

# Publication list

(November 21, 2017)

## Refereed original publications

1. R. Egger and U. Weiss, "Quantum Monte Carlo simulation of the dynamics of the spin-boson model," *Zeitschrift für Physik B* **89**, 97-107 (1992).
2. R. Egger and C. H. Mak, "Dynamical effects in the calculation of quantum rates for electron transfer reactions," *Journal of Chemical Physics* **99**, 2541-2549 (1993).
3. R. Egger, C. H. Mak, and U. Weiss, "Quantum rates for nonadiabatic electron transfer," *Journal of Chemical Physics* **100**, 2651-2660 (1994).
4. C. H. Mak and R. Egger, "Quantum Monte Carlo study of tunneling diffusion in a dissipative multistate system," *Physical Review E* **49**, 1997-2008 (1994).
5. R. Egger, C. H. Mak, and U. Weiss, "Rate concept and retarded master equations for dissipative tight-binding models," *Physical Review E (Rapid Communication)* **50**, 655-658 (1994).
6. R. Egger and C. H. Mak, "Dissipative three-state system and the primary electron transfer in the bacterial photosynthetic reaction center," *Journal of Physical Chemistry* **98**, 9903-9918 (1994).
7. R. Egger and C. H. Mak, "Low-temperature dynamical simulation of spin-boson systems," *Physical Review B* **50**, 15210-15221 (1994).
8. C. H. Mak and R. Egger, "On the mechanism of the primary charge separation in bacterial photosynthesis," *Chemical Physics Letters* **238**, 149-155 (1995).
9. K. Leung, R. Egger, and C. H. Mak, "Dynamical simulation of transport in one-dimensional quantum wires," *Physical Review Letters* **75**, 3344-3347 (1995).

10. R. Egger and H. Grabert, "Friedel oscillations for interacting fermions in one dimension," *Physical Review Letters* **75**, 3505-3508 (1995).
11. U. Weiss, R. Egger, and M. Sasseti, "Low-temperature nonequilibrium transport in a Luttinger liquid," *Physical Review B* **52**, 16707-16719 (1995).
12. R. Egger and H. Grabert, "Voltage-biased quantum wire with impurities," *Physical Review Letters* **77**, 538-541 (1996); *ibid.* **80**, 2255(E) (1998).
13. R. Egger and H. Schoeller, "RKKY interaction and Kondo screening cloud for strongly correlated electrons," *Physical Review B* **54**, 16337-16340 (1996).
14. K. Hallberg and R. Egger, "Two-impurity Kondo problem for correlated electrons," *Physical Review B (Rapid Communication)* **55**, 8646-8649 (1997).
15. R. Egger, H. Grabert, and U. Weiss, "Crossover from coherent to incoherent dynamics in damped quantum systems," *Physical Review E (Rapid Communication)* **55**, 3809-3812 (1997).
16. R. Egger and H. Grabert, "Charging effects in quantum wires," *Physical Review B* **55**, 9929-9935 (1997); *ibid.* **58**, 13275(E) (1998).
17. X. Wang, R. Egger, and H. Grabert, "Coulomb charging energy for arbitrary tunneling strength," *Europhysics Letters* **38**, 545-551 (1997).
18. A. Komnik, R. Egger, and A. O. Gogolin, "Exact Fermi-edge singularity exponent in a Luttinger liquid," *Physical Review B* **56**, 1153-1160 (1997).
19. A. Lucke, C. H. Mak, R. Egger, J. Ankerhold, J. Stockburger, and H. Grabert, "Is the direct observation of electronic coherence in electron transfer reactions possible?," *Journal of Chemical Physics* **107**, 8397-8408 (1997).
20. R. Egger and H. Grabert, "Electroneutrality and the Friedel sum rule in a Luttinger liquid," *Physical Review Letters* **79**, 3463-3466 (1997).
21. R. Egger and A. O. Gogolin, "Effective low-energy theory for carbon nanotubes," *Physical Review Letters* **79**, 5082-5085 (1997).
22. A. Komnik and R. Egger, "Nonequilibrium transport for crossed Luttinger liquids," *Physical Review Letters* **80**, 2881-2884 (1998).

23. R. Egger and A. O. Gogolin, "Correlated transport and non-Fermi-liquid behavior in single-wall carbon nanotubes," *European Physical Journal B* **3**, 281-300 (1998).
24. R. Egger and A. Komnik, "Scaling and criticality of the Kondo effect in a Luttinger liquid," *Physical Review B* **57**, 10620-10630 (1998).
25. R. Egger and H. Grabert, "Applying voltage sources to a Luttinger liquid with arbitrary transmission," *Physical Review B* **58**, 10761-10768 (1998).
26. C. H. Mak, R. Egger, and H. Weber-Gottschick, "Multilevel blocking approach to the fermion sign problem in path-integral Monte Carlo simulations," *Physical Review Letters* **81**, 4533-4536 (1998).
27. C. H. Mak and R. Egger, "A multilevel blocking approach to the sign problem in real-time quantum Monte Carlo simulations," *Journal of Chemical Physics* **110**, 12-14 (1999).
28. L. Mühlbacher, A. Lucke, and R. Egger, "Coherent nuclear motion in a condensed-phase environment: Wave-packet approach and pump-probe spectroscopy," *Journal of Chemical Physics* **110**, 5851-5860 (1999).
29. R. Egger, W. Häusler, C. H. Mak, and H. Grabert, "Crossover from Fermi liquid to Wigner molecule behavior in quantum dots," *Physical Review Letters* **82**, 3320-3323 (1999); *ibid.* **83**, 462(E) (1999).
30. R. Egger, A. Komnik, and H. Saleur, "Effect of irrelevant boundary scaling operators," *Physical Review B (Rapid Communication)* **60**, 5113-5116 (1999).
31. R. Egger, "Luttinger liquid behavior in multiwall carbon nanotubes," *Physical Review Letters* **83**, 5547-5550 (1999).
32. R. Egger, H. Grabert, A. Koutouza, H. Saleur, and F. Siano, "Current bistability and hysteresis in strongly correlated quantum wires," *Physical Review Letters* **84**, 3682-3685 (2000).
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35. S. Hügler, R. Egger, and H. Grabert, "Static and dynamic image potential for tunneling into a Luttinger liquid," *Solid State Communications* **117**, 93-97 (2001).
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37. L. Balents and R. Egger, "Spin transport in Luttinger liquids," *Physical Review B* **64**, 035310/1-20 (2001).
38. R. Egger and A. O. Gogolin, "Bulk and boundary zero-bias anomaly in multi-wall carbon nanotubes," *Physical Review Letters* **87**, 066401/1-4 (2001).
39. A. De Martino and R. Egger, "ESR theory for interacting 1D quantum wires," *Europhysics Letters* **56**, 570-575 (2001).
40. B. Trauzettel, R. Egger, and H. Grabert, "Coulomb drag shot noise in coupled Luttinger liquids," *Physical Review Letters* **88**, 116401/1-4 (2002).
41. A. De Martino, R. Egger, K. Hallberg, and C. A. Balseiro, "Spin-orbit coupling and electron spin resonance theory for carbon nanotubes," *Physical Review Letters* **88**, 206402/1-4 (2002).
42. R. Egger and A. O. Gogolin, "Intrinsic Coulomb blockade in multi-wall carbon nanotubes," *Chemical Physics* **281**, 447-454 (2002) [Special Issue *Transport in molecular wires*.]
43. S. Chen, B. Trauzettel, and R. Egger, "Landauer-type transport theory for interacting quantum wires: Application to carbon nanotube Y junctions," *Physical Review Letters* **89**, 226404/1-4 (2002).
44. S. Hügler and R. Egger, "Van Hove singularities in disordered multi-channel quantum wires and nanotubes," *Physical Review B* **66**, 193311/1-4 (2002).
45. L. Mühlbacher and R. Egger, "Crossover from nonadiabatic to adiabatic electron transfer reactions: Multilevel blocking Monte Carlo simulations," *Journal of Chemical Physics* **118**, 179-191 (2003).

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47. B. Reusch and R. Egger, "Impurity effects in few-electron quantum dots: Incipient Wigner molecule regime," *Europhysics Letters* **64**, 84-90 (2003).
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49. S. Chen and R. Egger, "Destruction of interference by many-body interactions in cold atomic Bose gases," *Physical Review A* **68**, 063605/1-7 (2003).
50. L. Mühlbacher and R. Egger, "Electron transfer rates for asymmetric reactions," *Chemical Physics* **296**, 193-199 (2004) [Special Issue *The Spin-Boson Model: From electron transfer to quantum computers*.]
51. A. De Martino, R. Egger, F. Murphy-Armando, and K. Hallberg, "Spin-orbit coupling and electron spin resonance for interacting electrons in carbon nanotubes," *Journal of Physics: Condensed Matter* **16**, S1437-S1452 (2004).
52. S. Hügler and R. Egger, "Resonant tunneling in a Luttinger liquid for arbitrary barrier transmission," *Europhysics Letters* **66**, 565-571 (2004).
53. B. Gao, A. Komnik, R. Egger, D. C. Glattli, and A. Bachtold, "Evidence for Luttinger liquid behavior in crossed metallic single-wall nanotubes," *Physical Review Letters* **92**, 216804/1-4 (2004).
54. A. De Martino and R. Egger, "Effective low-energy theory of superconductivity in carbon nanotube ropes," *Physical Review B* **70**, 014508/1-10 (2004).
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56. F. Siano and R. Egger, "Josephson current through a nanoscale magnetic quantum dot," *Physical Review Letters* **93**, 047002/1-4 (2004); *ibid.* **94**, 039902(E) (2005); *ibid.* **94**, 229702(R) (2005).

57. C. Mora, R. Egger, A. O. Gogolin, and A. Komnik, "Atom-dimer scattering for confined ultracold fermion gases," *Physical Review Letters* **93**, 170403/1-4 (2004).
58. A. De Martino, M. Thorwart, R. Egger, and R. Graham, "Exact results for one-dimensional disordered bosons with strong repulsion," *Physical Review Letters* **94**, 060402/1-4 (2005).
59. C. Mora, R. Egger, and A. O. Gogolin, "Three-body problem for ultracold atoms in quasi-one-dimensional traps," *Physical Review A* **71**, 052705/1-19 (2005).
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96. A. Zazunov and R. Egger, "Adiabatic polaron dynamics and Josephson effect in a superconducting molecular quantum dot," *Physical Review B* **81**, 104508/1-11 (2010).
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98. R. Egger, A. De Martino, H. Siedentop, and E. Stockmeyer, "Multiparticle equations for interacting Dirac fermions in magnetically confined graphene quantum dots," *Journal of Physics A: Mathematical and Theoretical* **43**, 215202/1-18 (2010).

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108. N. Bode, S. Viola Kusminskiy, R. Egger, and F. von Oppen, "Scattering theory of current-induced forces in mesoscopic systems," *Physical Review Letters* **107**, 036804/1-4 (2011).
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135. L. Cohnitz, W. Häusler, A. Zazunov, and R. Egger, "Interaction-induced conductance from zero modes in a clean magnetic graphene waveguide," *Physical Review B* **92**, 085422/1-15 (2015).
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