

Supporting Information

High-performance light trajectory tracking and image sensing devices based on γ - $\text{In}_2\text{Se}_3/\text{GaAs}$ heterostructure

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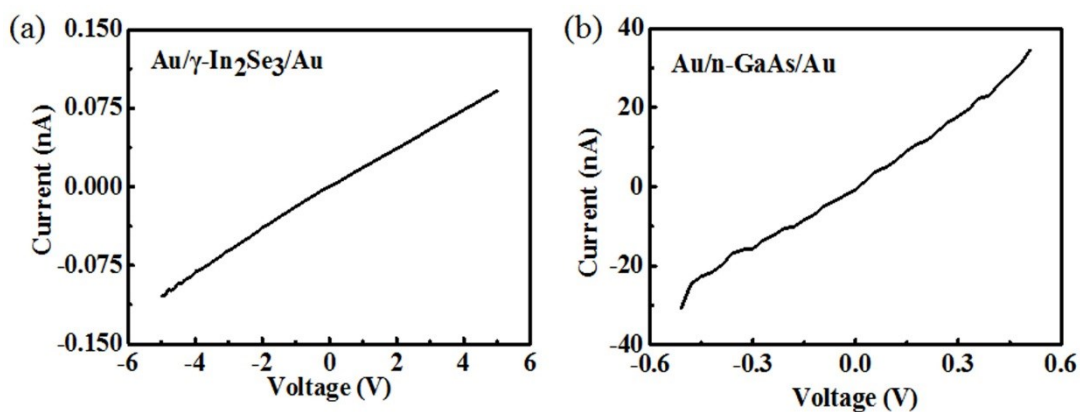


Fig. S1 I - V curves of (a) $\text{Au}/\gamma\text{-In}_2\text{Se}_3/\text{Au}$ and (b) $\text{Au}/\text{n-GaAs}/\text{Au}$ in dark.

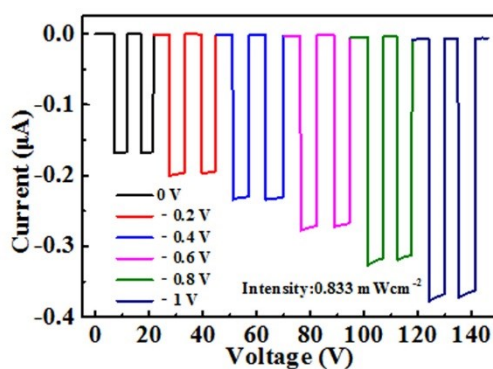


Fig. S2 Time-dependent photoresponse of the $\gamma\text{-In}_2\text{Se}_3/\text{GaAs}$ heterojunction photodetector under 660 nm light illumination (0.833 mWcm^{-2}) at different bias voltages of 0, -0.2, -0.4, -0.6, -0.8 and -1 V, respectively.

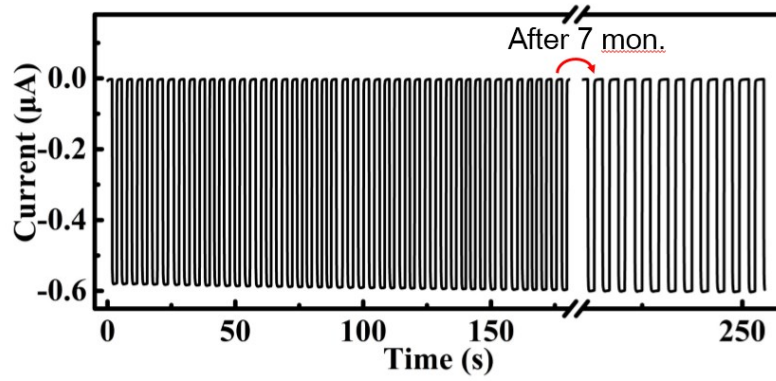


Fig. S3 Photoresponse of the γ - $\text{In}_2\text{Se}_3/\text{GaAs}$ heterojunction photodetector for 45 times and after 7-month storage under ambient conditions.

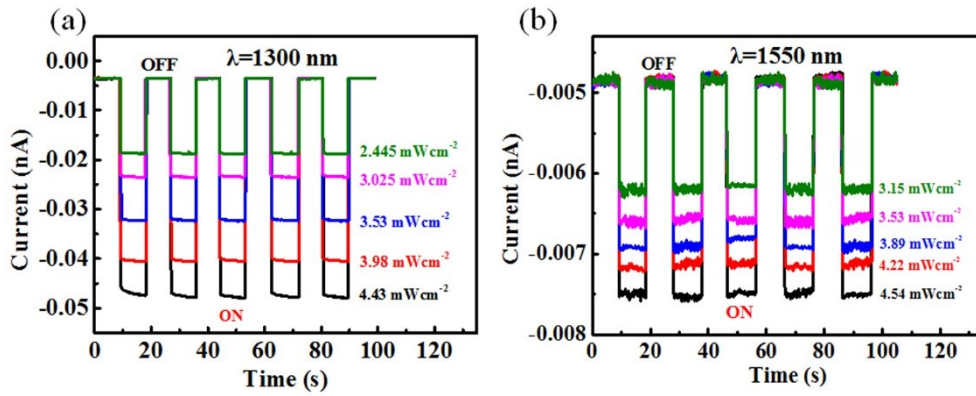


Fig. S4 Photoresponse of the γ - $\text{In}_2\text{Se}_3/\text{GaAs}$ heterojunction photodetector under (a) 1300 nm and (b) 1550 nm, respectively.

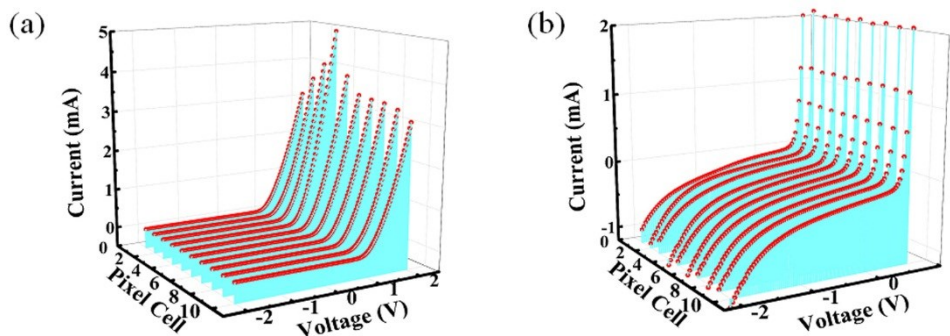


Fig. S5 (a) A 3D diagram shows the I - V curves for each pixel device in dark. (b) I - V curves of each pixel device under 660 nm illumination (0.85 mWcm^{-2}).