

Supplementary Information

Observation of giant spin-orbit interaction in graphene and heavy metal
heterostructures

Amir Muhammad Afzal¹, Kuen Hong Min¹, Byung Min Ko¹ and Jonghwa Eom^{1*}

¹Department of Physics & Astronomy and Graphene Research Institute-Texas Photonics Center
International Research Center (GRI-TPC IRC), Sejong University, Seoul 05006, Korea

*E-mail: eom@sejong.ac.kr

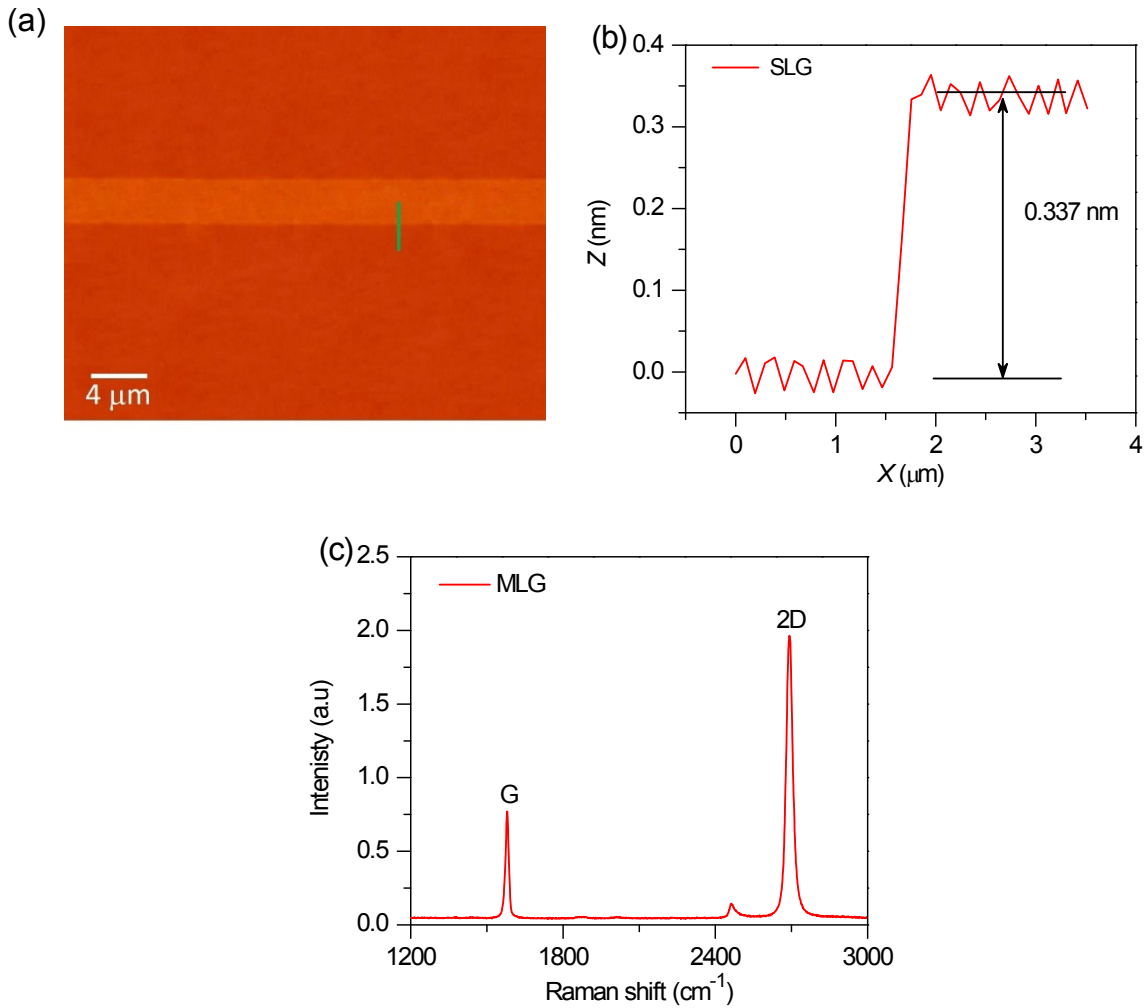


Figure S1. (a) Atomic force microscope (AFM) image of the device showing single layer graphene (SLG) on SiO₂. (b) The height profile of SLG. The thickness of SLG flake is ~0.337 nm. (c) Raman spectrum of SLG. The ratio intensities of peaks 2D and G are 2.6, which agree with previously reported values.

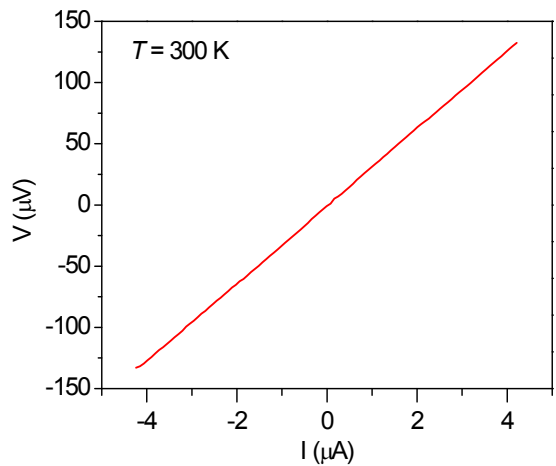


Figure S2. Current–voltage (I–V) curve at room temperature. The linear dependence of current with voltage does not include any contribution from the thermoelectric effect on the NL signal.

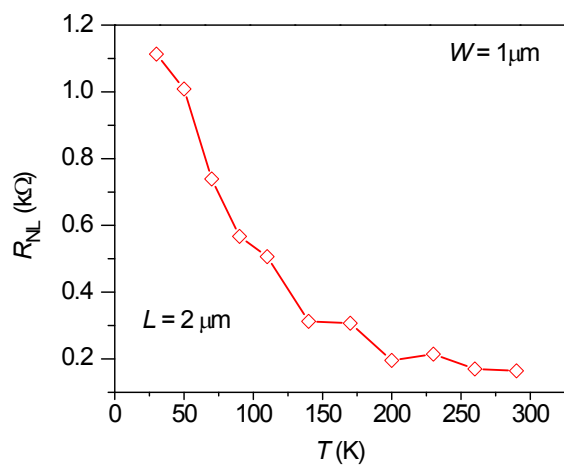


Figure S3. Temperature-dependent resistance of graphene under Pb + Au.