

Supporting Information

Engineering Excitonic Dynamics and Environmental Stability of Post-Transition Metal Chalcogenides by Pyridine Functionalization Technique

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Figure S1

Change in PL of pristine GaTe stored at ambient conditions for 3 days. Optical change of pristine GaTe at ambient conditions

In the main text we have argued that pristine GaTe oxidizes at ambient conditions with time elapses. In Figure S1, we show the progression of GaTe's PL signal after exposing freshly cleaved GaTe surfaces to ambient conditions for 3 days. The integrated PL intensity for the pristine GaTe at day 0, day 1, day 2, and day 3 are measured as 88.07, 10.9, 9.49 and 9.49 counts, respectively, which corresponds to ~89% reduction in the PL. However, after pyridine treatment the PL intensity remains within 5% of its original (freshly cleaved) value up to a week, thereby improving the environmental stability of GaTe surface.

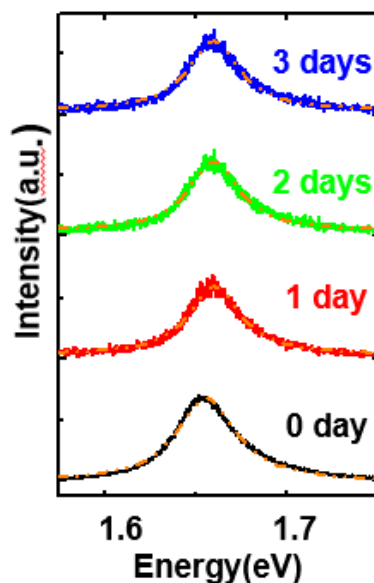


Figure S1. PL properties of pristine GaTe stored at ambient conditions for 0, 1, 2 and 3 days, respectively. The dash lines are the fitted curves of the corresponding spectra.