

Supporting information

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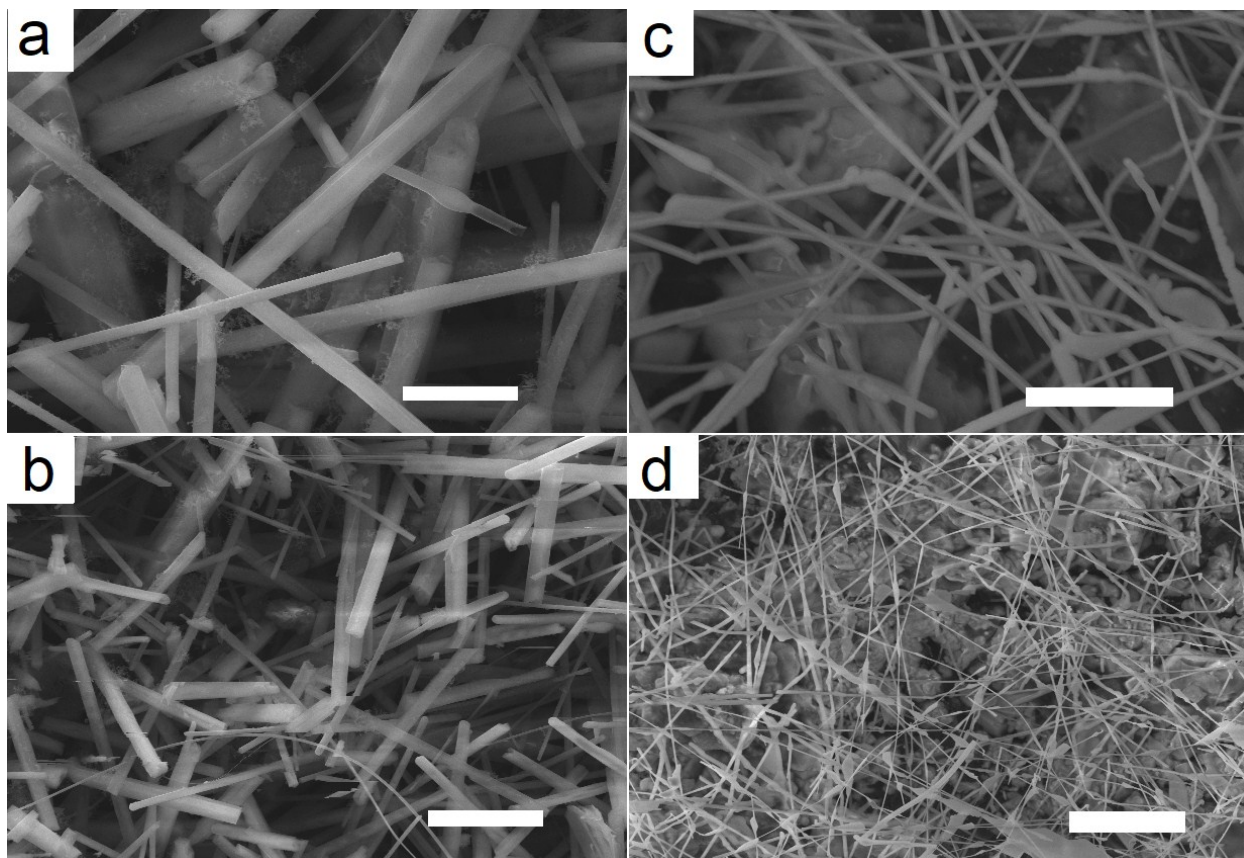


Fig. S1. High- and low-magnification FESEM images of ReS₂ nanowires, when the temperature of the furnace II is increased to 1100 °C (a, b) and decreased to 900 °C. Scale bar: 10 μm (a), 5 μm (c) and 20 μm (b, d).

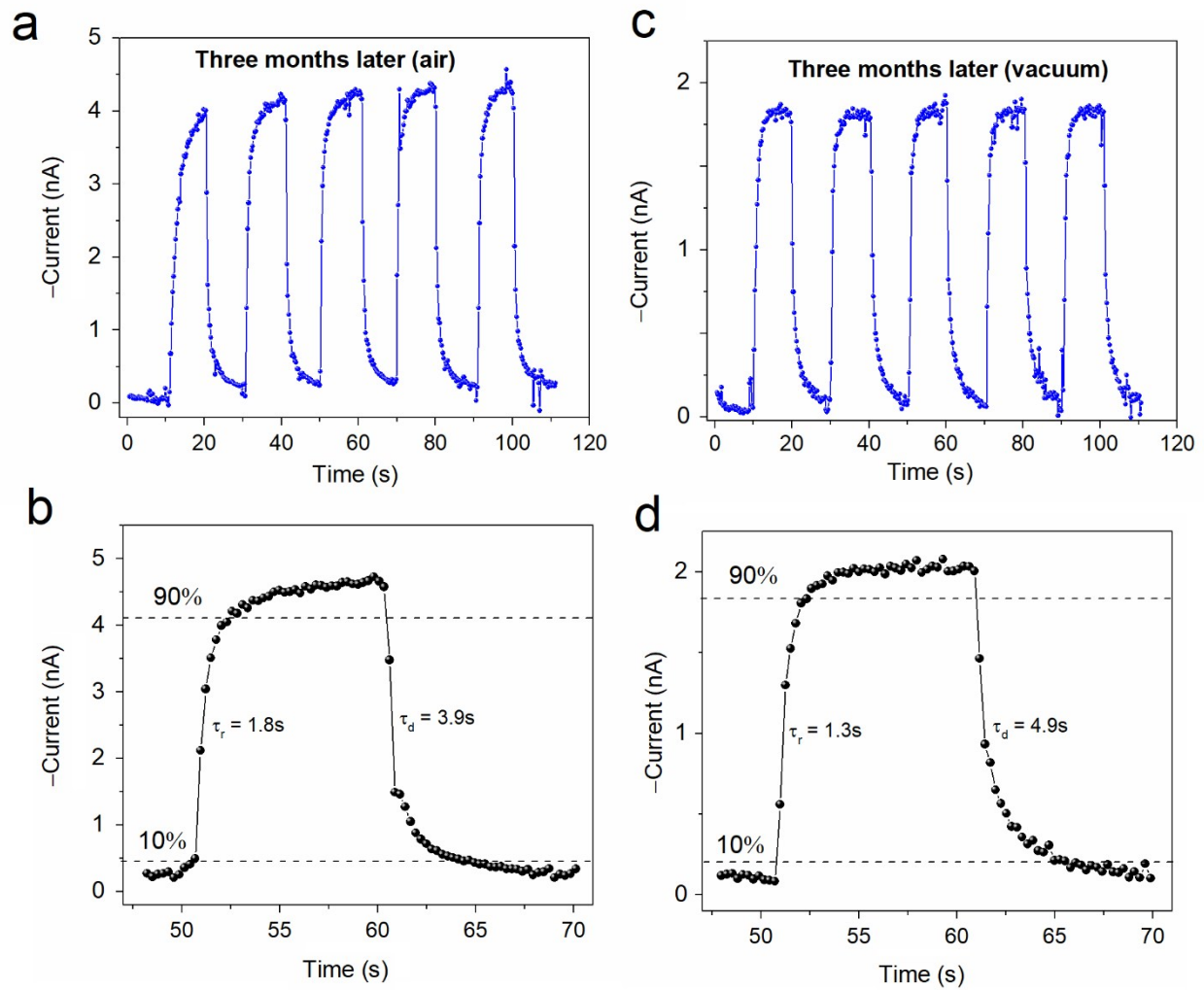


Fig. S2. Time-dependent photoresponse curves of the nanostructured PD device (a) in air and (c) vacuum condition after three months. Single on/off cycle of the device (b) in air and (d) vacuum condition. Photoresponse rise and decay time (τ_r and τ_d) is recorded.

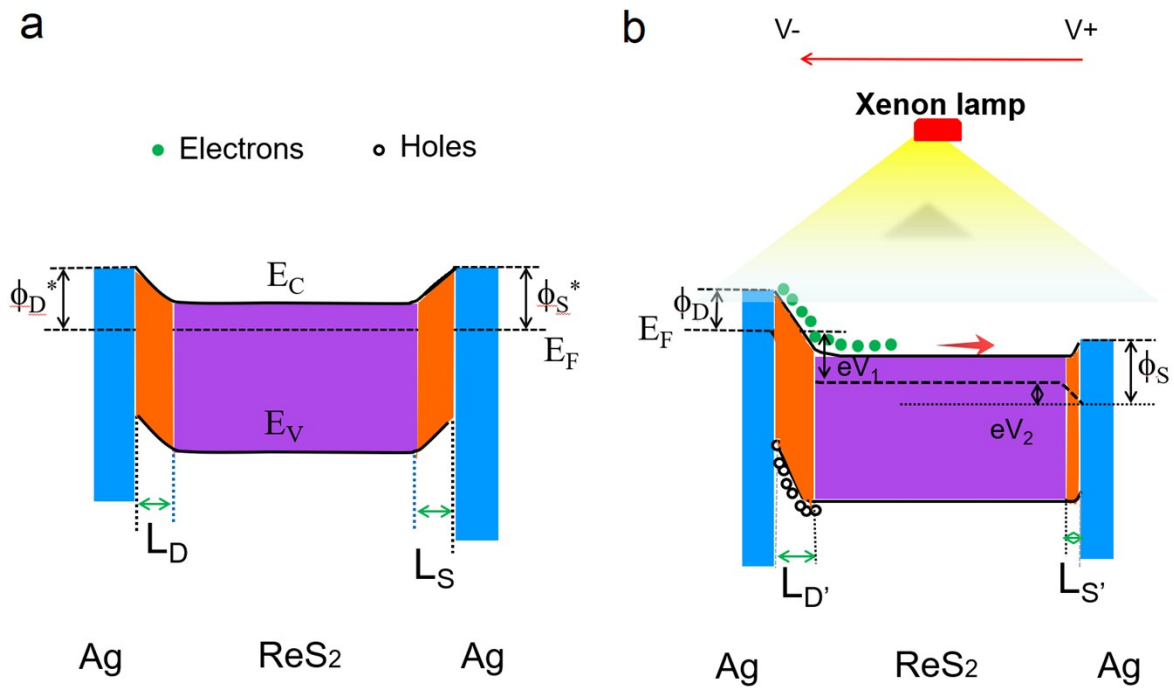


Fig. S3. Band diagram of nanostructured PDs with metal-semiconductor-metal (MSM) structure in vacuum (a) without illumination and (b) at the bias of 3V under illumination.

Table S1. The light power density of the monochromatic lights provided by using optical filters
(The measurement setup and process is presented in supporting information of Ref. 26).

Wavelength (nm)	254	297	365	405	450	500	546	600
Power (nW/cm ²)	0.98	0.81	0.46	0.78	0.53	0.42	0.46	0.32
Wavelength (nm)	650	700	750	800	850	900	950	1000
Power (nW/cm ²)	0.29	0.28	0.22	0.23	0.26	0.27	0.33	0.52