

CURRICULUM VITAE

MIKHAIL E. RAIKH

Date of birth: 27 July 1954
Place of birth: Leningrad, USSR
Married, one daughter (1985)

EDUCATION:

1990 Doctor Degree, A.F. Ioffe Physico-Technical Institute, Leningrad (Much higher than Ph.D. degree—no comparison in the US—the thesis is prepared without a supervisor. The German equivalent is Habilitation), Thesis title: “Fluctuation Phenomena in Disordered Semiconductor Structures.”

1981 Ph.D. (Candidate of Sciences), Thesis title: “Theory of Light Propagation in Periodic Heterostructures”.

1971–1977 Leningrad Polytechnical Institute, (Graduation equivalent to MS degree in US).

POSITIONS:

1994–present Professor of Physics, University of Utah

1991–1994 Associate Professor, Department of Physics, University of Utah

1989–1990 Alexander von Humboldt Fellow at Physics Department, Technical University of München

1988–1989 Senior research scientist

1986–1988 Research scientist

1981–1986 Junior research scientist at A.F. Ioffe Physico-Technical Institute, Academy of Sciences, Leningrad

1977–1981 Graduate

AWARDS:

1988 Diploma of Academy of Science of USSR for young scientists

1990 Alexander von Humboldt Fellowship

1992 Outstanding Teacher Award

2006 Fellow of the American Physical Society

2008 Distinguished Research Award

2010 Distinguished Mentor Award

CONFERENCES: Invited talks at III Intern. Conf. on Hopping Conductivity (Chapel Hill, USA, August 1989), IV Intern. Conference of Hopping and Related Phenomena (Marburg, Germany, August 1991), VI International Conference on Hopping and Related Phenomena (Jerusalem, Israel, September 1995), Seminar “New Developments in Quantum Hall Effect” (Minneapolis, May 1996), SPIE Conference “Optical Probes of Conjugated Polymers” (San Diego, July 1997), APS March Meeting

(Atlanta, March 1999), SCIENCE seminar “Challenges in Mesoscopic Quantum Physics” (Hamburg, Germany, June 1999), MRS Fall Meeting (Boston, November 2000), Workshop “Nanostructures in Photovoltaics” (Dresden, July 2001), Workshop “Spins and Interactions in Mesoscopic Systems” (Minneapolis, May 2002), Workshop “Mesoscopic Physics and Electron Interactions” (Trieste, June 2002), International WE - Heraeus - Seminar “Localisation, Quantum Coherence and Interactions” (Hamburg, Germany September 2002), Workshop “Quantum Transport and Correlations in Mesoscopic Systems and QHE” (Dresden, August 2003), OSA Annual Meeting (Tucson, September 2003), SPIE International Symposium on Fluctuations and Noise, (Gran Canary, May 2004), International Workshop “Cooperative Phenomena in Optics and Transport in Nanostructures” (Dresden, June 2004), International Conference QELS/CLEO (Baltimore, May 2005), International Workshop “Surface Spin Correlations” (Hamburg, September 2006), International Workshop “Interactions, Excitations and Broken Symmetries in Quantum Hall Systems” (Dresden, October 2006), APS March Meeting (Denver, March 2007), International Workshop “Quantum Phases and Excitations in Quantum Hall Systems” (Dresden, June 2008). International WE - Heraeus - Seminar “Network Models in Quantum Physics” (Bremen, July 2008), Program on 2D Electron Systems (KITP Santa Barbara, April 2009), International Workshop “Interactions, Disorder, and Topology in Quantum Hall Systems” (Dresden, June 2010), Program on Electron Glasses (KITP Santa Barbara, July 2010), APCTP Workshop on Metal-Insulator Transitions in Disordered and Magnetic Systems (Pohang, September 2010), International Workshop on Disordered Systems (Benasque, August 2012).

JOURNALS: Referee for Phys. Rev. Lett., Phys. Rev. B, Journal of Applied Physics, Applied Physics Letters, Europhysics Letters.

TALKS GIVEN OUTSIDE THE UNIVERSITY OF UTAH

1. “Oscillations of the hopping magnetoresistance in a macroscopic homogeneous sample,” APS Meeting, Indianapolis, March 1992.
2. “Coulomb blockade of inelastic transport through a disordered barrier,” APS Meeting, Indianapolis, March 1992.
3. “Oscillations of the hopping magnetoresistance in a macroscopic homogeneous sample,” University of Minnesota, June 1992.
4. “Magnetoresistance and mesoscopic fluctuations in the conductance of resonant-tunneling junctions,” APS Meeting, Seattle, March 1993.
5. “High Landau levels for two-dimensional electrons,” Stanford University, May 1993.
6. “Energy spectrum and size quantization in partially ordered semiconductor alloys,” University of München, June 1993.
7. “Weak localization effects in a resonant tunneling junction,” University of Aachen, June 1993.
8. “High Landau levels for two-dimensional electrons,” University of Köln, July 1993.
9. “2D electronic states in a magnetic field with a smooth random potential: an exact solution for the density of states,” XX Low Temperature Conference, Eugene, Oregon, August 1993.

10. "Interference effects in the hopping magnetoresistance of a double plane system in a parallel field," V International Conference on "Hopping and Related Phenomena," Glasgow, September 1993.
11. "Magnetoresistance and mesoscopic fluctuations in the conductance of resonant-tunneling junctions," University of Exeter, September 1993.
12. "Density of states in a smooth random potential for two-dimensional electron system in a magnetic field," University of Birmingham, September 1993.
13. "Weak-localization effects in a resonant-tunneling junction," University of Jerusalem, December 1993.
14. "Magnetoresistance and mesoscopic fluctuations in the conductance of resonant-tunneling junctions," Weizmann Institute of Physics, December 1993.
15. "Two-channel resonant tunneling," XXIXth Recontres de Moriond Condensed Matter Physics Meeting," Coulomb and Interference Effects in Small Electronic Structures," Villars-sur-ollon, Switzerland, January 1994.
16. "Effect of a gate on the Coulomb gap in the density of states of 2D localized electrons," APS Meeting, Pittsburgh, March 1994.
17. "Effect of Ordering on the Energy Spectrum of Narrow-Gap III-V Alloys," APS Meeting, Pittsburgh, March 1994.
18. "Energy Spectrum and Size Quantization in Partially Ordered Semiconducting Alloys," Marburg University, July 1994.
19. "Spin-Orbit Effects in Hopping Transport," University of München, July 1994.
20. "Two-Channel Resonant Tunneling," University of Exeter, August 1994.
21. "Two-Channel Resonant Tunneling," University of Köln, August 1994.
22. "Anomalous Tunneling in a Strong Magnetic Field and a Smooth Potential," Workshop on Localization, Murcia, Spain, September, 1994.
23. "K-linear term in the energy spectrum of 2D electron as probed by hopping magnetoresistance," APS Meeting, San Jose, March 1995.
24. "Aharonov-Casher Effect and Hopping Magnetotransport," VI International Conference on Hopping and Related Phenomena Jerusalem, September 1995 (Invited).
25. "Two-electron Tunneling into a Disordered Quantum Dot," APS Meeting, St. Louis, March 1996.
26. "Weak Levitation of 2D Delocalized States in a Magnetic Field," Seminar "New Developments in Quantum Hall Effect," Minneapolis, May 1996 (Invited).
27. "Two-electron States in a Disordered 2D Island," Workshop on Quantum Hall Effect, Aspen, August 1996.
28. "Cooperative Emission from a Disordered System: A Classical Model," SPIE Conference, San Diego, July 1997 (Invited).
29. "Cooperative Emission from a Disordered System: A Classical Model," Technical University of Muenchen, June 1998.
30. "Renormalization-Group Approach to the Integer Quantum Hall Effect," APS Meeting, Atlanta, March 1999 (Invited).

31. "Chiral Electromagnetic Waves at the Boundary of Optical Isomers: Quantum Cotton-Mouton Effect," Seminar "New Developments in Quantum Hall Effect," Minneapolis, May 1999 (poster).
32. "Mesoscopic Cooperative Emission from a Disordered System," University of Hamburg, May 1999.
33. "Signatures of Electron-Electron Interactions in Tunneling Experiments," University of Koln, May 1999.
34. "Renormalization-Group Approach to the Integer Quantum Hall Effect," Institute of Physics Czech Academy of Sciences, Prague, May 1999.
35. "Signatures of Electron-Electron Interactions in Tunneling Experiments," Technical University of Muenchen, June 1999.
36. "Mesoscopic Cooperative Emission from a Disordered System," University of Marburg, June 1999.
37. "Renormalization-Group Approach to the Integer Quantum Hall Effect," SCIENCE seminar "Challenges in Mesoscopic Quantum Physics" Hamburg, Germany, June 1999 (Invited).
38. "Renormalization-Group Approach to the Integer Quantum Hall Effect," Technical University of Chemnitz, June 1999.
39. "Signatures of Electron-Electron Interactions in Tunneling Experiments," University of Geneva, July 1999.
40. "Aharonov-Bohm Effect for an Exciton", APS Meeting, Minneapolis, March 2000.
41. "Mesoscopic Cooperative Emission from Disordered Systems," Technical University of Chemnitz, July 2000.
42. "Anomalous Coherent Backscattering of Light from Photonic Crystals," Lecture at First International Wilhelm and Else Heraeus Summer School "Mesoscopic Physics between Photonic and Electronic Systems" Wittenberg, Germany, July 2000.
43. "Manifestation of the Kondo Effect in Nonlinear Optical Absorption," Lecture at First International Wilhelm and Else Heraeus Summer School "Mesoscopic Physics between Photonic and Electronic Systems," Wittenberg, Germany, July 2000.
43. "Kondo Physics in Nonlinear Optical Absorption" Workshop "Topics in Mesoscopic Physics," University of Köln, August 2000.
44. "Anomalous Coherent Backscattering of Light from Photonic Crystals," MRS Fall Meeting, Boston, November 2000 (Invited).
45. "Anomalous Coherent Backscattering of Light from Photonic Crystals," University of New York at Stony Brook, December 2000.
46. "Anomalous Coherent Backscattering of Light from Photonic Crystals," APS Meeting, Seattle, March 2001.
47. "Anomalous Coherent Backscattering of Light from Photonic Crystals," Michigan State University, April 2001.
48. "Many-Body Luminescence from Quantum Dots," Free University of Berlin, June 2001.
49. "Anomalous Coherent Backscattering of Light from Photonic Crystals," University of Chemnitz, June 2001.

- 50 “Many-Body Luminescence from Quantum Dots,” Invited talk at International Workshop “Nanostructures in Photovoltaics” Dresden, Germany, July 2001.
- 51 “Anomalous Coherent Backscattering of Light from Photonic Crystals,” Duke University, October 2001.
- 52 “Anomalous Coherent Backscattering of Light from Photonic Crystals,” Erlangen University, February 2002.
- 53 “Many-Body Luminescence from Quantum Dots: Luttinger Liquid Description,” Hamburg University, February 2002.
- 54 “Spin-Orbit-Induced Satellites of a Zero-Bias Anomaly,” Workshop “Spins and Interactions in Mesoscopic Systems,” Minneapolis, May 2002 (Invited).
- 55 “Interplay of Spin-Orbit Coupling and Electron-Electron Interactions in Two Dimensional Electron Gas,” Workshop “Mesoscopic Physics and Electron Interactions” Trieste, July 2002 (Invited).
- 56 “Random Resonators in Disordered Dielectric Films,” International WE - Heraeus - Seminar “Localisation, Quantum Coherence and Interactions” Hamburg, September 2002 (Invited).
- 57 “Strongly Localized Photonic Mode at the Intersection of Phase-Slips in Photonic Crystals with Incomplete Gap”, Freie University of Berlin, July 2003.
- 58 “Random Resonators and Prelocalized Modes in Disordered Dielectric Films” University of Essen, July 2003.
- 59 “Strongly Localized Photonic Mode at the Intersection of Phase-Slips in Photonic Crystals with Incomplete Gap”, Marburg University, July 2003.
- 60 “Interplay of Short-Range Interactions and Quantum Interference at the Quantum Hall Transition” Workshop “Quantum Transport and Correlations in Mesoscopic Systems and QHE” Dresden, August 2003 (Invited).
- 61 “Strongly Localized Photonic Mode at the Intersection of Phase-Slips in Photonic Crystals with Incomplete Gap”, OSA Annual Meeting, Tucson, October 2003 (Invited).
- 62 “Strongly Localized Photonic Mode at the Intersection of Phase-Slips in Photonic Crystals with Incomplete Gap”, Ohio University, November 2003.
- 63 “Strongly Localized Photonic Mode at the Intersection of Phase-Slips in Photonic Crystals with Incomplete Gap”, The University of Toledo, December 2003.
- 64 “Strongly Localized Photonic Mode at the Intersection of Phase-Slips in Photonic Crystals with Incomplete Gap”, Northwestern University, February 2004.
- 65 “Coherent Random Lasing in Disordered Media”, SPIE Second International Symposium on Fluctuations and Noise, Gran Canary, May 2004 (Keynote Address).
- 66 “Trapping of Light in a Weakly Scattering Media”, International Workshop and Seminar “Cooperative Phenomena in Optics and Transport in Nanostructures” Dresden, June 2004 (Invited Lecture).
- 67 “Strongly Localized Photonic Mode at the Intersection of Phase-Slips in Photonic Crystals with Incomplete Gap”, Sandia National Laboratory, October 2004.
- 68 “Manifestation of Inherent Bandgap of Photonic Crystal in Disorder-Induced Speckle Pattern of Scattered Light Waves”, International Conference CLEO/QELS-2005, Baltimore, May 2005 (Invited).

- 70 “Interplay of Short-Range Interactions and Quantum Interference at the Quantum Hall Transition”, University of Köln, June 2005.
- 71 “Two-Electron Absorption of Light in a Biased Quantum Well”, Hahn-Meitner Institute, Berlin, June 2005.
- 72 “Two-Electron Absorption of Light in a Biased Quantum Well”, Free University of Berlin, June 2005.
- 73 “Electrostatics of Straight and Bent Carbon Nanotubes”, APS Meeting, Baltimore, March 2006.
- 74 “Disorder-Induced Resistive Anomaly near Ferromagnetic Transitions”, Argonne National Laboratory, April 2006.
- 75 “Disorder-Induced Resistive Anomaly near Ferromagnetic Transitions”, UC San Diego, May 2006.
- 76 “Disorder-Induced Resistive Anomaly near Ferromagnetic Transitions”, International workshop Surface Spin Correlations, Hamburg, September 2006 (Invited).
- 77 “Effective Drag Between Strongly Inhomogeneous Layers: Exact Results and Applications”, International workshop Interactions, Excitations and Broken Symmetries in Quantum Hall Systems, Dresden, October 2006 (Invited).
- 78 “Disorder-Induced Resistive Anomaly near Ferromagnetic Transitions”, Hebrew University of Jerusalem, December 2006.
- 79 “Effective Drag Between Strongly Inhomogeneous Layers: Exact Results and Applications”, Technion, Haifa, December 2006.
- 80 “Pair Tunneling Through Single Molecules”, APS March Meeting, Denver March 2007 (Invited).
- 81 “Anomalous Response of a High-Mobility 2D Electron Gas”, Free University of Berlin, July 2007.
- 82 “Anomalous Response of a High-Mobility 2D Electron Gas”, Weizmann Institute of Science, July 2007.
- 83 “Anomalous Sensitivity of High-Mobility Interacting 2D Electron Gas to a Weak Magnetic Field”, International Workshop Quantum Phases and Excitations in Quantum Hall Systems, Dresden, June 2008 (Invited).
- 84 “Anomalous Response Functions of Interacting High-Mobility 2D Electron Gas”, International WE - Heraeus - Seminar Network Models in Quantum Physics, Bremen, July 2008 (Invited).
- 85 “Disorder-Induced Resistive Anomaly near Ferromagnetic Transitions”, Bar-Ilan University, December 2008.
- 86 “Anomalous Sensitivity of High-Mobility Interacting 2D Electron Gas to a Weak Magnetic Field”, Technion, Haifa, December 2008.
- 87 “Anomalous Sensitivity of High-Mobility Interacting 2D Electron Gas to a Weak Magnetic Field”, KITP, Santa Barbara, April 2009.
- 88 “Quantum Site Percolation on Triangular Lattice and the Integer Quantum Hall Effect”, Free University of Berlin, July 2009.

- 89 "Microscopic Description of a Quantum Hall Transition without Landau Levels", International Workshop Interactions, Disorder, and Topology in Quantum Hall Systems, Dresden, June 2010 (Invited).
- 90 "Quantum Hall Effect without Landau Levels", KITP, Santa Barbara, July 2010.
- 91 "Levitation of delocalized states in a vanishing magnetic field", APCTP Pohang, South Korea, September 2010 (Invited).
- 92 "Rabi-vibronic resonance with large number of vibrational quanta", APS Meeting, Boston, March 2012.
- 93 "Quantum Hall effect in vanishing magnetic field", Michigan State University, March 2012.
- 94 "Localization properties of random-mass Dirac fermions", International Workshop on Disordered Systems, Benasque, August 2012 (Invited).

VISITS TO OTHER INSTITUTIONS

- 1. University of Köln 1 month, July 1993
- 2. University of Exeter 1 week, September 1993
- 3. University of Jerusalem 1 week, December 1993
- 4. University of Minnesota 2 weeks, June 1994
- 5. University of Köln 2 month, July-August 1994
- 6. University of Exeter 1 week, August 1994
- 7. Aspen Center for Physics 2 weeks, August 1996
- 8. Aspen Center for Physics 2 weeks, August 1998
- 9. University of Chemnitz 1 month, June 1999
- 10. University of Geneva 2 weeks, July 1999
- 11. University of Chemnitz 1 week, July 2000
- 12. University of Köln 3 weeks, August 2000
- 13. University of Chemnitz 2 weeks, June 2001
- 14. ITP at UC Santa Barbara 3 weeks, August 2001
- 15. Hamburg University 3 weeks, February 2002
- 16. ICTP, Trieste 2 weeks, June 2002
- 17. Free University of Belin 2 weeks, July 2003
- 18. MPI for Complex Systems 2 weeks, August 2003
- 19. Weizmann Institute 2 weeks, December 2003
- 20. Free University of Berlin 2 weeks, May 2004
- 21. MPI for Complex Systems 3 weeks, June 2004
- 22. University of Minnesota 2 weeks, May 2005
- 23. Free University of Berlin 2 weeks, June 2005
- 24. Free University of Berlin 1 month, May 2006
- 25. Technion, Haifa 2 weeks, December 2006
- 26. Free University of Berlin 1 week, July 2007
- 27. Weizmann Institute 2 weeks, July 2007
- 28. MPI for Complex Systems 1 week, June 2008
- 29. Technion, Haifa 1 week, December 2008
- 30. KITP, Santa Barbara 3 weeks, April 2009
- 31. Free University of Berlin 2 weeks, July 2009
- 32. KITP, Santa Barbara 3 weeks, July 2010

PUBLICATION LIST

Review Articles and Contributed Chapters

- [1] Almost Localized Photon Modes in Continuous and Discrete Models of Disordered Media, V. M. Apalkov, M. E. Raikh, and B. Shapiro, *JOSA B* **21**, 132 (2004) [Feature issue *Localization, Multiple Scattering and Lasing in Random Media*].
- [2] Many-Body Luminescence from Highly Excited Quantum-Confined Structures, T. V. Shahbazyan and M. E. Raikh, Chapter in the Book *Computational Material Science* **15**, (Elsevier, 2004).
- [3] Coherent Random Lasing and "Almost Localized" Photon Modes, V. M. Apalkov, M. E. Raikh, and B. Shapiro, in *The Anderson Transition and its Ramifications—Localisation, Quantum interference, and Interactions*, 'Lecture Notes in Physics' series, edited by T. Brandes and S. Kettmann (Springer Verlag, 2003), no. 630, pp. 119 - 144.
- [4] Cooperative Emission from a Disordered System: a Classical Model, T. V. Shahbazyan, M. E. Raikh, and Z. V. Vardeny, in *Optical Probes of Conjugated Polymers*, edited by Z. V. Vardeny and L. J. Rothberg (SPIE Proceedings Series, vol. 3145, 1997), p. 13.
- [5] Aharonov-Casher Effect and Hopping Magnetotransport, T. V. Shahbazyan and M. E. Raikh, in *Hopping and Related Phenomena* **6**, edited by O. Millo and Z. Ovadyahu (World Scientific, Singapore 1996), pp. 236-242.
- [6] Two-Channel Resonant Tunneling Between Edge States in a Quantum Hall Sample, M. E. Raikh and T. V. Shahbazyan, in *High Magnetic Fields in the Physics of Semiconductors*, edited by D. Heitman (World Scientific, Singapore, 1995), p. 164.
- [7] Interference Effects in the Hopping Magnetoresistance of a Double-Plane system in a Parallel Field, M. E. Raikh and T. V. Shahbazyan, in *Hopping and Related Phenomena* **6**, edited by C. J. Adkins, A. R. Long, and J. A. McInnes, (World Scientific, Singapore 1994) pp.

36-40.

- [8] Two-Channel Resonant Tunneling, M. E. Raikh and T. V. Shahbazyan, in *Coulomb and Interference Effects in Small Electronic Structures*, edited by D. C. Glattli, M. Sanquer, and J. Tran Thanh Van (Editions Frontières, France, 1994), pp. 277-282.
- [9] Distribution Function of Conductance of Finite Size Inhomogeneous Barrier Structures, M. E. Raikh and I. M. Ruzin, in *Hopping and Related Phenomena*, edited by H. Fritzsche and M. Pollak (World Scientific, Singapore 1990), pp. 217-242.
- [10] Transmittancy Fluctuations in Randomly Nonuniform Barriers and Incoherent Mesoscopics, M. E. Raikh and I. M. Ruzin, in *Mesoscopic Phenomena in Solids*, edited by B. L. Altshuler, P. A. Lee, and R. A. Webb, (North Holland, Amsterdam 1991), pp. 303-353.
- [11] Effect of Composition Disorder on the Electronic Properties of Semiconducting Mixed Crystals, A. L. Efros and M. E. Raikh, in *Optical Properties of Mixed Crystals*, edited by R. J. Elliot and I. P. Ipatova (North Holland, Amsterdam, 1988), pp. 133-175.

Journal Articles

- [1] Interplay of spin-orbit coupling and Zeeman splitting in the absorption lineshape of fermions in two dimensions, R. Glenn, O. A. Starykh, and M. E. Raikh, *Phys. Rev. B* **86**, 024423 (2012).
- [2] Rabi-Vibronic Resonance with Large Number of Vibrational Quanta, R. Glenn and M. E. Raikh, *Phys. Rev. B* **84**, 195454 (2011).
- [3] Phase Diagram of the Weak-Magnetic-Field Quantum Hall Transition Quantified from Classical Percolation, M. Ortuno, A. M. Somoza, V. V. Mkhitarian, and M. E. Raikh, *Phys. Rev. B* **84**, 165314 (2011).
- [4] Localization Properties of Random-Mass Dirac Fermions from Real-Space Renormalization Group, V. V. Mkhitarian and M. E. Raikh, *Phys. Rev. Lett.* **106**, 256803 (2011).

- [5] Fermi-Edge Singularity in the Vicinity of the Resonant Scattering Condition, V. V. Mkhitarian and M. E. Raikh, Phys. Rev. Lett. **106**, 197003 (2011).
- [6] Nonlocal Correlations of the Local Density of States in Disordered Quantum Hall Systems, T. Champel, S. Florens, and M. E. Raikh, Phys. Rev. B **83**, 125321 (2011).
- [7] Disorder-Induced Magneto-Oscillations in Bilayer Graphene at High Bias, V. V. Mkhitarian, and M. E. Raikh, Phys. Rev. B **83**, 045406 (2011).
- [8] Weakly Chiral Networks and Two-Dimensional Delocalized States in a Weak Magnetic Field, V. V. Mkhitarian, V. Kagalovsky, and M. E. Raikh, Phys. Rev. B **81**, 165426 (2010).
- [9] Photon Absorption Edge in Superconductors and Gapped One-Dimensional Systems, V. V. Mkhitarian, E. G. Mishchenko, M. E. Raikh, and L. I. Glazman, Phys. Rev. B **80**, 205416 (2009).
- [10] Microscopic Description of a Quantum Hall Effect Without Landau Levels, V. V. Mkhitarian, V. Kagalovsky, and M. E. Raikh, Phys. Rev. Lett. **103** 066801 (2009).
- [11] Scattering of Plasmons at the Intersection of Two Metallic Nanotubes: Implications for Tunneling, V. V. Mkhitarian, Y. Fang, J. M. Gerton, E. G. Mishchenko, and M. E. Raikh, Phys. Rev. Lett. **101**, 256401 (2008).
- [12] Disorder-Induced Tail States in a Gapped Bilayer Graphene, V. V. Mkhitarian and M. E. Raikh, Phys. Rev. B **78**, 195409 (2008).
- [13] Two-Dimensional Skew Scattering in the Vicinity of and Away From the Resonant Scattering Condition, V. V. Mkhitarian and M. E. Raikh, Phys. Rev. B **77**, 245428 (2008).
- [14] Supergap Anomalies in Cotunneling Between Normal-Superconducting and Between Two Superconducting Leads via a Small Quantum Dot, V. V. Mkhitarian and M. E. Raikh, Phys. Rev. B **77**, 195329 (2008).
- [15] Transmission Distribution, $\mathcal{P}(\ln T)$, of 1D Disordered Chain: Low- T Tail, V. M. Apalkov and M. E. Raikh, Physics and Technics of Semiconductors **42**, 956 (2008). *Special Issue*

in Memory of V. I. Perel

- [16] Interaction Effects in a two-dimensional Electron Gas in a Random Magnetic Field: Implications for Composite Fermions and the Quantum Critical Point, T. A. Sedrakyan and M. E. Raikh, Phys. Rev. B **77**, 115353 (2008).
- [17] Crossover from Weak Localization to Shubnikov- de Haas Oscillations in a High-Mobility 2D Electron Gas, T. A. Sedrakyan and M. E. Raikh, Phys. Rev. Lett. **100**, 106806 (2008).
- [18] Magneto-Oscillations due to Electron-Electron Interactions in the ac Conductivity of a Two-Dimensional Electron Gas, T. A. Sedrakyan and M. E. Raikh, Phys. Rev. Lett. **100**, 086808 (2008).
- [19] Electron Pair Resonance in the Coulomb Blockade, E. Sela, H. S. Sim, Y. Oreg, M. E. Raikh, and F. von Oppen, Phys. Rev. Lett. **100**, 056809 (2008).
- [20] Zero-Bias Tunneling Anomaly in a Clean 2D Electron Gas Caused by Smooth Density Variations, T. A. Sedrakyan, E. G. Mishchenko, and M. E. Raikh, Phys. Rev. Lett. **99**, 206405 (2007).
- [21] Smearing of the Two-Dimensional Kohn Anomaly in a Nonquantizing Magnetic Field: Implications for Interaction Effects , T. A. Sedrakyan, E. G. Mishchenko, and M. E. Raikh, Phys. Rev. Lett. **99**, 036401 (2007).
- [22] News and Views Article “Photonics: Light Localized on the Lattice”, Z. Vally Vardeny, and Mikhail Raikh, Nature **446**, 37 (2007).
- [23] Planar Array of Semiconducting Nanotubes in an External Electric Field: Collective Screening and Polarizability, T. A. Sedrakyan, E. G. Mishchenko, and M. E. Raikh, Phys. Rev. B **74**, 235423 (2006).
- [24] Tunneling Between Two-Dimensional Electron Layers with Correlated disorder: Anomalous Sensitivity to Spin-Orbit Coupling, V. A. Zyuzin, E. G. Mishchenko and M. E. Raikh, Phys. Rev. B **74**, 205322 (2006).

- [25] Electrostatics of Straight and Bent Single-Walled Carbon Nanotubes, E. G. Mishchenko and M. E. Raikh, Phys. Rev. B **74**, 155410 (2006).
- [26] Regimes of Correlated Hopping via a Two-Site Interacting Chain, A. D. Ballard and M. E. Raikh, Phys. Rev. B **74**, 035117 (2006).
- [27] Penetration of External Field into Regular and Random Arrays of Nanotubes: Implications for Field Emission, T. A. Sedrakyan, E. G. Mishchenko, and M. E. Raikh, Phys. Rev. B **73**, 245325 (2006).
- [28] Spin-Orbit-Induced Correlations of the Local Density of States in a Two-Dimensional Electron Gas, V. M. Apalkov, M. E. Raikh, and B. Shapiro, Phys. Rev. B **73**, 125339 (2006).
- [29] Two-Electron Linear Intersubband Light Absorption in a Biased Quantum Well, J. Dai, M. E. Raikh, and T. V. Shahbazyan, Phys. Rev. Lett. **96**, 066803 (2006).
- [30] Pair Tunneling through Single Molecules, J. Koch, M. E. Raikh, and F. von Oppen, Phys. Rev. Lett. **96**, 056803 (2006).
- [31] Light Intensity Correlations in Optically Active Media, V. M. Apalkov, M. E. Raikh, and B. Shapiro, J. Phys. A: Math. Gen. **38**, 10545 (2005).
- [32] Full Counting Statistics of Strongly Non-Ohmic Transport through Single Molecules, J. Koch, M. E. Raikh, and F. von Oppen, Phys. Rev. Lett. **95**, 056801 (2005).
- [33] Effective Drag Between Strongly Inhomogeneous Layers: Exact Results and Applications, V. M. Apalkov and M. E. Raikh, Phys. Rev. B **71**, 245109 (2005).
- [34] Universal Fluctuations of the Random Lasing Threshold in a Sample of a Finite Area, V. M. Apalkov and M. E. Raikh, Phys. Rev. B **71**, 054203 (2005).
- [35] Disorder-Induced Resistive Anomaly Near Ferromagnetic Phase Transitions, C. Timm, M. E. Raikh, and F. von Oppen, Phys. Rev. Lett. **94**, 036602 (2005).

- [36] Parametric Resonance of a Two-Dimensional Electron Gas under Bichromatic Irradiation, C. Joas, M. E. Raikh, and F. von Oppen, *Phys. Rev. B* **70**, 235302 (2004).
- [37] Directional Emission from a Microdisk Resonator with a Linear Defect, V. M. Apalkov and M. E. Raikh, *Phys. Rev. B* **70**, 195317 (2004).
- [38] Incomplete Photonic Band Gap as Inferred from the Speckle Pattern of Scattered Light Waves, V. M. Apalkov, M. E. Raikh, and B. Shapiro, *Phys. Rev. Lett.* **92**, 253902 (2004).
- [39] Coherent Random Lasing: Trapping of Light by the Disorder, M. E. Raikh, V. M. Apalkov, B. Shapiro, R. C. Polson, and Z. V. Vardeny, *Proc. SPIE Int. Soc. Opt. Eng.* **4798**, 74 (2004).
- [40] Anomalous Localized States in the Anderson Model, V. M. Apalkov, M. E. Raikh, and B. Shapiro, *Phys. Rev. Lett.* **92**, 066601 (2004).
- [41] Interplay of Short-Range Interactions and Quantum Interference near the Integer Quantum Hall Transition, V. M. Apalkov and M. E. Raikh, *Phys. Rev. B* **68**, 195312 (2003).
- [42] Classical Model for the Negative dc Conductivity of ac-Driven Two-Dimensional Electrons Near the Cyclotron Resonance, A. A. Koulakov and M. E. Raikh, *Phys. Rev. B* **68**, 115324 (2003).
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