Supplementary Information

Surface etching and edge control of hexagonal boron nitride assisted by triangular Sn nanoplates

Hsin Yi,^a Pablo Solís-Fernández,^b Hiroki Hibino^c and Hiroki Ago*^{a,b}

^a Interdisciplinary Graduate School of Engineering Sciences, Kyushu University, Fukuoka 816-8580, Japan

^b Global Innovation Center (GIC), Kyushu University, Fukuoka 816-8580, Japan

^c School of Engineering, Kwansei Gakuin University, Hyogo 669-1330, Japan



Figure S1. SEM (a) and EDS (b) images showing the deposited Sn particles. (c) EDS data collected from the whole area in (b). The scale bars are 500 nm.



Figure S2. AFM image of a multilayer hBN after the annealing at 1000 $^{\circ}$ C in Ar for 30 min without Sn powder at the upstream. The scale bar is 1 μ m.



Figure S3. AFM images of the nanoplates before (a) and after (b) annealing of the Sn/hBN sample at 1000 $^{\circ}$ C in Ar for 10 min without supplying additional Sn vapor. The scale bars are 200 nm.



Figure S4. Two possible directions expected for the Sn-free etching. Due to the higher stability of N-terminated zigzag edges, the Sn-free etching will follow the directions indicated by the green lines.