Supporting Information

2D Te/Mxene Schottky Junction for Self-Powered Broadband Photodetector With High Polarization-Sensitive Imaging

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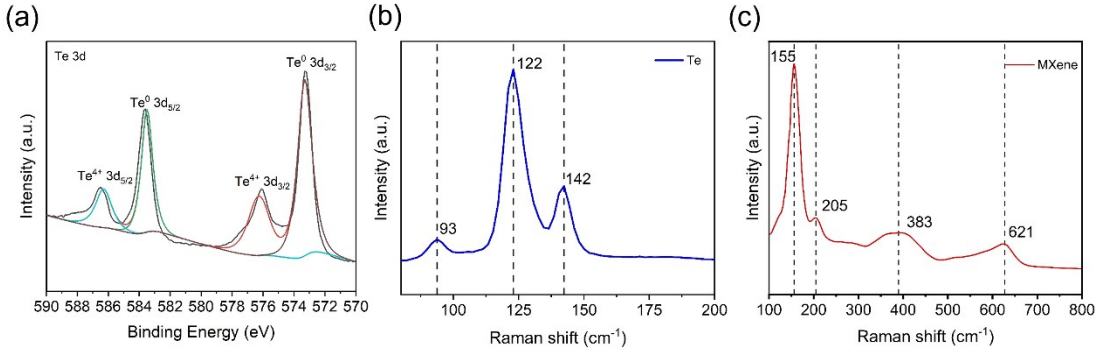

Fig. S1 Material characterizations of the Te/MXene heterojunction device. XPS spectra of Te NTs (a). Raman spectra of the Te (b) and MXene (c).

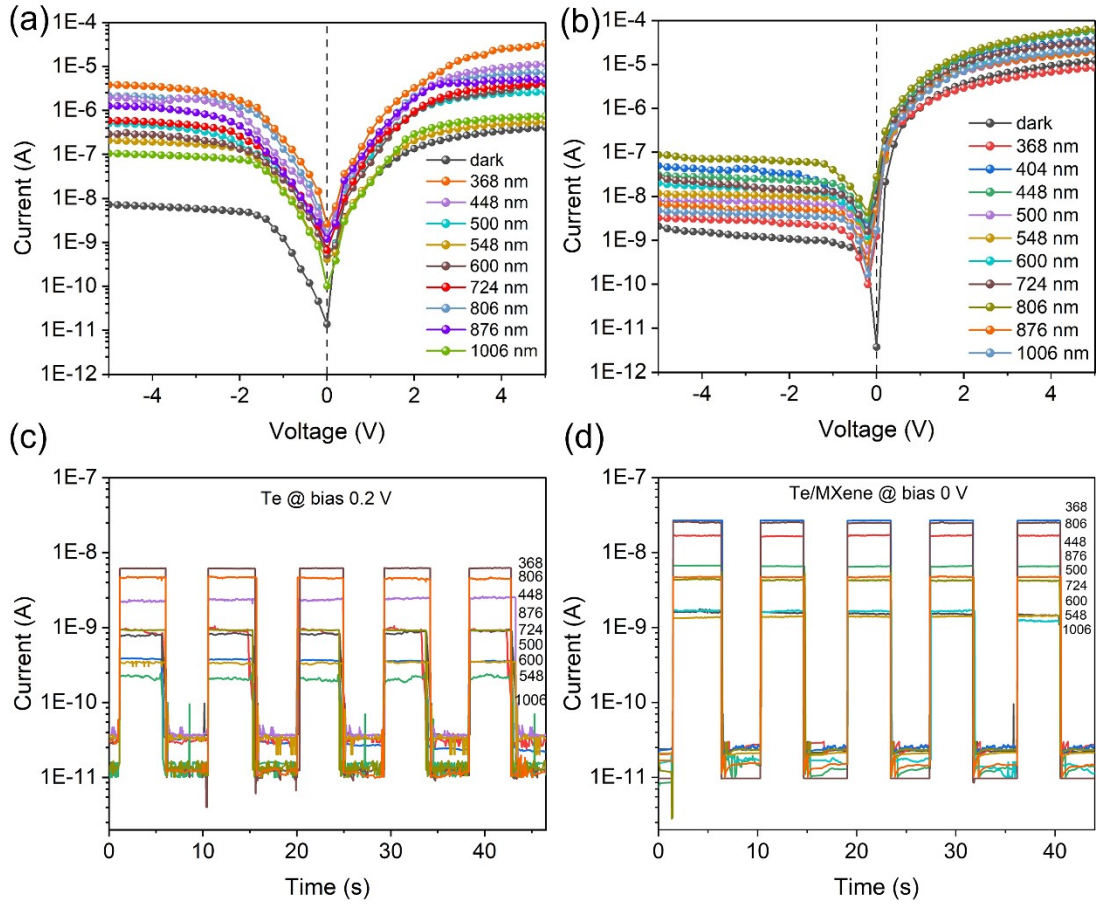

Fig. S2 Real-time photoresponse characteristics of the Te (c) and Te/MXene (d) device under the illumination of light at 0 V bias with various wavelengths.

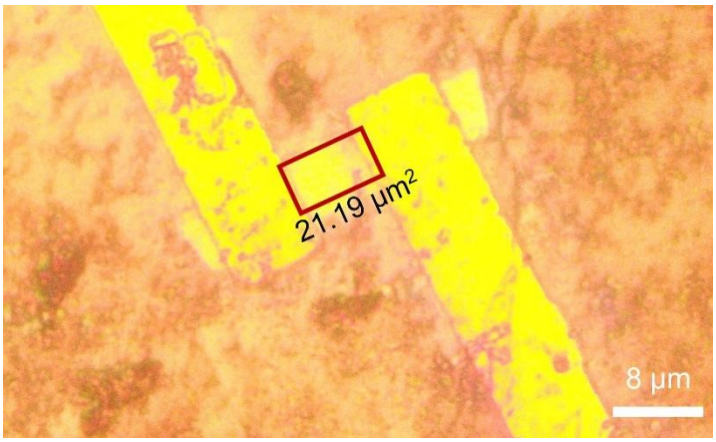

Fig. S3 Schematic representation of the actual light area of the heterojunction

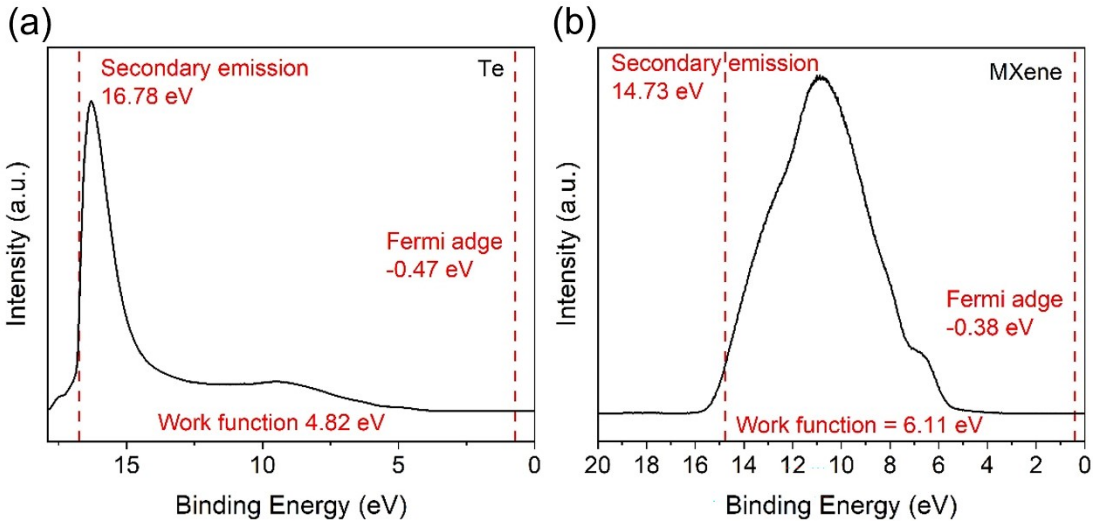

Fig. S4 UPS spectra for the pristine Te(a) and MXene(b).

Table S1 The light intensity at different wavelength.

Wavelength (nm)	**Light Intensity (mW cm^{-2})**
368	1.32
448	1.24
500	1.14
548	0.93
600	0.83
724	0.79
806	0.69
876	0.73
1006	0.71