

Kobra Hasanirokh

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Education:

▲ (2006) M. Sc. (Physics), Azarbaijan Shahid Madani University, Tabriz, Iran.

▲ (2002) B. Sc. (Physics), Azarbaijan Shahid Madani University, Tabriz, Iran.

Research Interests:

RPA and Keldysh Formalism, Many body effects , electron-electron coupling in many body systems, Electronic structure, quantum transport, semi-classic transport , spin transport in superlattice and low dimensional materials, T-Matrix method.

Awards and Prizes:

▲ Best Ph.D student by Department of Physics in Azarbaijan Shahid Madani University, (2013)

▲ Reasercher student (second Prize), Azarbaijan Shahid Madani University, (2015)

List of my publications:

1. K. Hasanirokh, A. Phirouznia, Physics Letters A 377 (2013) 1948–1953.

“Acoustic phonons mediated non-equilibrium spin current in the presence of Rashba and Dresselhaus spin–orbit couplings.”

2. K. Hasanirokh , A. Phirouznia, J Supercond Nov Magn (2013) 26:3271–3275

DOI 10.1007/s10948-013-2166-8.

“The role of the spin-orbit couplings and optical phonons on the anisotropic resistivity.”

3. Kobra Hasanirokh, Mohammad Esmaelpour, Hakimeh Mohammadpour, Arash Phirouznia, Physics Letters A 378 (2014) 1888–1892.

“Quantum transport in ferromagnetic graphene super lattice in the presence of Rashba spin–orbit coupling”

4. Kobra Hasanirokh, Hakimeh Mohammadpour, Arash Phirouznia, Physica E 56(2014)227–230.

“Anisotropic quantum transport in monolayer graphene in the presence of Rashba spin–orbit coupling”

5. Kobra Hasanirokh, Arash Phirouznia, Fateme Hasanirokh, Hakimeh Mohammadpour, Appl. Phys. A, (2015) 118:1087–1091, DOI 10.1007/s00339-014-8879-0.

“The role of non-homogenous Rashba coupling in dwell time and Hartmann effect in monolayer graphene”

6. K. Hasanirokh, J. Azizi, A. Phirouznia, and H. Mohammadpour, Eur. Phys. J. B (2014) 87: 95 DOI: 10.1140/epjb/e2014-40613-8.

“The role of the Rashba coupling in spin current of monolayer gapped graphene.”

7. J. Azizi, A. Phirouznia, K. Hasanirokh, Physica E (68) /2014;

DOI:10.1016/j.physe.2014.12.010

“ Anisotropic resistivity of the monolayer graphene in the trigonal warping and connected Fermi curve regimes. ”

8. Kobra Hasanirokh, Hakimeh Mohammadpour, Mohamad Esmaelpour, Arash Phirouznia,

Physica E 68(2015)28–32.

9. Kobra Hasanirokh, Arash Phirouznia, Roya Majidi, J Low Temp Phys (2016) 182:92–106

DOI 10.1007/s10909-015-1405-8

"The Influence of the Optical Phonons on the Non-equilibrium Spin Current in the Presence of Spin–Orbit Couplings."

10. Kobra Hasanirokh, Hakimeh Mohammadpour, Physica B 504 (2017) 52–57.

"The role of Rashba spin-orbit coupling in valley-dependent transport of Dirac fermions."

Presentations in Conferences and Workshops:

- 19th conference of Physics, by institute for Research in Fundamental Sciences (IPM), Tehran, May 18, 2012.
- Workshop on Graphene and topological insulator (GTIC2011), by institute for Research in Fundamental Sciences (IPM), Tehran, October 19-20, 2011.
- 11th annual conference of solid state Physics at Shahrood University, Shahrood, during January 27-28, 2012.
- 18th conference of solid state Physics at Zanjan University, Zanjan, May 25-26, 2012.

- Workshop on abinit at Azarbaijan Shahid Madani University, Tabriz, Septamber 6-8, 2014.

#### Teaching Experience

- Teaching Assistant: At Shahid Madani of Azarbaijan University I was a teaching assistant for one semester of physical laboratory. At Ardabil Universities I was a teaching assistant for four semesters of General physics .