Supplementary Materials

Evolution of Nanopores in Hexagonal Boron Nitride

Chunhui Dai^{1,2,3}, Derek Popple^{2,3,4}, Cong Su^{1,2,3}, Ji-Hoon Park⁵, Kenji Watanabe⁶, Takashi Taniguchi⁶, Jing Kong⁵, Alex Zettl^{1,2,3*}

- 1. Department of Physics, University of California at Berkeley, Berkeley, CA 94720, USA.
- 2. Materials Sciences Division, Lawrence Berkeley National Laboratory, Berkeley, CA 94720, USA
- 3. Kavli Energy NanoSciences Institute at the University of California Berkeley and the Lawrence Berkeley National Laboratory, Berkeley, CA 94720, USA.
- 4. Department of Chemistry, University of California at Berkeley, Berkeley, CA 94720, USA'
- 5. Department of Electrical Engineering and Computer Science, Massachusetts Institute of Technology, Cambridge, MA, USA
- 6. International Centre for Materials Nanoarchitectonics, National Institute for Materials Science, Tsukuba, Japan

TEM Characterization of Monolayer Hexagonal Boron Nitride (h-BN) Membrane:

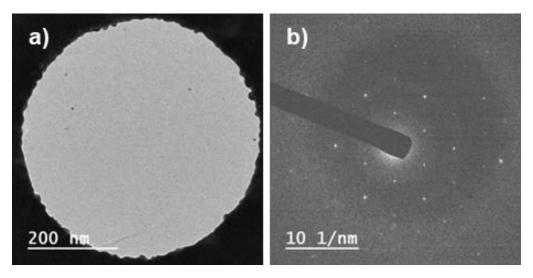


Figure S1, a) TEM image of a monolayer h-BN membrane transferred onto a holey TEM grid through a wet transfer process. b) Selected area electron diffraction (SEAD) of the monolayer h-BN studied in this work.

^{*}Corresponding author. Email: azettl@berkeley.edu

Time Series of Defects form in Bernal Stacked Mulatilayer h-BN:

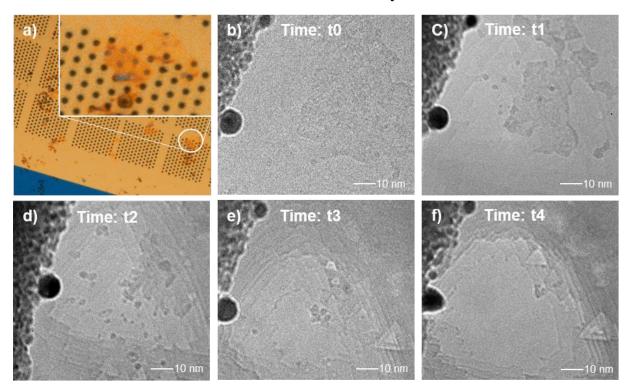


Figure S2, a) Multilayer Bernal stacked h-BN transferred onto a holey TEM grid through a wet transfer process. The membrane is ~10nm. b) TEM image of the initial condication (Time: t0) of the membrane. c-f) TEM time series (Time: t1 to t4) showing the formation of nanopores and stripping of layers under an electron beam with a beam current of ~40 A/cm². The time interval between tn and tn+1 is approximately 30 minutes. The beam is expended for imaging with a beam current of ~3 A/cm².