

Supporting Information for

Strength and failure behavior of a graphene containing bi-grain-boundary

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Fig. S1 The failure processes of ZZ1 ($T5.5^\circ, \perp 5.5^\circ$) at $T = 1$ K (a-e) and 1200 K (f-j).

Fig. S1 (a-j) is a part of graphene containing bi-GBs which is amplified from the black box. The formation of new structures are highlighted by green.

