

References on Graphene PN Junctions

The prediction of electron focusing in graphene was made in:

- [1] V.V. Cheianov, V.C. Fal'ko, and B.I. Altshuler, "The focusing of electron flow and a Veselago lens in graphene p-n junctions, *Science*, **315**, 1252, 2007.

For an introduction to tunneling in graphene NPN structures and to the computation of transmission coefficients, see:

- [2] M.I. Katsnelson, K.S. Novoselov, and A.K. Geim, "Chiral tunneling and the Klein Paradox in graphene," *Nature Phys.*, **2**, 620, 2006

For a discussion of tunneling through the NP junction transition region, see:

- [3] V.V. Cheianov and V.I. Fal'ko, "Selective transmission of Dirac electrons and ballistic magnetoresistance of n-p junctions in graphene," *Phys. Rev. B*, **94**, 041403(R), 2006.

A nice treatment of tunneling in a NPN structure is presented in

- [4] X. Chen and J.-W. Tao, "Design of electron wave fileters in monolayer graphene by tunable transmission gap," *Appl. Phys. Lett.*, **94**, 262102, 2009.

Graphene is a very new field, and issues are still being debated. For example, a discussion of the so-called Klein paradox is presented in:

- [5] D. Dragoman, "Evidence against Klein paradox in graphene," *Phys. Scr.*, **79**, 015003, 2009.

Experimental measurements of the conductance of graphene junctions are described in

- [6] B. Huard, J. A. Sulpizio, N. Stander, K. Todd, B. Yang, and D. Goldhaber-Gordon, "Transport Measurements Across a Tunable Potential Barrier in Graphene, *Phys. Rev. Lett.*, **98**, 236803, 2007
- [7] N. Stander, B. Huard, and D. Goldhaber-Gordon, "Evidence for Klein Tunneling in Graphene p-n Junctions," *Phys. Rev. Lett.*, **102**, 026807, 2009.

For an excellent discussion of how contacts affect measured conductance vs. gate voltage characteristics, see:

- [8] B. Huard, N. Stander, J.A. Sulpizio, and D. Goldhaber-Gordon, "Evidence of the role of contacts on the observed electron-hole asymmetry in graphene," *Phys. Rev. B*, **78**, 121402(R), 2008.