

Supplementary Information for:

Improved Efficiency of Graphene/Si Heterojunction Solar Cells by Optimizing Hydrocarbon Feed Rate

Zexia Zhang¹, Tongxiang Cui¹, Ruitao Lv^{1*}, Hongwei Zhu^{1,2}, Kunlin Wang¹, Dehai Wu¹, Feiyu Kang^{1,3*}

¹Key Laboratory of Advanced Materials (MOE), School of Materials Science and Engineering, Tsinghua University, Beijing 100084, China

²Center for Nano and Micro Mechanics, Tsinghua University, Beijing 100084, China

³Graduate School at Shenzhen, Tsinghua University, Shenzhen, Guangdong Province, 518055, China

*Correspondence should be addressed to F.Y. Kang; fykang@tsinghua.edu.cn; R.T. Lv; lvruitao@tsinghua.edu.cn.

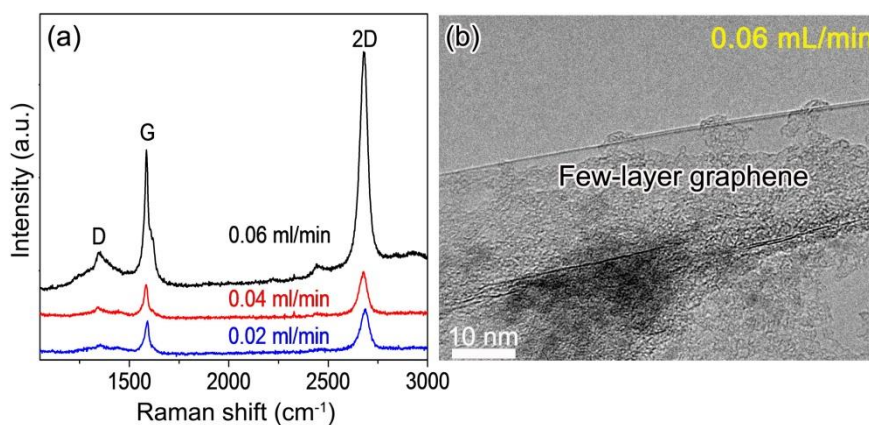


FIGURE S1: Raman spectra (a) and HRTEM image (b) of graphene film produced at feed rates of 0.02, 0.04 , 0.06 mL/min

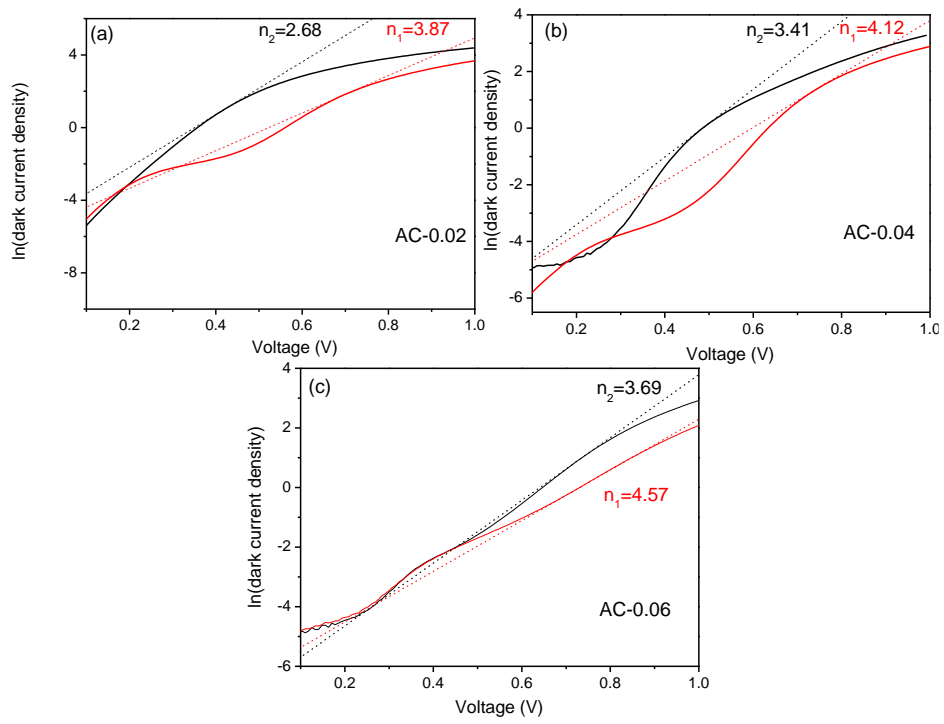


FIGURE S2: Plots of \ln (dark current density) versus voltage showing diode ideality factors of different graphene films before (n_1) and after (n_2) HNO_3 treatment.(a) AC-0.02, (b) AC-0.04, (c) AC-0.06.

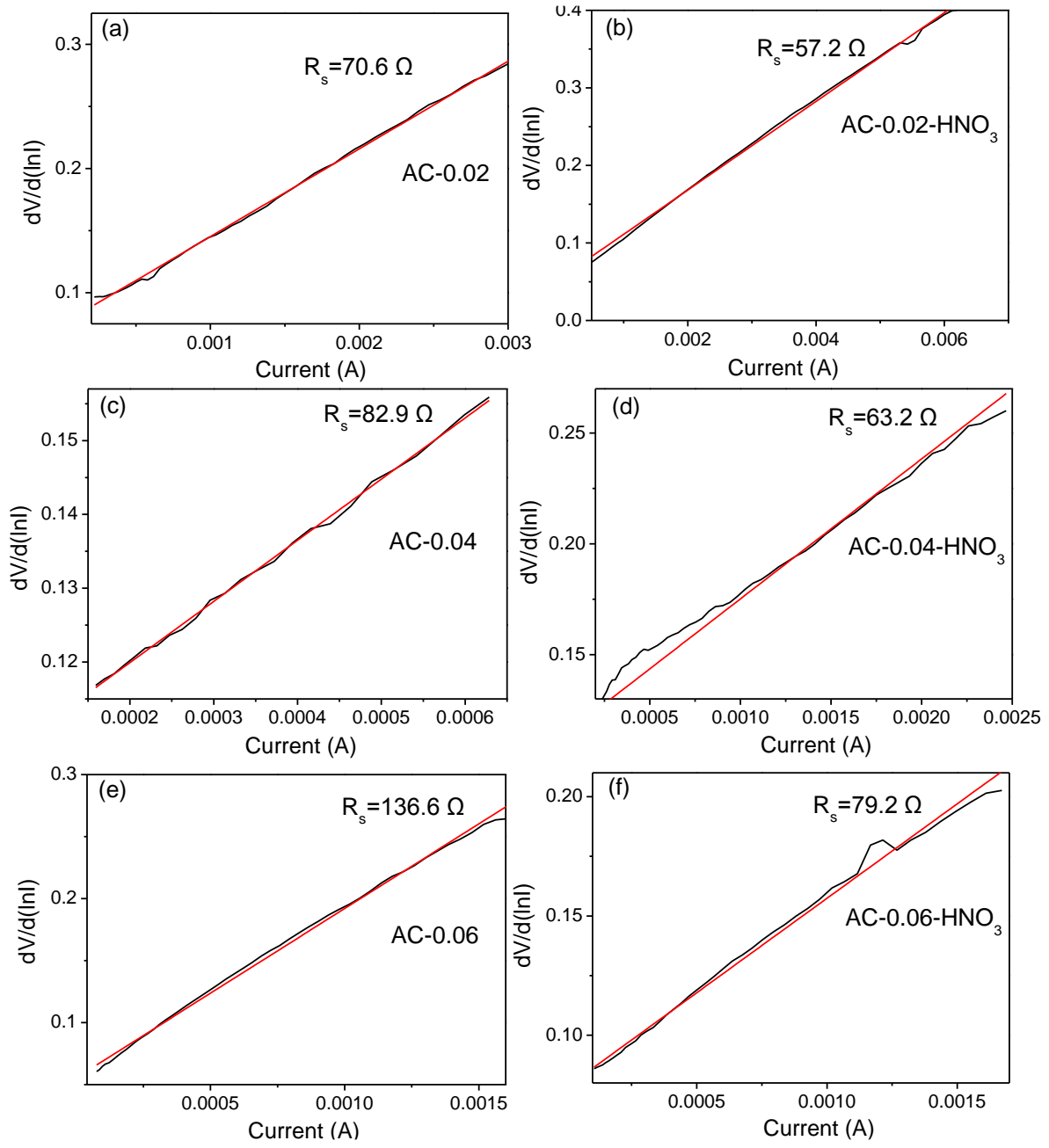


FIGURE S3: Linear fit of $dV/d(\ln I)$ versus I shows the R_s of different samples (I is dark current), (a) AC-0.02, (b) AC-0.02-HNO₃, (c) AC-0.04, (d) AC-0.04-HNO₃, (e) AC-0.06, (f) AC-0.06-HNO₃.