

Table 1: Comparison of temperature tolerance in different 2D material devices

Device	Device Type	Temperature Tolerance	Environment	Flexibility	Ref
MoS ₂	Photodetector	300 °C	in air	flexible	[21]
MoS ₂	FET	125 °C	in air	rigid	[39]
MoS ₂	Photodetector	200 °C	in air	rigid	[23]
MoS ₂	Synaptic Transistor	350 °C	in air	rigid	[40]
MoS ₂	TFT	107 °C	in air	rigid	[41]
MoS ₂	FET	107 °C	in air	rigid	[42]
MoS ₂	TFT	223 °C	in air	rigid	[43]
ReS ₂	FET	102 °C	in air	rigid	[44]
MoTe ₂	FET	400 °C	in N ₂	rigid	[45]
Graphene	FET	500 °C	in vacuum	rigid	[46]
Graphene	Sensor	650 °C	in vacuum	flexible	[47]
WSe ₂	Photodetector	700 °C	in air	flexible	This work
WSe ₂	Photodetector	1000 °C	in vacuum	flexible	This work