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## Publications 1987 – 1999

1. H.P. Breuer, K. Dietz, M. Holthaus, Th. Millack :  
*On the quantum field theory of photoionisation and electron scattering reactions on atoms*  
Z. Phys. D **7**, 9–21 (1987).
2. H.P. Breuer, K. Dietz, M. Holthaus :  
*The role of avoided crossings in the dynamics of strong laser field–matter interactions*  
Z. Phys. D **8**, 349–357 (1988).
3. H.P. Breuer, K. Dietz, M. Holthaus :  
*Strong laser fields interacting with matter*  
Z. Phys. D **10**, 13–26 (1988).
4. H.P. Breuer, M. Holthaus :  
*Adiabatic processes in the ionization of highly excited hydrogen atoms*  
Z. Phys. D **11**, 1–14 (1989).
5. H.P. Breuer, K. Dietz, M. Holthaus :  
*Low-frequency ionisation of excited hydrogen atoms: The Floquet picture*  
J. Phys. B **22**, 3187–3196 (1989).
6. H.P. Breuer, M. Holthaus :  
*Quantum phases and Landau-Zener transitions in oscillating fields*  
Phys. Lett. A **140**, 507–512 (1989).
7. H.P. Breuer, K. Dietz, M. Holthaus :  
*Adiabatic motion and the structure of quasienergy surfaces of periodically driven quantum systems*  
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8. H.P. Breuer, K. Dietz, M. Holthaus :  
*Transport of quantum states of periodically driven systems*  
J. Phys. France **51**, 709–722 (1990).
9. H.P. Breuer, K. Dietz, M. Holthaus :  
*On the classical dynamics of strongly driven anharmonic oscillators*  
Physica D **46**, 317–341 (1990).

10. H.P. Breuer, K. Dietz, M. Holthaus :  
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*(Proceedings of the First International Conference on Coherent Radiation Processes in Strong Fields*, Washington, D.C., June 18–22, 1990; edited by V.L. Jacobs, R. Fusina, A.W. Saenz, and H. Überall.)
11. H.P. Breuer, K. Dietz, M. Holthaus :  
*Highly excited hydrogen atoms in strong microwave fields*  
*Z. Phys. D* **18**, 239–248 (1991).
12. H.P. Breuer, M. Holthaus :  
*Excitation mechanisms for hydrogen atoms in strong microwave fields*  
*J. Phys. II* **1**, 437–449 (1991).
13. H.P. Breuer, K. Dietz, M. Holthaus :  
*Selective excitation of molecular vibrations by interference of Floquet states*  
*J. Phys. B* **24**, 1343–1357 (1991).
14. H.P. Breuer, M. Holthaus :  
*A semiclassical theory of quasienergies and Floquet wave functions*  
*Ann. Phys. (N.Y.)* **211**, 249–291 (1991).
15. H.P. Breuer, K. Dietz, M. Holthaus :  
*Selective excitation of the HF molecule: continuum and pulse shape effects*  
*Phys. Rev. A* **45** (Brief Report), 550–552 (1992).
16. J. Henkel, M. Holthaus :  
*Classical resonances in quantum mechanics*  
*Phys. Rev. A* **45**, 1978–1986 (1992).
17. K. Dietz, J. Henkel, M. Holthaus :  
*Transitions induced by separatrix crossing*  
*Phys. Rev. A* **45**, 4960–4968 (1992).
18. H.P. Breuer, K. Dietz, M. Holthaus :  
*A remark on the Kramers-Henneberger transformation*  
*Phys. Lett. A* **165**, 341–346 (1992).
19. M. Holthaus :  
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*Phys. Rev. Lett.* **69**, 1596–1599 (1992).
20. M. Holthaus :  
*Collapse of minibands in far-infrared irradiated superlattices*  
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21. M. Holthaus :  
*The quantum theory of an ideal superlattice responding to far-infrared laser radiation*  
*Z. Phys. B* **89**, 251–259 (1992).
22. H.P. Breuer, K. Dietz, M. Holthaus :  
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*Phys. Rev. A* **47** (Brief Report), 725–728 (1993).

23. M. Holthaus, D. Hone :  
*Quantum wells and superlattices in strong time dependent fields*  
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24. M. Holthaus, C.S. Kenney, A.J. Laub :  
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in: *Differential Equations, Dynamical Systems, and Control Science: A Festschrift in Honor of Lawrence Markus* (K.D. Elworthy, W.N. Everitt, and E.B. Lee, eds.), Lecture Notes in Pure and Applied Mathematics **152**, 101–114 (Marcel Dekker, New York, 1993).
25. H.P. Breuer, M. Holthaus :  
*Adiabatic control of molecular excitation and tunneling by short laser pulses*  
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26. D.W. Hone, M. Holthaus :  
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27. M. Holthaus, B. Just :  
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28. M. Holthaus :  
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30. M. Holthaus, M.E. Flatté :  
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31. M. Holthaus :  
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32. M. Holthaus :  
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Chaos, Solitons, & Fractals **5** (Special issue: *Quantum Chaos: Present and Future*), 1143–1167 (1995).
33. Th. Gebhardt, S. Grossmann, M. Holthaus, M. Löhden :  
*Rigorous bounds on the plane-shear-flow dissipation rate*  
Phys. Rev. E **51**, 360–365 (1995).
34. S. Grossmann, M. Holthaus :  
*Bose-Einstein condensation in a cavity*  
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35. S. Grossmann, M. Holthaus :  
*Bose-Einstein condensation and condensate tunneling*  
*Z. Naturforsch.* **50 a**, 323–326 (1995).
36. M. Holthaus, G.H. Ristow, D.W. Hone :  
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39. S. Grossmann, M. Holthaus :  
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40. S. Grossmann, M. Holthaus :  
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41. M.E. Flatté, M. Holthaus :  
*Classical and quantum dynamics of a periodically forced particle in a triangular well*  
*Ann. Phys. (N.Y.)* **245**, 113–146 (1996).
42. M. Holthaus, D.W. Hone :  
*Localization effects in ac-driven tight binding lattices*  
*Phil. Mag. B* **74**, 105–137 (1996).
43. K. Drese, M. Holthaus :  
*Anderson localization in an ac-driven two-band model*  
*J. Phys.: Condens. Matter* **8**, 1193–1206 (1996).
44. S. Grossmann, M. Holthaus :  
*Microcanonical fluctuations of a Bose system's ground state occupation number*  
*Phys. Rev. E* **54**, 3495–3498 (1996).
45. R. Nicodemus, S. Grossmann, M. Holthaus :  
*Improved variational principle for bounds on energy dissipation in turbulent shear flow*  
*Physica D* **101**, 178–190 (1997).
46. K. Drese, M. Holthaus :  
*Ultracold atoms in modulated standing light waves*  
*Chem. Phys.* **217** (Special issue: *Dynamics of Driven Quantum Systems*), 201–219 (1997).
47. K. Drese, M. Holthaus :  
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51. R. Nicodemus, S. Grossmann, M. Holthaus :  
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52. R. Nicodemus, S. Grossmann, M. Holthaus :  
*Variational bound on energy dissipation in plane Couette flow*  
Phys. Rev. E **56**, 6774–6786 (1997).
53. R. Nicodemus, S. Grossmann, M. Holthaus :  
*The background flow method. Part 1. Constructive approach to bounds on energy dissipation*  
J. Fluid Mech. **363**, 281–300 (1998).
54. R. Nicodemus, S. Grossmann, M. Holthaus :  
*The background flow method. Part 2. Asymptotic theory of dissipation bounds*  
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*Perturbative and nonperturbative processes in adiabatic population transfer*  
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56. M. Holthaus, E. Kalinowski, K. Kirsten :  
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59. M. Holthaus :  
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*Floquet theory for short laser pulses*  
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*Towards lowering dissipation bounds for turbulent flows*  
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  62. M. Holthaus, E. Kalinowski :  
*Universal renormalization of saddle-point integrals for condensed Bose gases*  
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See homepage of the Condensed Matter Theory group for publications from 2000 onwards