

ABSTRACT

A method of forming a semiconductor device structure comprises forming at least one 2D material over a substrate. The at least one 2D material is treated with at least one laser beam having a frequency of electromagnetic radiation corresponding to a resonant frequency of crystalline defects within the at least one 2D material to selectively energize and remove the crystalline defects from the at least one 2D material. Additional methods of forming a semiconductor device structure, and related semiconductor device structures, semiconductor devices, and electronic systems are also described.

[Figure 1]