Electronic Supplementary Material (ESI) for Nanoscale.

Supplementary Information

Facile Graphene N-Doping by Wet Chemical Treatment for Electronic Applications

Jae Hoon Bong, [a, d] *Onejae Sul,* [a, d] *Alexander Yoon,*[c] *Sung-Yool Choi*[a, b] *and Byung Jin Cho*[a, b, *]

[a]Department of Electrical Engineering, KAIST, Daejeon 305-701, Republic of Korea

[b]Graphene Research Center (GRC), KAIST, Daejeon 305-701, Republic of Korea

[c]LAM Research Corporation, San Jose, California 95134, United States

[*]Corresponding Author E-mail: bjcho@kaist.edu

[d]J. H. Bong and O. Sul contributed to this work equally.

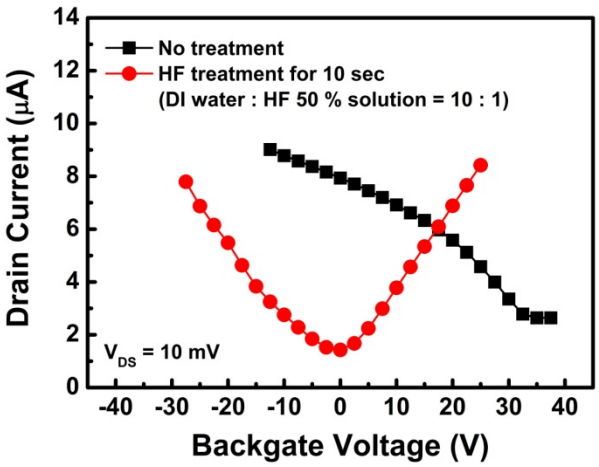

Figure S1. I_{DS}-V_{GS} characteristics of a back-gated graphene FET after HF treatment for 10 seconds. The volume ratio of DI water and HF 50 % solution is 10:1.

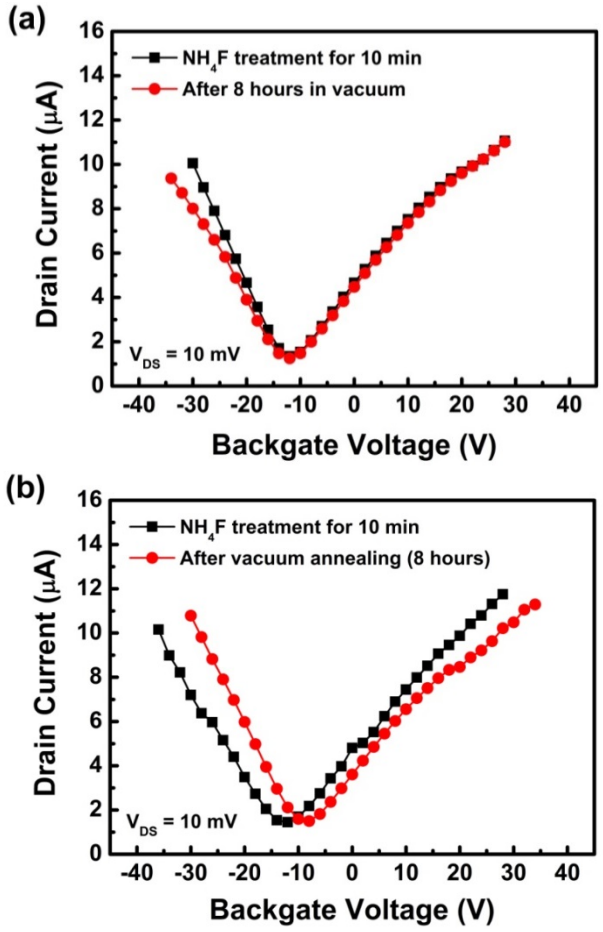

Figure S2. (a) I_{DS}-V_{GS} characteristics of NH_4F treated graphene devices when the devices are in vacuum (~10^{-3} Torr) for 8 hours. (b) I_{DS}-V_{GS} characteristics of NH_4F treated graphene devices after the devices are annealed in vacuum (~10^{-7} Torr) at 300 °C for 8 hours.