

Supplementary information for
“Mechanical stability of a nanotube from monolayer black
phosphorus with the [110] direction as tube’s circumference or
generatrix”

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Table S1. Geometry parameters of s-BPNTs with same effective length. All the simulation models are set in periodic boundary conditions.

s-BPNTs	(11, 11)	(13, 13)	(15, 15)	(17, 17)	(19, 19)	(21, 21)
L (nm)	22.014	22.014	22.014	22.014	22.014	22.014
D (nm)	1.922	2.271	2.621	2.970	3.319	3.669
$\alpha=L/D$	11.454	9.693	8.399	7.412	6.633	6.000

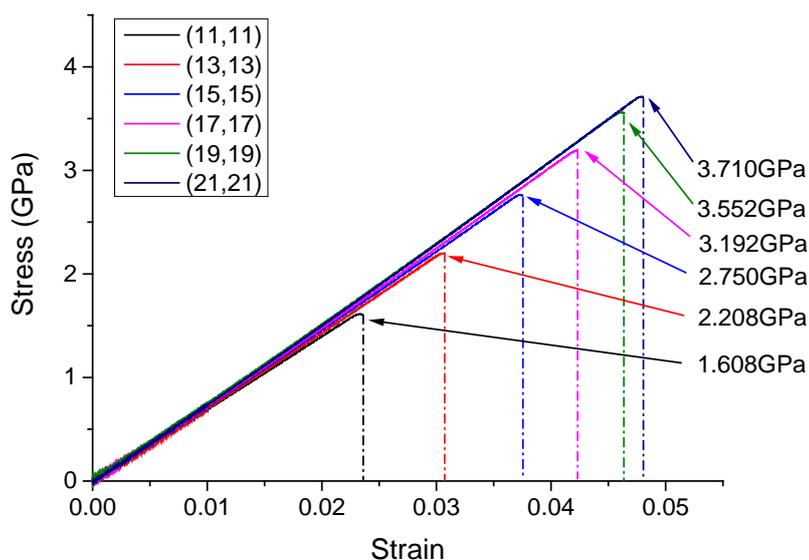


Figure S1. The uniaxial compressing stress-strain curves before buckling of s-BPNTs with same effective length and different diameters. The critical stresses are shown.

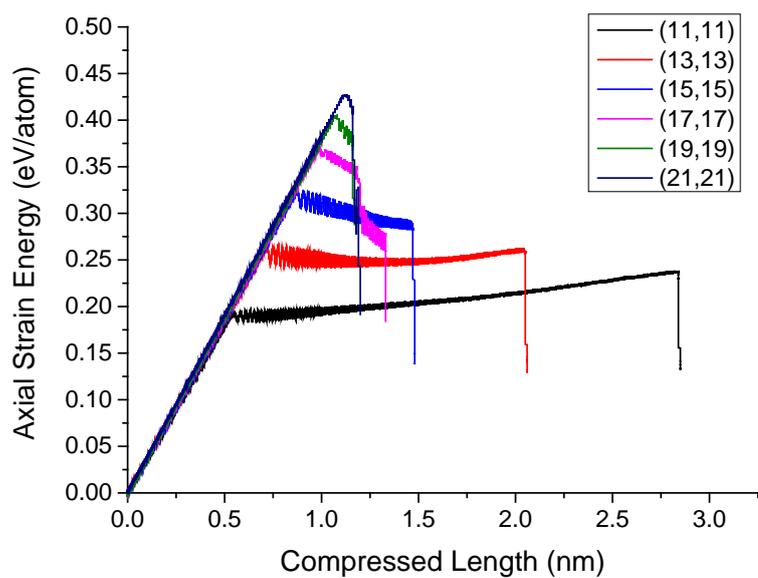


Figure S2. The axial strain energy versus compressed length of s-BPNTs with same effective length and different diameters. The final descent stage represents for the break of BPNTs.