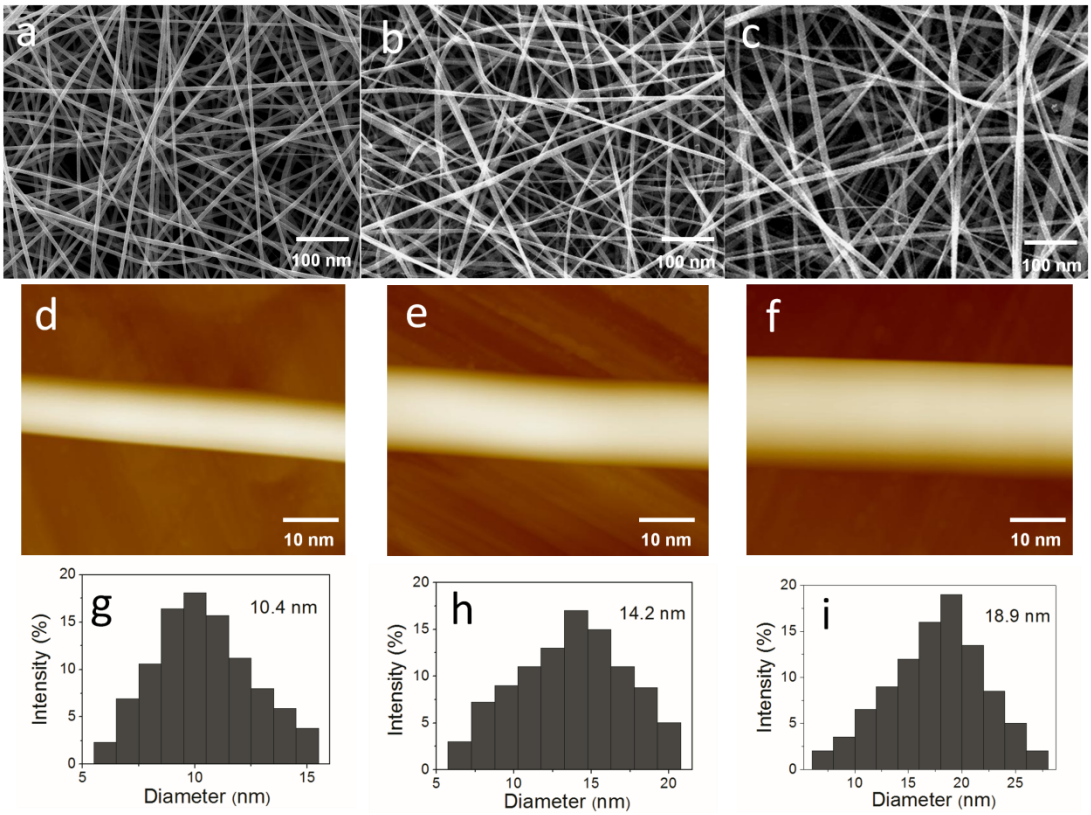

Fig. S1 SEM micrographs (a-c), AFM micrographs (d-f) and the corresponding size distribution (g-i) of Ag_2Se nanowires synthesized over varied reaction times: (a,d,g) 24 h; (b,e,h) 48 h; (c,f,i) 72 h.

Table S1 EDX data for Ag_2Se nanowires of 10.4 nm.

No.	Se	Ag	Atomic Ratio
1	34.23	64.35	1.88
2	34.07	63.03	1.85
3	34.11	64.45	1.89
4	34.58	63.28	1.83
5	33.99	64.92	1.91
6	34.70	63.50	1.83
7	34.77	64.67	1.86
8	34.75	63.59	1.83
Average	34.40	63.98	1.86
STDEV	0.332	0.706	0.031

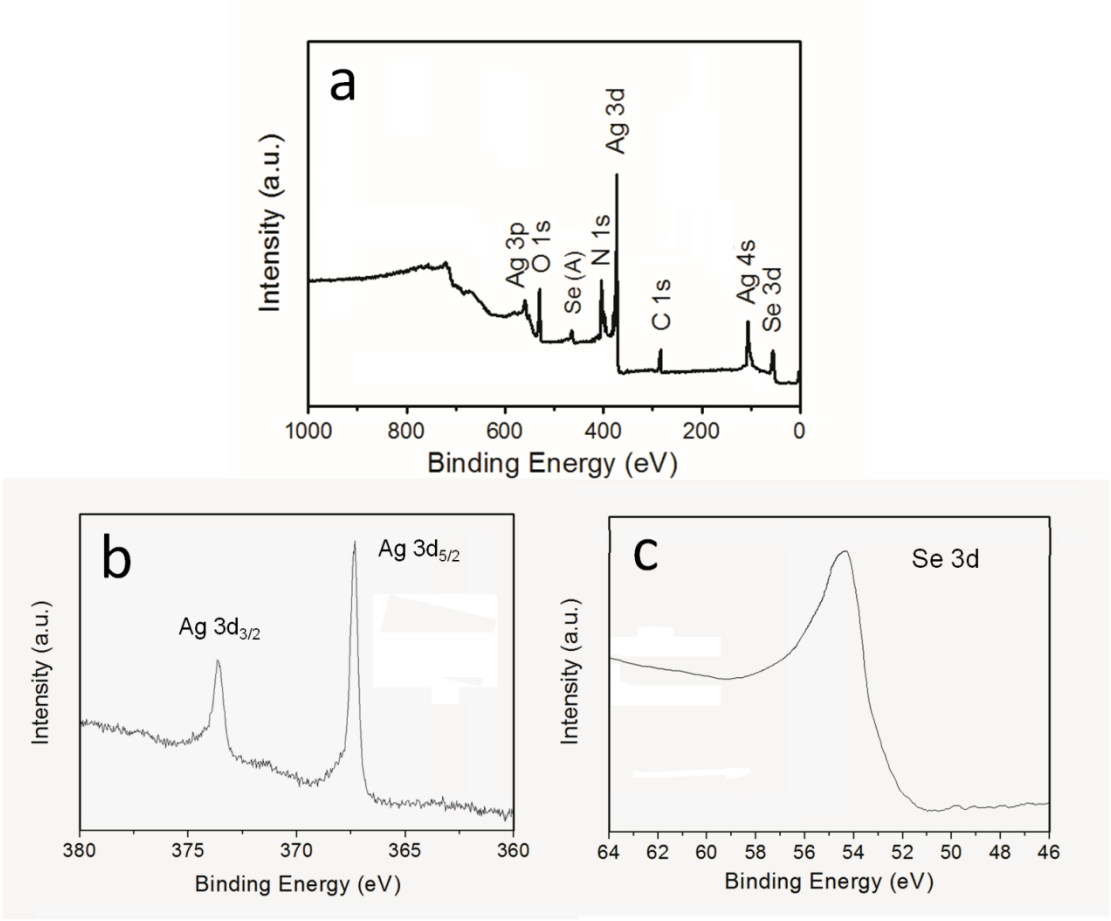

Fig. S2 (a) Full XPS spectrum of Ag_2Se nanowires. (b) Ag 3*d* signals and (c) Se 3*d* signals recorded for the Ag_2Se nanowires of 10.4 nm.

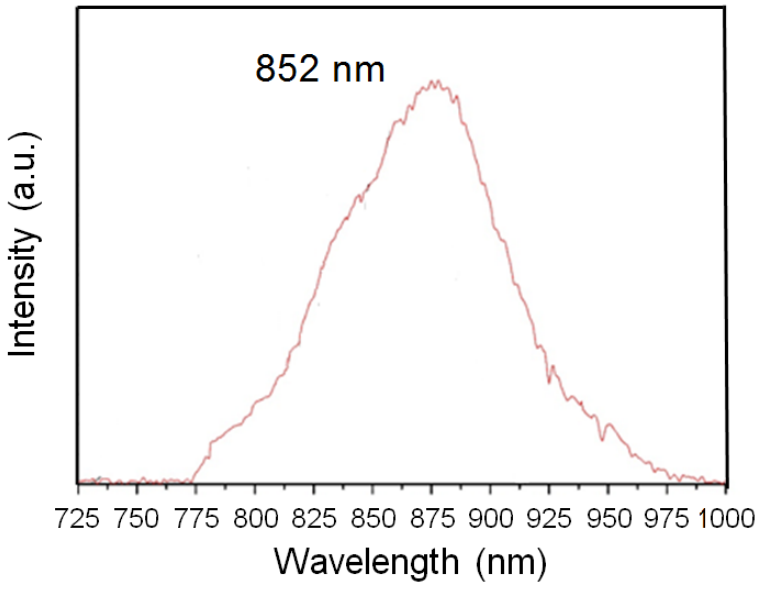

Fig. S3 PL excitation spectrum of the Ag_2Se nanowires of 10.4 nm.

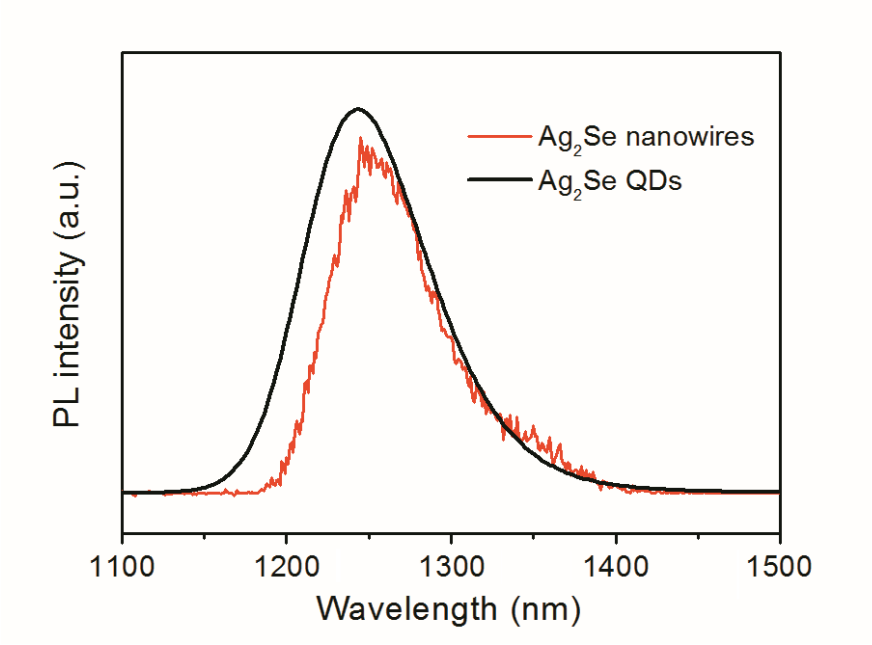

Fig. S4 PL spectra of the Ag_2Se nanowires and Ag_2Se QDs synthesized according to the method reported previously [1] at the same concentration of 10 μg/mL.

References

1 L. Tan, A. Wan, X. Zhu, R. Huang and H. Li, *ACS Appl. Mater. Interfaces*., 2014, **6**, 6217.