

Papers in Refereed Journals:

1. The Vienna Observatory Echelle Spectrograph
A. WEISS, M. BARYLAK, J. HRON, J. SCHMIEDMAYER;
Pub. A.S.P. **93**, 787 (1981).
2. Neutral D-Meson Properties in 360 GeV/c \bar{p} Interactions
LEBC-EHS Collaboration: M. AGUILAR-BENITEZ, ... ,J. SCHMIEDMAYER, et al.;
Phys. Lett. **146B**, 266 (1984).
3. A Search for F Production in 360 GeV/c \bar{p} Interactions
LEBC-EHS Collaboration: M. AGUILAR-BENITEZ, ... ,J. SCHMIEDMAYER, et al.;
Phys. Lett. **156B**, 444 (1985).
4. Inclusive Properties of D Mesons Produced in 360 GeV/c \bar{p} Interactions
LEBC-EHS Collaboration: M. AGUILAR-BENITEZ, ... ,J. SCHMIEDMAYER, et al.;
Phys. Lett. **161B**, 400 (1985).
5. DD Correlations in 360 GeV \bar{p} Interactions
LEBC-EHS Collaboration: M. AGUILAR-BENITEZ, ... ,J. SCHMIEDMAYER, et al.;
Phys. Lett. **164B**, 404 (1985).
6. Measurement of D Meson Branching Ratios
LEBC-EHS Collaboration: M. AGUILAR-BENITEZ, ... ,J. SCHMIEDMAYER, et al.;
Phys. Lett. **168B**, 170 (1986).
7. The European Hybrid Spectrometer
EHS Collaboration: M. AGUILAR-BENITEZ, ... ,J. SCHMIEDMAYER, et al.;
Nucl. Inst. Meth **A258**, 26 (1987).
8. Measurement of the Electric Polarizability of the Neutron
J. SCHMIEDMAYER, H. RAUCH, P. RIEHS;
Phys.Rev.Lett. **61**, 1065 (1988).
9. Analog and Time Digitizer for 2 Dimensional Time of Flight Measurement
J. SCHMIEDMAYER, M. PERNICKA, M.C. MOXON;
Nucl. Inst. Meth. **A276**, 250 (1989).
10. High Precision Cross-Section Measurement on a Pulsed White Neutron Source
J. SCHMIEDMAYER;
Kerntechnik **53**, 218 (1989).
11. The Electric Polarizability of the Neutron
J. SCHMIEDMAYER, H. RAUCH, P. RIEHS;
Nucl. Inst. Meth. **A284**, 137 (1989).
12. The Equivalence of the Inertial and Gravitational Mass of the Neutron
J. SCHMIEDMAYER;
Nucl. Inst. Meth. **A284**, 59 (1989).
13. Wave Aspects of Electrons and Ion Emission from Point Sources
J. SUMMHAMMER, J. SCHMIEDMAYER;
Physica Scripta **42**, 124 (1990).
14. Measurement of the Electric Polarizability of the Neutron
J. SCHMIEDMAYER, P. RIEHS, J.A. HARVEY, N.W. HILL;
Phys.Rev.Lett. **66**, 1015 (1991).

15. A Constraint on Hypothetical Light Bosons from Low Energy Neutron Physics
H. LEEB, J. SCHMIEDMAYER;
Phys.Rev.Lett. **67**, 1472 (1992).
16. Magnetic Coherences in Atom Interferometry
J. SCHMIEDMAYER, C.R. EKSTROM, M. CHAPMAN, T. HAMMOND, D.E. PRITCHARD;
J. Phys. II **4**, 2029 (1994).
17. Near Field Imaging of Atom Diffraction Gratings: the Atomic Talbot Effect
M. CHAPMAN, C.R. EKSTROM, T. HAMMOND, J. SCHMIEDMAYER, B. TANNIAN, S. WEHINGER, D.E. PRITCHARD;
Phys.Rev. **A51**, R14 (1995).
18. The Matter Wave Index of Refraction of a Gas Measured by an Atom Interferometer
J. SCHMIEDMAYER, M. CHAPMAN, C.R. EKSTROM, T. HAMMOND, S. WEHINGER,
D.E. PRITCHARD;
Phys.Rev.Lett. **74**, 1043 (1995).
19. A Wire Trap for Neutral Atoms
J. SCHMIEDMAYER;
Appl. Phys. **B60**, 169 (1995).
20. Multiplex Velocity Selection for Precision Matter Wave Interferometry
T. HAMMOND, D.E. PRITCHARD, M. CHAPMAN, A. LENEFF, J. SCHMIEDMAYER;
Appl. Phys. **B60**, 193 (1995).
21. Optics and Interferometry with Molecules
M. CHAPMAN, C.R. EKSTROM, T. HAMMOND, R. RUBENSTEIN, J. SCHMIEDMAYER, S. WEHINGER, D.E. PRITCHARD;
Phys.Rev.Lett. **74**, 4783 (1995).
22. Measurement of the Electric Polarizability of Na Atom with an Atom Interferometer
C.R. EKSTROM, J. SCHMIEDMAYER, M. CHAPMAN, T. HAMMOND, D.E. PRITCHARD;
Phys.Rev. **A51** 3883 (1995).
23. Guiding and Trapping a Neutral Atom on a Wire
J. SCHMIEDMAYER;
Phys.Rev. **A52**, R13 (1995).
24. Atom Wave Interferometry with Diffraction Gratings of Light
E. RASEL, M. OBERHALER, H. BATELAAN, J. SCHMIEDMAYER, A. ZEILINGER;
Phys.Rev.Lett. **75**, 2633 (1995).
25. Photon Scattering from Atoms in an Atom Interferometer: Coherence Lost and Regained
M. CHAPMAN, T. HAMMOND, A. LENEFF, R. RUBENSTEIN, E. SMITH, J. SCHMIEDMAYER,
D.E. PRITCHARD;
Phys.Rev.Lett. **75**, 3783 (1995).
26. Modulation of Atomic de Broglie Waves using Bragg-Diffraction
ST. BERNET, M. OBERHALER, R. ABFALTERER, J. SCHMIEDMAYER, A. ZEILINGER;
Journal of EOS B: Quantum and Semiclassical Optics; **8**, 497 (1996).
27. Classical and Quantum Motion of Atoms in the Field of a Current-Carrying Wire:
a Simple Guide for Atoms
J. SCHMIEDMAYER, A. SCRINZI;
Journal of EOS B: Quantum and Semiclassical Optics; **8**, 693 (1996).
28. Concepts of Temporal Mach-Zehnder Interferometry with Atoms
S. NIC CHORMAIC, S. FRANKE, J. SCHMIEDMAYER, A. ZEILINGER;
Acta Physica Slovaca **46**, 463 (1996).

29. A Particle with an arbitrary Spin in the Magnetic Field of a Liner Current
J. SCHMIEDMAYER, A. SCRINZI;
Phys.Rev.**A54**, R2525 (1996).
30. Inertial Sensing with Classical Atomic Beams
M. OBERHALER, ST. BERNET, E. RASEL, J. SCHMIEDMAYER, A. ZEILINGER;
Phys.Rev. **A54**, 3165 (1996).
31. Trapping Polar Molecules with a Charged Wire
S.K. SEKATSKII, J. SCHMIEDMAYER;
Europhysics Letters **36**, 407 (1996).
32. Atom Waves in Light Crystals.
M. OBERHALER, ST. BERNET, R. ABFALTERER, J. SCHMIEDMAYER, A. ZEILINGER;
Phys.Rev.Lett. **77**, 4980 (1996).
33. Coherent Frequency Shift of Atomic Matter Waves
ST. BERNET, M. OBERHALER, R. ABFALTERER, J. SCHMIEDMAYER, A. ZEILINGER;
Phys.Rev.Lett. **77**, 5160 (1996).
34. Atom Holography at Light Structures
ST. BERNET, R. ABFALTERER, C. KELLER, M. OBERHALER, J. SCHMIEDMAYER, A. ZEILINGER;
J. Imaging Science and Technology **41**, 324 (1997).
35. Anomalous Transmission in Atom Optics
H. BATELAAN, E. RASEL, M. OBERHALER, J. SCHMIEDMAYER, A. ZEILINGER;
J. Mod. Optics **44**, 2629 (1997).
36. Scattering a Neutral Atom from a Charged Wire
J. DENSCHLAG, J. SCHMIEDMAYER;
Europhysics Letters **38**, 405 (1997).
37. Tailored Complex Potentials and Friedel's law Atom Optics
C. KELLER, R. ABFALTERER, ST. BERNET, M. OBERHALER, J. SCHMIEDMAYER, A. ZEILINGER;
Phys.Rev.Lett. **79**, 3327 (1997).
38. Nanometer Definition of Atomic Beams with Masks of Light
R. ABFALTERER, C. KELLER, ST. BERNET, M. OBERHALER, J. SCHMIEDMAYER, A. ZEILINGER;
Phys.Rev.A **56**, R4365 (1997).
39. Quantum Wires and Quantum Dots for Neutral Atoms
J. SCHMIEDMAYER;
European Physics Journal D **4**, 57 (1998).
40. Probing a Singular Potential with Cold Atoms: An Atom and a Charged Wire
J. DENSCHLAG, G. UMSHAUS, J. SCHMIEDMAYER
Phys.Rev.Lett. **81**, 737 (1998).
41. Diffractive Matter-Wave Optics in Time
ST. BERNET, R. ABFALTERER, C. KELLER, J. SCHMIEDMAYER, A. ZEILINGER
JOSA-B **15**, 2817 (1998).
42. Absorptive Masks Of Light -A Useful Tool For Spatially Probing In Atom Optics
C. KELLER, R. ABFALTERER, ST. BERNET, M. OBERHALER, J. SCHMIEDMAYER, A. ZEILINGER
J. Vac. Sci. Tech. **16**, 3850 (1998).
43. Determining the electron forward-scattering amplitude using electron interferometry
R. C. FORREY, A. DALGARNO, J. SCHMIEDMAYER,
Phys.Rev A **59**, R942 (1999).

44. Matter-Wave Sidebands from a Potential with Temporal Helicity in Complex Space
ST. BERNET, R. ABFALTERER, C. KELLER, J. SCHMIEDMAYER, A. ZEILINGER
Proc. of Royal Society (London) **455**, 1509 (1999).
45. Guiding Neutral Atoms with a Wire
J. DENSCHLAG, D. CASSETTARI, J. SCHMIEDMAYER
Phys.Rev.Lett. **82**, 2014 (1999).
46. Dynamical Diffraction of Atomic Matter Waves by Light Crystals
M. OBERTHALER, R. ABFALTERER, ST. BERNET, C. KELLER, J. SCHMIEDMAYER, A. ZEILINGER
Phys. Rev. A **60**, 456 (1999).
47. An Atom and a Wire, Towards Mesoscopic Atom Optics
J. DENSCHLAG, D. CASSETTARI, A. CHENET, ST. SCHNEIDER, J. SCHMIEDMAYER
Appl. Phys. B. **69**, 291 (1999).
48. Adiabatic Following in Standing Wave Diffraction of Atoms
C. KELLER, J. SCHMIEDMAYER, A. ZEILINGER, T. NONN, ST. DÜRR, G. REMPE
Appl. Phys. B. **69**, 303 (1999).
49. Quantum gates with neutral atoms: Controlling collisional interactions in time dependent traps,
T. CALARCO, E.A.HINDS, D. JAKSCH, J. SCHMIEDMAYER, J. I. CIRAC, P. ZOLLER,
Phys. Rev. A **61**, 022304 (2000) [arXiv:quant-ph/9905013](https://arxiv.org/abs/quant-ph/9905013).
50. Filtered Talbot lens: Producing $\lambda / 2n$ -periodic atomic patterns with standing-wave fields having period λ
J. L. COHEN, B. DUBETSKY, P. R. BERMAN, AND J. SCHMIEDMAYER
Phys. Rev. A **61**, 033610 (2000) [arXiv:physics/9909044](https://arxiv.org/abs/physics/9909044).
51. Micromanipulation of Neutral Atoms with Nanofabricated Structures
D. CASSETTARI, A. CHENET, R. FOLMAN, A. HAASE, B. HESSMO, P. KRÜGER, T. MAIER,
S. SCHNEIDER, T. CALARCO, J. SCHMIEDMAYER
Appl. Phys. B **70**, 721-730 (2000).
52. Requirements for Coherent Atom Channeling
C. KELLER, J. SCHMIEDMAYER, A. ZEILINGER
Optics Communications **179**, 1 (2000).
53. Controlling Cold Atoms using Nanofabricated Surfaces: Atom Chips
R. FOLMAN, P. KRÜGER, D. CASSETTARI, B. HESSMO, T. MAIER, J. SCHMIEDMAYER
Phys. Rev. Lett. **84**, 4749 (2000) [arXiv:quant-ph/9912106](https://arxiv.org/abs/quant-ph/9912106).
54. Matter waves in time-modulated complex light potentials
ST. BERNET, R. ABFALTERER, C. KELLER, M. OBERTHALER,
J. SCHMIEDMAYER, A. ZEILINGER
Phys. Rev. A **62**, 023606 (2000).
55. Nanofabricated atom optics: Atom chips
K. BRÜGGER, T. CALARCO, D. CASSETTARI, R. FOLMAN, A. HAASE, B. HESSMO,
P. KRÜGER, T. MAIER, J. SCHMIEDMAYER
J. Mod. Optics **47**, 2789 (2000).
56. A Beam Splitter for Guided Atoms on an Atom Chip
D. CASSETTARI, B. HESSMO, R. FOLMAN, T. MAIER, J. SCHMIEDMAYER
Phys. Rev.Lett. **85**, 5483 (2000) [arXiv:quant-ph/0003135](https://arxiv.org/abs/quant-ph/0003135).
57. Atoms and Wires: Towards Atom Chips
M. BARTENSTEIN, D. CASSETTARI, T. CALARCO, A. CHENET, R. FOLMAN, K. BRÜGGER, A. HAASE, E. HARTUNGEN, B.
HESSMO, A. KASPER, P. KRÜGER, T. MAIER, F. PAYR,
S. SCHNEIDER, J. SCHMIEDMAYER
IEEE **36** No. 12, 1364 (2000)

58. On the observation of decoherence with a movable mirror
R. FOLMAN, J. SCHMIEDMAYER, H. RITSCH, D. VITALI
European Physics Journal D **13**, 93 (2001) arXiv:quant-ph/9906064.
59. Trapping Neutral Atoms with a Wire
A. HAASE, D. CASSETTARI, B. HESSMO, J. SCHMIEDMAYER
Phys. Rev. A **64**, 043405 (2001)
60. Multimode Interferometer for Guided Matter Waves:
E. ANDERSSON, T. CALARCO, R. FOLMAN, M. ANDERSSON, B. HESSMO, J. SCHMIEDMAYER,
Phys. Rev. Lett. **88**, (10) 100401 (2002) arXiv:quant-ph/0107124
61. Atom interferometer that puts noise in the shade - Bose-Einstein condensates could help physicists to measure the
fundamental constants with greater accuracy
J. SCHMIEDMAYER
Physics World **15** (6) 26 (2002)
62. Microscopic atom optics: From wires to an atom chip
R. FOLMAN R, P. KRUGER, J. SCHMIEDMAYER, J. DENSCHLAG, C. HENKEL
Advances in Atomic, Molecular, and Optical Physics, **48** 263 (2002)
63. Quantum information processing with neutral atoms on an atom chip:
J. SCHMIEDMAYER, R. FOLMAN, T. CALARCO
J. Mod. Opt. **49**, 1375 (2002)
64. A Bose-Einstein condensate in a microtrap
A. KASPER, S. SCHNEIDER, C. VOM HAGEN, M. BARTENSTEIN, B. ENGESER,
T. SCHUMM, I. BAR-JOSEPH, R. FOLMAN, L. FEENSTRA, J. SCHMIEDMAYER
Journal of Optics B-Quantum and Semiclassical Optics **5** (2) S143 (2003)
65. Fundamental limits for coherent manipulation on atom chips
C. HENKEL, P. KRUEGER, R. FOLMAN, J. SCHMIEDMAYER,
Appl. Phys. B. **76**, 173 (2003) arXiv:quant-ph/0208165
66. Possibility of single-atom detection on a chip
P. HORAK, B.G. KLAPPAUF, A. HAASE, R. FOLMAN, J. SCHMIEDMAYER P. DOMOKOS,
E.A. HINDS,
Phys. Rev. A. **67**, 043806 (2003) arXiv:quant-ph/0210090
67. Bose-Einstein condensation in a simple microtrap
S. SCHNEIDER, A. KASPER, CH. VOM HAGEN, M. BARTENSTEIN, B. ENGESER,
T. SCHUMM, I. BAR-JOSEPH, R. FOLMAN, L. FEENSTRA, J. SCHMIEDMAYER
Phys. Rev. A **67**, 023612 (2003) arXiv:cond-mat/0210488
68. Trapping and Manipulating Neutral Atoms with Electrostatic Fields
P. KRÜGER, X. LUO, M. W. KLEIN, K. BRUGGER, A. HAASE, S. WILDERMUTH, S. GROTH,
I. BAR-JOSEPH, R. FOLMAN, J. SCHMIEDMAYER
Phys.Rev.Lett **91**, (23) 233201 (2003) arXiv:quant-ph/0306111
69. Microtraps and Atom Chips: Toolboxes for cold atom physics
L. FEENSTRA, LM. ANDERSSON, J. SCHMIEDMAYER
General Relativity And Gravitation **36** 2317 (2004)
70. Rydberg atoms in magnetic quadrupole traps
I. LESANOVSKY, J. SCHMIEDMAYER, P. SCHMELCHER
Europhysics Letters **65**, 478 (2004)
71. Failure of geometric electromagnetism in the adiabatic vector Kepler problem
J. ANGLIN, J. SCHMIEDMAYER
Phys.Rev.A **69**, 022111 (2004)

72. Electronic structure of atoms in magnetic quadrupole traps
I. LESANOVSKY, J. SCHMIEDMAYER, P. SCHMELCHER
Phys. Rev. A **69**, 053405 (2004)
73. Optimized magneto-optical trap for experiments with ultracold atoms near surfaces
S. WILDERMUTH, P. KRÜGER, C. BECKER, M. BRAJDIC, S. HAUPT, A. KASPER, R. FOLMAN, J. SCHMIEDMAYER
Phys. Rev. A **69**, 030901(R) (2004)
74. Atom chips: Fabrication and thermal properties
S. GROTH, P. KRÜGER, S. WILDERMUTH, R. FOLMAN, T. FERNHOLZ, D. MAHALU,
I. BAR-JOSEPH, J. SCHMIEDMAYER
Appl. Phys. Lett **85**, 2980 (2004); [arXiv:cond-mat/0404141](https://arxiv.org/abs/cond-mat/0404141)
75. Atom fiber for omnidirectional guiding of cold neutral atoms
X. LUO, P. KRÜGER, M. W. KLEIN, K. BRUGGER, S. WILDERMUTH, S. GROTH,
I. BAR-JOSEPH, R. FOLMAN, J. SCHMIEDMAYER
Optics.Lett **29**, (18) 2145 (2004)
76. Rydberg atoms in a magnetic guide
I. LESANOVSKY, J. SCHMIEDMAYER, P. SCHMELCHER
Phys.Rev.A **70**, 043409 (2004)
77. Atom chips: manipulating atoms and molecules with microfabricated structures
C. HENKEL, J. SCHMIEDMAYER, C. WESTBROOK
European Physical Journal D **35** (1) 1 (2005)
78. Quantum physics - Atom waves in passing
M. DEKIEVIET, J. SCHMIEDMAYER
Nature **437**, 1102 (2005)
79. Two-wire guides and traps with vertical bias fields on atom chips
K. BRUGGER, P. KRÜGER, X. LUO, S. WILDERMUTH, H. GIMPEL, M. W. KLEIN, S. GROTH, R. FOLMAN, I. BAR-JOSEPH,
J. SCHMIEDMAYER
Phys. Rev. A **72**, 023607 (2005)
80. Fabrication of alignment structures for a fiber resonator by use of deep-ultraviolet lithography
X. LIU, K.-H. BRENNER, M. WILZBACH, M. SCHWARZ, T. FERNHOLZ, J. SCHMIEDMAYER,
Appl. Opt. **44**, 6857 (2005)
81. Bose-Einstein condensates - Microscopic magnetic-field imaging
S. WILDERMUTH, S. HOFFERBERTH, I. LESANOVSKY, E. HALLER, M. ANDERSSON,
S. GROTH, I. BAR-JOSEPH, P. KRÜGER, J. SCHMIEDMAYER,
Nature **435**, 440 (2005)
82. Relevance of sub-surface chip layers for the lifetime of magnetically trapped atoms
BO ZHANG, C. HENKEL, E. HALLER, ST. WILDERMUTH, S. HOFFERBERTH, P. KRÜGER,
J. SCHMIEDMAYER
Eur. Phys. J. D **35**, 97 (2005)
83. A simple quantum gate with atom chips
M. A. CIRONE, A. NEGRETTI, T. CALARCO, P. KRUEGER, J. SCHMIEDMAYER
Eur. Phys. J. D **35**, 165 (2005)
84. Matter-wave interferometry in a double well on an atom chip
T. SCHUMM, S. HOFFERBERTH, L. M. ANDERSSON, S. WILDERMUTH, S. GROTH,
I. BAR-JOSEPH, J. SCHMIEDMAYER, P. KRUGER
Nature Physics **1**, (1) 57 (2005)
85. Ultracold Atoms in Optical Lattices with Random On-Site Interactions
H. GIMPERLEIN, S. WESSEL, J. SCHMIEDMAYER, L. SANTOS
Phys. Rev. Lett. **95**, 170401 (2005)

86. Quantum scattering in quasi-one-dimensional cylindrical confinement
J.I. KIM, J. SCHMIEDMAYER, P. SCHMELCHER
Phys. Rev. A **72**, 042711 (2005)
87. Rydberg atoms in a magnetic quadrupole field
I. LESANOVSKY, J. SCHMIEDMAYER, P. SCHMELCHER
Journal of Physics B-Atomic Molecular and Optical Physics **38** (2) S151 (2005)
88. Random on-site interactions versus random potential in ultra cold atoms in optical lattices H. GIMPERLEIN, S. WESSEL, J. SCHMIEDMAYER, L. SANTOS
Applied Physics B-Lasers and Optics **82** (2) 217 (2006)
89. Detecting magnetically guided atoms with an optical cavity
A. HAASE, B. HESSMO, J. SCHMIEDMAYER
Opt. Lett. **31**, 268 (2006) arXiv:physics/0510166
90. Detecting neutral atoms on an atom chip
M. WILZBACH, A. HAASE, M. SCHWARZ, D. HEINE, K. WICKER, X. LIU,
K.-H. BRENNER, S. GROTH, TH. FERNHOLZ, B. HESSMO, J. SCHMIEDMAYER
Fortschr. Phys. **54**, 746 (2006) arXiv:physics/0608189
91. Quasicondensate growth on an atom chip
N. P. PROUKAKIS, J. SCHMIEDMAYER, H. T. C. STOOFF
Phys. Rev. A **73**, 053603 (2006) arXiv: cond-mat/0509154
92. Adiabatic radio-frequency potentials for the coherent manipulation of matter waves
I. LESANOVSKY, T. SCHUMM, S. HOFFERBERTH, L. M. ANDERSSON, P. KRÜGER,
J. SCHMIEDMAYER
Phys. Rev. A **73**, 033619 (2006) arXiv:physics/0510076
93. Deterministic and efficient quantum cryptography based on Bell's theorem
Z-B CHEN, Q ZHANG, X-H BAO, J. SCHMIEDMAYER, J-W PAN
Phys. Rev. A **73**, 050302(R) (2006) arXiv:quant-ph/0501171
94. Sensing electric and magnetic fields with Bose-Einstein Condensates
S. WILDERMUTH, S. HOFFERBERTH, I. LESANOVSKY, S. GROTH,
I. BAR-JOSEPH, P. KRÜGER, J. SCHMIEDMAYER,
Appl. Phys. Lett. **88**, 264103 (2006) arXiv:physics/0512520
95. Theoretical analysis of a realistic atom-chip quantum gate
E. CHARRON, M. CIRONE, A. NEGRETTI, J. SCHMIEDMAYER, T. CALARCO
Phys. Rev. A **74**, 012308 (2006) arXiv:quant-ph/0603138
96. Manipulation of ultracold atoms in dressed adiabatic radio-frequency potentials
I. LESANOVSKY, S. HOFFERBERTH, J. SCHMIEDMAYER, P. SCHMELCHER
Phys. Rev. A **74**, 033619 (2006) arXiv:physics/0606165
97. Experimental quantum teleportation of a two-qubit composite system
Q. ZHANG, A. GOEBEL, C. WAGENKNECHT, YA CHEN, B. ZHAO, T. YANG, A. MAIR,
J. SCHMIEDMAYER, J-W PAN
Nature Physics **2** 678 (2006) DOI: 10.1038/nphys417 arXiv: quant-ph/0609129
98. Radiofrequency-dressed-state potentials for neutral atoms
S. HOFFERBERTH, I. LESANOVSKY, B. FISCHER, J. VERDU, J. SCHMIEDMAYER
Nature Physics **2** 710 (2006) DOI: 10.1038/nphys420 arXiv: quant-ph/0608228
99. Deterministic and Storable Single-Photon Source Based on Quantum Memory
S. CHEN, Y-A CHEN, T. STRASSEL, Z-S YUAN, B ZHAO, J. SCHMIEDMAYER, J-W PAN
Phys. Rev. Lett **97**, 173004 (2006) arXiv:quant-ph/0607036

100. A double well interferometer on an atom chip
T. SCHUMM, P. KRÜGER, S. HOFFERBERTH, I. LESANOVSKY, S. WILDER-MUTH,
S. GROTH, I. BAR-JOSEPH, LM. ANDERSSON, J. SCHMIEDMAYER
Quantum Information Processing **5** (6) 537 (2006)
101. Optimal quantum control of Bose Einstein condensates in magnetic microtraps
U. HOHENESTER, P K REKDAL, A BORZI, J. SCHMIEDMAYER
Phys. Rev.A **75**, 023602 (2007) arXiv:quant-ph/0701094
102. Collisional decoherence during writing and reading quantum states
S. MANZ, T. FERNHOLZ, J. SCHMIEDMAYER, J-W PAN
Phys. Rev. A **75**, 040101 (2007) arXiv:quant-ph/0608159
103. High-fidelity entanglement via molecular dissociation in integrated atom optics
BO ZHAO, Z-B CHEN, J-W PAN, J. SCHMIEDMAYER, A. RECATI, G. ASTRAKHARCHIK
T. CALARCO
Phys. Rev. A **75**, 042312 (2007) arXiv:quant-ph/0502011
104. Synchronized Independent Narrow-band Single Photons and Efficient Generation of Photonic Entanglement
Z-S YUAN, Y-A CHEN, S. CHEN, BO ZHAO, M. KOCH, T. STRASSEL, Y. ZHAO, G-J ZHU,
J. SCHMIEDMAYER, J-W PAN
Phys. Rev. Lett. **98**, 180503 (2007) arXiv:quant-ph/ 0703188
105. Designing potentials by sculpturing wires
L. DELLA PIETRA, S. AIGNER, CH. VOM HAGEN, S. GROTH, I. BAR-JOSEPH, H.LEZEC,
J. SCHMIEDMAYER
Phys. Rev.A **75**, 063604 (2007) arXiv:cond-mat/0604619
106. Robust long-distance quantum communication with atomic ensembles and linear optics
BO ZHAO, Z-B CHEN, Y-A CHEN, J SCHMIEDMAYER, J-W PAN
Phys. Rev. Lett. **98**, 240502 (2007) arXiv:quant-ph/0609154
107. Ultracold atoms in Radio-frequency-dressed atoms beyond the rotating wave approximation
S. Hofferberth, B. Fischer, T. Schumm, J. Schmiedmayer, I. Lesanovsky
Phys. Rev. A **76**, 013401 (2007) arXiv:quant-ph/ 0611240
108. Fault-tolerant quantum repeater with atomic ensembles and linear optics
Z-B CHEN, BO ZHAO, Y-A CHEN, J. SCHMIEDMAYER, J-W PAN
Phys. Rev. A **76**, 022329 (2007) arXiv:quant-ph/0609151
109. Non-equilibrium coherence dynamics in one-dimensional Bose gases
S. HOFFERBERTH, I. LESANOVSKY, B. FISCHER, T. SCHUMM, J. SCHMIEDMAYER
Nature **449**, 324 (2007); arXiv:0706.2259
110. Demonstration of a stable atom-photon entanglement source for quantum repeaters
S. CHEN, Y-A CHEN, BO ZHAO, Z-S YUAN, J. SCHMIEDMAYER, J-W PAN
Phys. Rev. Lett. **99**, 180505 (2007) arXiv:0706.2327
111. Potential Roughness near Lithographically Fabricated Atom Chips
P. KRUGER, L. M. ANDERSSON, S. WILDERMUTH, S. HOFFERBERTH, E. HALLER,
S. AIGNER, S. GROTH, I. BAR-JOSEPH, J. SCHMIEDMAYER
Phys. Rev. A **76**, 063621 (2007).
112. Memory-built-in quantum teleportation with photonic and atomic qubits
Y-A. CHEN, S. CHEN, Z-S. YUAN, BO ZHAO, C-S. CHUU, J. SCHMIEDMAYER, J-W. PAN
Nature Physics **4**, 103-107 (2008), doi:10.1038/nphys832; arXiv:0705.1256
113. Long-Range Order in Electronic Transport through Disordered Metal Films
S. AIGNER, L. DELLA PIETRA, Y. JAPHA, O. ENTIN-WOHLMAN, T. DAVID, R. SALEM,
R. FOLMAN, J. SCHMIEDMAYER
Science **319**, 1226 (2008); arXiv:0802.0386

114. Probing quantum and thermal noise in an interacting many-body system
S. HOFFERBERTH, I. LESANOVSKY, T. SCHUMM, A. IMAMBEKOV, V. GRITSEV,
E. DEMLER, J. SCHMIEDMAYER
Nature Physics **4**, 489-495 (2008), doi:10.1038/nphys941; arXiv:0710.1575
115. Multi-layer atom chips for versatile atom micro manipulation
M. TRINKER, S. GROTH, S. HASLINGER, S. MANZ, T. BETZ, I. BAR-JOSEPH, S. SCHNEIDER, T. SCHUMM, J.
SCHMIEDMAYER
Appl. Phys. Lett. **92**, 254102 (2008), doi:10.1063/1.2945893; arXiv:0801.3351
116. Organized Current Patterns in Disordered Conductors
Y. JAPHA, O. ENTIN-WOHLMN, T. DAVID, R. SALEM, S. AIGNER, J. SCHMIEDMAYER,
R. FOLMAN
Phys. Rev. B **77**, 201407(R) (2008); arXiv:0803.4307
117. Breakdown of integrability in a quasi-one-dimensional ultracold bosonic gas
I. MAZETS, T. SCHUMM, J. SCHMIEDMAYER
Phys. Rev. Lett. **100**, 210403 (2008); arXiv:0802.1701
118. Multistage entanglement swapping
A. GOEBEL, C. WAGENKNECHT, Q. ZHANG, Y-A CHEN, K. CHEN, J. SCHMIEDMAYER,
J-W PAN
Phys. Rev. Lett. **101**, 080403 (2008); arXiv:0808.2972
119. Experimental demonstration of a BDCZ quantum repeater node
Z-S YUAN, Y-A CHEN, B ZHAO, S CHEN, J SCHMIEDMAYER, J-W PAN
Nature **454**, 1098-1101 (2008), doi:10.1038/nature07241; arXiv:0803.1810
120. Creation of macroscopic quantum superposition states by a measurement
I.E. MAZETS, G. KURIZKI, M.K. OBERTHALER, J. SCHMIEDMAYER
EPL, **83** 60004 (2008) doi:10.1209/0295-5075/83/60004, arXiv:0710.3578
121. Quantum Memory with Optically trapped Atoms
C-S CHUU, T. STRASSEL, BO ZHAO, M. KOCH, Y-A CHEN, S. CHEN, Z-S YUAN,
J. SCHMIEDMAYER, J-W PAN
Phys. Rev. Lett. **101**, 120501 (2008) arXiv:0808.2687
122. Stochastic optimization of a cold atom experiment using a genetic algorithm
W. ROHRINGER, R. BÜCKER, S. MANZ, T. BETZ, CH. KOLLER, M. GÖBEL,
A. PERRIN, J. SCHMIEDMAYER, T. SCHUMM
Appl. Phys. Lett. **93**, 264101 (2008), arXiv:0810.4474
123. A simple integrated single-atom detector
M. WILZBACH, D. HEINE, S. GROTH, X-Y. LIU, B. HESSMO, J. SCHMIEDMAYER
Optics Letters **34**, 259 (2009) arXiv:0801.3255
124. A millisecond quantum memory for scalable quantum networks
BO ZHAO, Y-A CHEN, X-H BAO, T. STRASSEL, C-S CHUU, X-M JIN, J SCHMIEDMAYER,
Z-S YUAN, S CHEN, J-W PAN
Nature Physics **5**, 95-99 (2009), arXiv:0807.5064
125. Optimizing number squeezing when splitting a mesoscopic condensate
J. GROND, J. SCHMIEDMAYER, U. HOHENESTER
Phys. Rev. A **79**, 021603(R) (2009), arXiv:0806.3877
126. Integrated atom detector: Single atoms and photon statistics
D. HEINE, M. WILZBACH, T. RAUB, B. HESSMO, J. SCHMIEDMAYER
Phys. Rev. A **79**, 021804 (R) (2009), arXiv:0903.3896

127. Reversible state transfer between superconducting qubits and atomic ensembles
D. PETROSYAN, G. BENSKY, G. KURIZKI, I. MAZETS, J. MAJER, J. SCHMIEDMAYER
Phys. Rev. A **79**, 040304 (R) (2009), arXiv:0902.0881
128. Dephasing in two decoupled one-dimensional Bose-Einstein condensates and the subexponential decay of the interwell coherence
I.E. MAZETS, J. SCHMIEDMAYER
Eur. Phys. J. B **68**, 335–339 (2009) arXiv:0806.4431
129. Restoring integrability in one-dimensional quantum gases by two-particle correlations
I. E. MAZETS, J. SCHMIEDMAYER
Phys. Rev. A **79**, 061603(R) (2009); arXiv:0904.1718
130. Strong magnetic coupling of an ultracold gas to a superconducting waveguide cavity
J. VERDU, H. ZOUBI, CH. KOLLER, J. MAJER, H. RITSCH, J. SCHMIEDMAYER
Phys. Rev. Lett. **103**, 043603 (2009); arXiv:0809.2552
131. Optics and Interferometry with Atoms and Molecules
A. CRONIN, J.SCHMIEDMAYER, D.PRITCHARD
Rev. Mod. Phys. **81**, 1051 (2009); arXiv:0712.3703
132. "Density ripples" of expanding low-dimensional gases as a probe of correlations
A. IMAMBEKOV, I. E. MAZETS, D. S. PETROV, V. GRITSEV, S. MANZ, S.HOFFERBERTH,
T. SCHUMM, E. DEMLER, J. SCHMIEDMAYER
Phys.Rev.A **80**, 033604 (2009); arXiv:0904.1723
133. Single-particle-sensitive imaging of freely propagating ultracold atom
R. BÜCKER, A. PERRIN, S. MANZ, T. BETZ, CH. KOLLER, T. PLISSON, J. ROTTMANN,
T. SCHUMM, J. SCHMIEDMAYER
New J. Phys. **11**, 103039 (2009), arXiv:0907.0674
134. Optimizing atom interferometry on atom chips
U. HOHENESTER, J. GROND, J. SCHMIEDMAYER
Fortschr. Phys. **57**, 1121 (2009);
135. Optimal control of number squeezing in trapped Bose-Einstein condensates
J. GROND, G. VON WINCKEL, J.SCHMIEDMAYER, U. HOHENESTER
Phys. Rev. A **80**, 053625 (2009), arXiv:0908.1634
136. An Optical Lattice on an Atom Chip
D. GALLEGRO, S. HOFFERBERTH, T. SCHUMM, P. KRUGER, J. SCHMIEDMAYER
Opt. Lett. **34**, 3463-3465 (2009), arXiv:0905.2207
137. Shaking the condensates: Optimal number squeezing in the dynamic splitting of a Bose-Einstein condensate
J. GROND, J. SCHMIEDMAYER, U. HOHENESTER
Physica E **42**, 432–435 (2010)
138. Ramsey's Method of Separated Oscillating Fields and its Application to Gravitationally Induced Quantum Phaseshifts
H. ABELE, T. JENKE, H. LEEB, J. SCHMIEDMAYER
Phys. Rev. D **81**, 065019 (2010) arXiv:0907.5447
139. Two-point density correlations of quasi-condensates in free expansion
S. MANZ, R. BÜCKER, T. BETZ, CH. KOLLER, S. HOFFERBERTH, I. E. MAZETS, A. IMAMBEKOV,
E. DEMLER, A. PERRIN, J. SCHMIEDMAYER, T. SCHUMM
Phys. Rev. A **81**, 031610 (2010); arXiv:0911.2376
140. RF-field-induced Feshbach resonances
T. V. TSCHERBUL, T. CALARCO, I. LESANOVSKY, R. V. KREMS, A. DALGARNO, J. SCHMIEDMAYER
Phys. Rev. A **81**, 050701 (2010); arXiv:1001.1004

141. Thermalization in a quasi-1D ultracold bosonic gas
I. E. MAZETS, J. SCHMIEDMAYER
New J. Phys. **12**, 055023 (2010); arXiv:0912.4493
142. Atom interferometry with trapped Bose-Einstein condensates: Impact of atom-atom interactions
J. GROND, U. HOHENESTER, I. MAZETS, J. SCHMIEDMAYER
New J. Phys. **12**, 065036 (2010); arXiv:1002.0265
143. Ramsey interference in one dimensional systems: The full distribution function of fringe contrast as a probe of many-body dynamics
T. KITAGAWA, S. PIELAWA, A. IMAMBEKOV, J. SCHMIEDMAYER, V. GRITSEV, E. DEMLER
Phys. Rev. Lett. **104**, 255302 (2010); arXiv:0912.4643
144. Fluctuations and stochastic processes in one-dimensional many-body quantum systems.
H.-P. STIMMING, N. J. MAUSER, J. SCHMIEDMAYER, I. E. MAZETS
Phys. Rev. Lett. **105**, 015301 (2010); arXiv:0910.5337
145. A single atom detector integrated on an atom chip: fabrication, characterization and application
D. HEINE, W. ROHRINGER, D. FISCHER, M. WILZBACH, T. RAUB, S. LOZICZKY, XI-YUAN LIU,
S. GROTH, B. HESSMO, J. SCHMIEDMAYER
New J. Phys. **12**, 095005 (2010); arXiv:1002.1573
146. Cavity QED with an ultracold ensemble on a chip: prospects of strong magnetic coupling at finite temperatures
K. HENSCHHEL, H. RITSCH, J. MAJER, J. SCHMIEDMAYER
Phys. Rev. A, **82**, 033810 (2010); arXiv:1007.0116
147. Weakly interacting Bose gas in the one dimensional limit
P. KRÜGER, S. HOFFERBERTH, I.E. MAZETS, I. LESANOVSKY, J. SCHMIEDMAYER
Phys. Rev. Lett. **105**, 265302 (2010); arXiv:1012.3048
148. Two-point phase correlations of a one-dimensional bosonic Josephson junction
T. BETZ, S. MANZ, R. BÜCKER, C. KOLLER, G. KAZAKOV, I.E. MAZETS, H.-P. STIMMING,
A. PERRIN, T. SCHUMM, J. SCHMIEDMAYER
Phys. Rev. Lett. **106**, 020407 (2011); arXiv:1010.5989
149. Dephasing in coherently-split quasicondensates
H.-P. STIMMING, N. J. MAUSER, J. SCHMIEDMAYER I. E. MAZETS
Phys. Rev. A, **83** 023618 (2011); arXiv:1011.2276
150. Electron beam driven alkali metal atom source for loading a magneto-optical trap in a cryogenic environment
S. HASLINGER, R. AMSUESS, C. KOLLER, C. HUFNAGEL, N. LIPPOK, J. MAJER, J. VERDU,
S. SCHNEIDER, J. SCHMIEDMAYER
Appl. Phys. B. **102**, 819-823 (2011); arXiv:1003.5144
151. Absorption imaging ultra cold atoms on Atom Chip
D. SMITH, S. AIGNER, M. ANDERSSON, S. HOFFERBERTH, M. GRING, ST. WILDERMUTH, P. KRÜGER, ST. SCHNEIDER,
T. SCHUMM, J. SCHMIEDMAYER
OpticsExpress **19**, 8471 (2011); arXiv:1101.4206
152. Single spontaneous photon generates coherence between matterwaves
J. TOMKOVIC, M. SCHREIBER, J. WELTE, M. KIFFNER, J. SCHMIEDMAYER, M. K. OBERTHALER
Nature Physics, **7**, 379–382 (2011); DOI: 10.1038/NPHYS1961 arXiv:1012.4704
153. Twin Atom Beams
R. BUCKER, J. GROND, S. MANZ, T. BERRADA, T. BETZ, C. KOLLER, U. HOHENESTER,
T. SCHUMM, A. PERRIN, J. SCHMIEDMAYER
Nature Physics, **7**, 608-611 (2011); DOI: 10.1038/NPHYS1992 arXiv:1012.2348
154. Shapiro effect in atomchip-based bosonic Josephson junctions
J. GROND, T. BETZ, U. HOHENESTER, N. MAUSER, J. SCHMIEDMAYER, T. SCHUMM
New Journal of Physics, **13** 065026 (2011) arXiv:1102.1459

155. The dynamics and prethermalization of one dimensional quantum systems probed through the full distributions of quantum noise
T. KITAGAWA, A. IMAMBEKOV, J. SCHMIEDMAYER, E. DEMLER
New Journal of Physics, **13** 073018 (2011) arXiv:1104.5631
156. Cavity QED with magnetically coupled collective spin states
R. AMSÜSS, CH. KOLLER, T. NÖBAUER, S. PUTZ, S. ROTTER, K. SANDNER, S. SCHNEIDER,
M. SCHRAMBÖCK, G. STEINHAUSER, H. RITSCH, J. SCHMIEDMAYER, J. MAJER
Phys. Rev. Lett. **107**, 060502 (2011); arXiv:1103.1045
157. Mach-Zehnder interferometry with interacting trapped Bose-Einstein condensates
J. GROND, U. HOHENESTER, J. SCHMIEDMAYER, A. SMERZI
Phys. Rev. A. **84**, 023619 (2011); arXiv:1010.3273
158. Controlling quantum information processing in hybrid systems on chips
G. Bensky, R. Amsüss, J. Majer, D. Petrosyan, J. Schmiedmayer, G. Kurizki
Quantum Information Processing **10**, 1037-1060 (2011) DOI:10.1007/s11128-011-0302-6
159. Hanbury Brown and Twiss correlations across the Bose-Einstein condensation threshold
A. Perrin, R. Bucker, S. Manz, T. Betz, C. Koller, T. Plisson, T. Schumm, J. Schmiedmayer
Nature Physics **8** 195-198 (2012) DOI:10.1038/NPHYS2212 arXiv:1012.5260
160. Strong magnetic coupling of an inhomogeneous NV ensemble to a cavity
K. Sandner, H. Ritsch, R. Amsüss, Ch. Koller, T. Nöbauer, S. Putz, J. Schmiedmayer,
J. Majer
Phys. Rev. A **85**, 053806 (2012) DOI:10.1103/PhysRevA.85.053806 arXiv:1112.4767
161. Optimizing Inhomogeneous Spin Ensembles for Quantum Memory
G. Bensky, D. Petrosyan, J. Majer, J. Schmiedmayer, G. Kurizki
Phys. Rev. A **86**, 012310 (2012) DOI:10.1103/PhysRevA.86.012310 arXiv:1203.6305
162. Dynamics of parametric matter wave amplification
R. Bucker, U. Hohenester, T. Berrada, S. Van Frank, A. Perrin, S. Manz, T. Betz, J. Grond,
T. Schumm, J. Schmiedmayer
Phys. Rev. A **86**, 013638 (2012) DOI:10.1103/PhysRevA.86.013638 arXiv:1203.5357
163. Two-body anticorrelation in a harmonically trapped ideal Bose gas
T. M. WRIGHT, A. PERRIN, A. BRAY, J. SCHMIEDMAYER, AND K. V. KHERUNTSYAN
Phys. Rev. A **86**, 023618 (2012) DOI:10.1103/PhysRevA.86.023618 arXiv:1207.1278
164. Relaxation Dynamics and Pre-thermalization in a Quantum System
M. Gring, T. Langen, M. Kuhnert, T. Kitagawa, M. Schreitl, I. Mazets, D. Smith,
E. Demmler, J. Schmiedmayer
Science **337**, 1318 (2012) DOI:10.1126/science.1224953 arXiv:1112.0013
165. Multimode dynamics and emergence of a characteristic length-scale in a one-dimensional quantum system
M. Kuhnert, R. Geiger, T. Langen, M. Gring, B. Rauer, T. Kitagawa, E. Demler, D. Adu Smith, J. Schmiedmayer
Phys. Rev. Lett. **110**, 090405 (2013) arXiv:1211.5323
166. Prethermalization in one-dimensional Bose gases: description by a stochastic Ornstein-Uhlenbeck process
T. Langen, M. Gring, M. Kuhnert, B. Rauer, R. Geiger, D. Adu Smith, I. E. Mazets,
J. Schmiedmayer
Eur. Phys. J. Special Topics **217**, 43-53 (2013) arXiv:1211.0016
167. Vibrational state inversion of a Bose-Einstein condensate: optimal control and state tomography
R. Bucker, T. Berrada, S. Van Frank, Jf. Schaff, T. Schumm, J. Schmiedmayer, G. Jäger, J. Grond, U. Hohenester
J. Phys. B: At. Mol. Opt. Phys. **46**, 104012 (2013) arXiv:1212.4173

168. Integrated Mach-Zehnder interferometer for Bose-Einstein condensates
T. Berrada, S. Van Frank, R. Bücker, T. Schumm, J.-F. Schaff, J. Schmiedmayer
Nature Communications **4**, 2077 (2013) arXiv:1303.1030
doi:10.1038/ncomms3077
169. Prethermalization Revealed by the Relaxation Dynamics of Full Distribution Functions
D. Adu Smith, M. Gring, T. Langen, M. Kuhnert, B. Rauer, R. Geiger, T. Kitagawa,
I. Mazets, E. Demler, J. Schmiedmayer
New Journal of Physics, **15**, 075011 (2013) arXiv:1212.4645
170. Local emergence of thermal correlations in an isolated quantum many-body system
T. Langen, R. Geiger, M. Kuhnert, B. Rauer, J. Schmiedmayer
Nature Physics **9**, 640-643 (2013) doi:10.1038/nphys2739 arXiv:1305.3708
171. Cold Atom Cosmology
J. Schmiedmayer, J. Berges
Science, **341**, 1180 (2013)
172. Magnetic conveyor belt transport of ultracold atoms to a superconducting atomchip
S. Minniberger, F. Diorico, S. Haslinger, C. Hufnagel, C. Novotny, N. Lippok, J. Majer, C. Koller, S. Schneider, J. Schmiedmayer
Applied Physics B, **116** pp. 1017 – 1021 (2014) arXiv:1311.3155
173. Interferometry with non-classical motional states of a Bose-Einstein condensate
S. van Frank, A. Negretti, T. Berrada, R. Bücker, S. Montangero, J.-F. Schaff, T. Schumm, T. Calarco, J. Schmiedmayer
Nature Communications **5**, 4009 (2014) DOI: 10.1038/ncomms5009 arXiv:1402.0377
174. Local relaxation and light-cone-like propagation of correlations in a trapped one-dimensional Bose gas
R. Geiger, T. Langen, I. Mazets, J. Schmiedmayer
New Journal of Physics **16**, 053034 (2014) arXiv:1312.7568
175. Implementation of the Dicke lattice model in hybrid quantum system arrays
Liu Jun Zou, D. Marcos, S. Diehl, S. Putz, J. Schmiedmayer, J. Majer, P. Rabl
Phys. Rev. Lett. **113**, 023603 (2014) arXiv:1405.3209
176. Photonic architecture for scalable quantum information processing in NV-diamond
Kae Nemoto, Michael Trupke, Simon J. Devitt, Ashley M. Stephens, Kathrin Buczak, Tobias Nobauer, Mark S. Everitt,
Jörg Schmiedmayer, William J. Munro
Phys. Rev. X **4**, 031022 (2014) arXiv:1309.4277
177. Protecting a Spin Ensemble against Decoherence in the Strong-Coupling Regime of Cavity QED
S. Putz, D.O. Krimer, R. Amsüss, A. Valookaran, T. Nöbauer, J. Schmiedmayer, S. Rotter, J. Majer
Nature Physics **10**, 720-724 (2014) arXiv:1405.3209
178. Arrays of open, independently tunable microcavities
C. Derntl, M. Schneider, J. Schalko, A. Bittner, J. Schmiedmayer, U. Schmid, M. Trupke
Optics Express **22**, 22111-22120 (2014) arXiv:1309.0023
179. Chiral Prethermalization in supersonically split condensates
K. Agarwal, E.G. Dalla Torre, B. Rauer, T. Langen, J. Schmiedmayer, E. Demler
Phys. Rev. Lett. **113**, 190401 (2014) arXiv:1402.6716
180. Interferometry with atoms
J.-F. Schaff, T. Langen and J. Schmiedmayer
Rivista del Nuovo Cimento, **37**, 509 (2014) doi:10.1393/ncr/i2014-10105-7 arXiv: 1504.04285
181. Experimental Observation of a Generalized Gibbs Ensemble
T. Langen, S. Erne, R. Geiger, B. Rauer, T. Schweigler, M. Kuhnert, W. Rohringer, I. E. Mazets, T. Gasenzer, J. Schmiedmayer
Science **348**, 207 (2015) arXiv: 1411.7185

182. Ultracold atoms out of equilibrium
T. Langen, R. Geiger, J. Schmiedmayer
Annual Review of Condensed Matter Physics **6**, 201-217 (2015) arXiv:1408.6377
183. Quantum Technologies with Hybrid Systems
G. Kurizki, P. Bertet, Y. Kubo, K. Molmer, D. Petrosyan, P. Rabl, J. Schmiedmayer
PNAS **112**, 3866 (2015) doi:10.1073/pnas.1419326112.
184. Non-equilibrium scale invariance and shortcuts to adiabaticity in a one-dimensional Bose gas
W. Rohringer, D. Fischer, F. Steiner, I. E. Mazets, J. Schmiedmayer, M. Trupke
Scientific Reports **5**, 9820 (2015) arXiv:1312.5948
185. Towards experimental quantum field tomography with ultracold atoms
A. Steffens, M. Friesdorf, T. Langen, B. Rauer, T. Schweigler, R. Hübener, J. Schmiedmayer, C. A. Riofrio, J. Eisert
Nature Communications **6**, 7663 (2015) arXiv:1406.3632
DOI: 10.1038/ncomms8663
186. Probing the Dark Side
J. Schmiedmayer, H. Abele
Science, **349**, 786 (2015)
187. Smooth optimal quantum control for practical solid state spin magnetometry
T. Nöbauer, A. Angerer, B. Bartels, M. Trupke, S. Rotter, J. Schmiedmayer, F. Mintert, J. Majer
Phys. Rev. Lett. **115**, 190801 (2015) arXiv: 1412.5051
188. Parametric squeezing amplification of Bose-Einstein condensates
G. Jäger, T. Berrada, J. Schmiedmayer, T. Schumm, U. Hohenester
Phys. Rev. A **92**, 053632 (2015) arXiv:1511.03146
189. Cooling a one Dimensional Bose Gas
B. Rauer, P. Grišins, I. E. Mazets, W. Rohringer, T. Schweigler, R. Geiger, T. Langen,
J. Schmiedmayer
Phys. Rev. Lett. **116**, 030402 (2016) arXiv :1505.04747
190. Degenerate Bose gases with uniform loss
P. Grišins, B. Rauer, T. Langen, J. Schmiedmayer, I.E. Mazets
Phys. Rev. A **93**, 033634 (2016) arXiv:1411.4946
191. Macroscopic quantum resonators (MAQRO)
R. Kaltenbaek et al.
EPJ Quantum Technology **3**:5, (2016) arXiv:1503.02640
DOI 10.1140/epjqt/s40507-016-0043-7
192. Quantum technology: from research to application
Wolfgang P. Schleich et al.
Appl. Phys. B **122**, 130 (2016) DOI 10.1007/s00340-016-6353-8
193. Photonic Quantum Networks formed from NV- Centers
K. Nemoto, M. Trupke, S. J. Devitt, B. Scharfenberger, K. Buczak, J. Schmiedmayer, W. J. Munro
Scientific Reports **6**, 26284 (2016) DOI: 10.1038/srep26284 arXiv:1412.5950
194. Matter-wave recombiners for trapped Bose-Einstein condensates
T. Berrada, S. van Frank, R. Bücke, T. Schumm, J.-F. Schaff, and J. Schmiedmayer, B. Julia-Diaz, A. Polls
Phys. Rev. A **93**, 063620 (2016) arXiv:1512.08127
195. Prethermalization and universal dynamics in near-integrable quantum systems
T. Langen, T. Gasenzer, J. Schmiedmayer
J. Stat. Mech. 064009 (2016) doi:10.1088/1742-5468/2016/06/064009
arXiv:1603.09385

196. Optimal control of complex atomic quantum systems
S. van Frank, M. Bonneau, J. Schmiedmayer, S. Hild, C. Gross, M. Cheneau, I. Bloch, T. Pichler, A. Negretti, T. Calarco, S. Montangero
Scientific Reports **6**, 34178 (2016) doi:10.1038/srep34187 arXiv:1511.02247
197. Spectral Hole Burning, Long-Lived Collective Dark States and their applications in Microwave Photonics
S. Putz, A. Angerer, D.O. Krimer, R. Glattauer, W.J. Munro, S. Rotter, J. Schmiedmayer, J. Majer
Nature Photonics accepted (2016) arXiv:1512.00248
198. Does an isolated quantum System relax?
B. Rauer, T. Schweigler, T. Langen, J. Schmiedmayer
in Proceedings of the International School of Physics “Enrico Fermi”, Course 191 “Quantum Matter at Ultralow Temperatures”, edited by M. Inguscio, W. Ketterle, S. Stringari and G. Roati (IOS, Amsterdam; SIF, Bologna), pp.485-504, 2016
arXiv:1504.04288