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EDUCATION

Goethe Universität, Frankfurt	1972	Diplom in Theoretical Physics
Goethe Universität, Frankfurt	1973	Dr. phil. nat. in Theoretical Physics

PROFESSIONAL EXPERIENCE

1999 – 2004 Dean of the Natural Sciences, Duke University
1997 – 1999 Physics Department Chair, Duke University
1996 – J. B. Duke Professor of Physics, Duke University
1990 – 1996 Professor of Physics, Duke University
1976 – 1989 Associate Professor (C3), Goethe Universität, Frankfurt
1974 – 1975 Research Associate, University of Washington
1974 Postdoctoral Fellow, Yale University
1972 – 1974 Research Assistant, Goethe Universität, Frankfurt

AWARDS

1998 Senior U.S. Scientist Award, A. v. Humboldt Foundation
1994 Fellow, American Association for the Advancement of Science
1994 Fellow, American Physical Society
1975 Röntgen Prize, Universität Giessen, Germany

MEMBERSHIPS

American Physical Society
American Association for the Advancement of Science

VISITING APPOINTMENTS

2006 Yukawa Institute for Theoretical Physics, Kyoto
1987 University of Arizona
1985 Institute for Nuclear Study, University of Tokyo
1984 University of Cape Town
1980 California Institute of Technology
1980 Vanderbilt University

PROFESSIONAL ACTIVITIES

- 2007 Co-chair, DNP Town Meeting on Phases of QCD Matter
- 2006 External Review Committee, Stony Brook Univ. Physics Dept.
- 2005 NSAC Subcommittee on LRP Implementation
- 2004 MIT Lab. of Nuclear Science Program Review (DOE)
- 2004 DOE Low Energy Nuclear Reactions Review Panel
- 2004 – Scientific Council, GSI, Darmstadt, Germany
- 2004 Helmholtz Research Centers Review, Hadrons and Nuclei
- 2003 – Dean’s Advisory Committee, Laboratory for Nuclear Science, MIT
- 2003 NSAC Subcommittee on Nuclear Theory (Chair)
- 2002 APS Division of Nuclear Physics, Nominations Committee (Chair)
- 2002 AGS/RHIC Thesis Award ion Committee
- 2002 DOE LHC Heavy Ion Physics Review Panel
- 2002 External Review Committee, Univ. North Carolina Physics Dept.
- 2001 MIT Lab. of Nuclear Science Program Review (DOE)
- 2000 RHIC Facility Program Review (DOE)
- 2000 Yale Univ. Nuclear Theory Review (DOE)
- 2000 – 2004 Duke University – Oak Ridge National Laboratory Liaison
- 1998 – 2004 AGS/RHIC Program Advisory Committee, Brookhaven National Laboratory
- 1998 – 2003 Physics Division Review Committee, Los Alamos National Laboratory
- 1998 – 2001 Editorial Board, Physical Review C
- 1998 – 2000 Physics Division Review Committee, Oak Ridge National Laboratory
- 1998 External Review Committee, Indiana Univ. Physics Dept.
- 1997 – 2001 Editorial Board, Annual Reviews of Nuclear and Particle Science
- 1996 – 1998 APS Division of Nuclear Physics, Executive Committee
- 1995 – 1998 National Advisory Committee, Institute for Nuclear Theory, Seattle
(Chair 1997 – 98)
- 1995 Writing Group Chair, Long Range Plan for Nuclear Science
- 1992 – 1995 NSF/DOE Nuclear Science Advisory Committee (NSAC)
- 1992 – 1996 Physics Department Visiting Committee, Brookhaven National Laboratory
- 1992 – 1994 Divisional Associate Editor, Physical Review Letters
- 1993 Director, VIth Annual National Summer School in Nuclear Physics

UNIVERSITY SERVICE

- 2005 – Steering Committee, Center for Computational Science, Engineering and Medicine
- 2005 – 2007 Academic Council
- 2005 – 2006 Strategic Planning Committee on Research
- 2002 – 2003 Steering Committee, President’s Women’s Initiative
- 2001 – 2004 French Science Center Program Advisory Committee
- 2000 – 2003 Genomics Steering Committee
- 1999 – 2000 University Strategic Plan Steering Committee
- 1997 – 1999 Principal Investigator, Duke Medical Free Electron Laser Center
- 1997 – 1999 Arts & Sciences Dean’s Advisory Committee
- 1997 Review Committee for the Dean of Engineering
- 1995 – 1996 Executive Committee, Arts and Sciences Council

CONFERENCE ORGANIZATION (SINCE 2000)

- 2004 Eighth Workshop on Non-Perturbative Quantum Chromodynamics,
(with C. I. Tan), Paris (France), 7 – 11 June 2004
- 2003 Seventh Int. Conference on Strangeness in Quark Matter (SQM2003),
(with S. A. Bass, G. S. F. Stephans, and T. Ullrich),
Atlantic Beach, NC, 12 – 17 March 2003
- 2003 Seventh Workshop on Quantum Chromodynamics (with H. M. Fried and Y. Gabellini),
Villefranche (France), 6 – 10 January 2003
- 2001 Sixth Workshop on Non-Perturbative Quantum Chromodynamics,
(with H. M. Fried and Y. Gabellini), Paris (France), 5 – 9 June 2001
- 2000 Heräus Workshop on Hard Thermal Loops, Bonn (Germany), December 2000
- 2000 Fifth AUP Workshop on Quantum Chromodynamics, (with H. M. Fried
and Y. Gabellini), Villefranche (France), 3 – 7 January 2000

Ph.D. THESES SUPERVISED (SINCE 1990)

- 1998 Chaoran Hu
Classical Lattice Gauge Fields with Hard Thermal Loops
- 1996 Michael T. Strickland
Dynamical Mass Generation and Confinement at Finite Temperature
- 1994 Chengqian Gong
Hamiltonian Dynamics and Chaotic Behavior of Yang-Mills Fields on a Lattice
- 1993 Jochen Rau
*The Apparent Irreversibility of Particle Creation: A Study of Time Scales
and of the Mechanisms Responsible for Entropy Production in Quantum Field Theory*

POST-DOCTORAL COLLABORATORS (PAST 10 YEARS)

- 2005 – Dr. Abhijit Majumder
- 2004 – 2006 Dr. Jörg Ruppert (Lynen Fellow)
- 2004 – 2005 Dr. Thorsten Renk (Lynen Fellow)
- 2002 – 2005 Dr. Chiho Nonaka
- 2001 – 2003 Dr. Rainer Fries (Lynen Fellow)
- 1998 – 1999 Steffen A. Bass (Lynen Fellow)
- 1996 – 1997 Dirk H. Rischke

TOP 10 PUBLICATIONS OF BERNDT MUELLER

1. R. J. Fries, B. Müller, C. Nonaka and S. A. Bass, *Hadronization in heavy ion collisions: Recombination and fragmentation of partons*, Phys. Rev. Lett. **90**, 202303 (2003) [arXiv:nucl-th/0301087].
2. M. Asakawa, U. W. Heinz and B. Müller, *Fluctuation probes of quark deconfinement*, Phys. Rev. Lett. **85**, 2072 (2000) [arXiv:hep-ph/0003169].
3. G. D. Moore, C. Hu, C. and B. Müller, B., *Chern-Simons number diffusion with hard thermal loops*, Phys. Rev. D **58**, 045001 (1998) [arXiv:hep-ph/9710436].
4. S. Gavin and B. Müller, *Larger domains of disoriented chiral condensate through annealing*, Phys. Lett. B **329**, 486 (1994) [arXiv:hep-ph/9312349].
5. T. S. Biro, E. van Doorn, B. Müller, M. H. Thoma and X. N. Wang, *Parton equilibration in relativistic heavy ion collisions*, Phys. Rev. C **48**, 1275 (1993) [arXiv:nucl-th/9303004].
6. K. Geiger and B. Müller, *Dynamics of parton cascades in highly relativistic nuclear collisions*, Nucl. Phys. B **369**, 600 (1992).
7. B. Müller and A. Trajanov, *Deterministic chaos in nonabelian lattice gauge theory*, Phys. Rev. Lett. **68**, 3387 (1992).
8. J. Rafelski and B. Müller, *Strangeness production in the quark-gluon plasma*, Phys. Rev. Lett. **48**, 1066 (1982) [Erratum-ibid. **56**, 2334 (1986)].
9. B. Müller, J. Rafelski and W. Greiner, *Solution of the Dirac equation with two Coulomb centers*, Phys. Lett. **47B**, 5 (1973).
10. B. Müller, H. Peitz, J. Rafelski and W. Greiner, *Solution of the Dirac equation for strong external fields*, Phys. Rev. Lett. **28**, 1235 (1972).

REPORTS OF BERNDT MUELLER

J. Carlson, R. Casten, B. Holstein, X. D. Ji, G. McLaughlin, B. Müller, W. Nazarewicz, K. Rajagopal, W. Roberts, and X. N. Wang, *A Vision for Nuclear Theory: Report to NSAC*, arXiv:nucl-th/0311056.

PUBLICATION LIST OF BERNDT MUELLER

1. A. Majumder, B. Müller and S. A. Bass, *Longitudinal Broadening of Quenched Jets in Turbulent Color Fields*, arXiv:hep-ph/0611135.
2. M. Asakawa, S. A. Bass and B. Müller, *Anomalous transport processes in anisotropically expanding quark-gluon plasmas*, Prog. Theor. Phys. **116**, 725 (2006) [arXiv:hep-ph/0608270].
3. Y. Kanada-En'yo and B. Müller, *Suppression of p-wave baryons in quark recombination*, Phys. Rev. C (in print) [arXiv:nucl-th/0608015].
4. A. Majumder and B. Müller, *Baryonic strangeness and related susceptibilities in QCD*, Phys. Rev. C **74**, 054901 (2006) [arXiv:nucl-th/0605079].
5. M. Asakawa, S. A. Bass and B. Müller, *Anomalous viscosity of an expanding quark-gluon plasma*, Phys. Rev. Lett. **96**, 252301 (2006) [arXiv:hep-ph/0603092].
6. B. Müller and J. L. Nagle, *Results from the Relativistic Heavy Ion Collider*, Annu. Rev. Nucl. Part. Science **56**, 93 (2006) [arXiv:nucl-th/0602029].
7. S. G. Matinyan and B. Müller, *The Partition Function in the Wigner-Kirkwood expansion*, J. Phys. A **39**, L285 (2006) [arXiv:quant-ph/0602041].
8. B. Müller and A. Schäfer, *The decoherence time in high energy heavy ion collisions*, Phys. Rev. C **73**, 054905 (2006) [arXiv:hep-ph/0512100].
9. J. Ruppert, T. Renk and B. Müller, *Mass and width of the rho meson in a nuclear medium from Brown-Rho scaling and QCD sum rules*, Phys. Rev. C **73**, 034907 (2006) [arXiv:hep-ph/0509134].
10. S. G. Matinyan and B. Müller, *Adventures of the coupled Yang-Mills oscillators. II: YM-Higgs quantum mechanics*, J. Phys. A **39**, 61 (2006) [arXiv:quant-ph/0506239].
11. S. G. Matinyan and B. Müller, *Adventures of the coupled Yang-Mills oscillators. I: Semiclassical expansion*, J. Phys. A **39**, 45 (2006) [arXiv:quant-ph/0506214].
12. R. J. Fries, B. Müller and D. K. Srivastava, *Centrality dependence of direct photons in Au + Au collisions at $\sqrt{s_{NN}} = 200$ GeV*, Phys. Rev. C **72**, 041902 (2005) [arXiv:nucl-th/0507018].
13. J. Ruppert and B. Müller, *Waking the colored plasma*, Phys. Lett. B **618**, 123 (2005) [arXiv:hep-ph/0503158].
14. B. Müller, R. J. Fries and S. A. Bass, *Thermal recombination: Beyond the valence quark approximation*, Phys. Lett. B **618**, 77 (2005) [arXiv:nucl-th/0503003].
15. B. Müller and K. Rajagopal, *From entropy and jet quenching to deconfinement?*, Eur. Phys. J. C **43**, 15 (2005) [arXiv:hep-ph/0502174].
16. C. Nonaka, B. Müller, S. A. Bass and M. Asakawa, *Possible resolutions of the D-paradox*, Phys. Rev. C **71**, 051901 (2005) [arXiv:nucl-th/0501028].
17. R. J. Fries, S. A. Bass and B. Müller, *Correlated emission of hadrons from recombination of correlated partons*, Phys. Rev. Lett. **94**, 122301 (2005) [arXiv:nucl-th/0407102].

18. B. Müller, *Heavy ions: Prospects at the LHC*, Czech. J. Phys. **55**, B313 (2005) [arXiv:hep-ph/0410115].
19. B. Müller, *Hadronic signals of deconfinement at RHIC*, Nucl. Phys. A **750**, 84 (2005) [arXiv:nucl-th/0404015].
20. B. Müller and D. K. Srivastava, *How relativistic heavy ion collisions can help us understand the universe*, Physics News (India) **35**, 3 (2004) [arXiv:nucl-th/0407010].
21. S. A. Bass, B. Müller and D. K. Srivastava, *Intensity interferometry of direct photons emitted in Au + Au collisions*, Phys. Rev. Lett. **93**, 162301 (2004) [arXiv:nucl-th/0404050].
22. T. S. Biró, G. Purcsel and B. Müller, *What is the temperature in heavy ion collisions?*, Acta Phys. Hung. A **21**, 85 (2004) [arXiv:hep-ph/0404115].
23. R. J. Fries and B. Müller, *Heavy ions at LHC: Theoretical issues*, Eur. Phys. J. C **34**, S279 (2004) [arXiv:nucl-th/0307043].
24. C. Nonaka, B. Müller, M. Asakawa, S. A. Bass and R. J. Fries, *Elliptic flow of resonances at RHIC: Probing final state interactions and the structure of resonances*, Phys. Rev. C **69**, 031902 (2004) [arXiv:nucl-th/0312081].
25. T. S. Biró and B. Müller, *Almost exponential transverse spectra from power law spectra*, Phys. Lett. B **578**, 78 (2004) [arXiv:hep-ph/0309052].
26. B. Müller, *Parton cascades in high-energy nuclear collisions*, Int. J. Mod. Phys. E **12**, 165 (2003).
27. G. R. Shin and B. Müller, *Studies of parton thermalization at RHIC*, J. Phys. G **29**, 2485 (2003) [arXiv:nucl-th/0307084].
28. S. A. Bass, B. Müller and D. K. Srivastava, *Transverse momentum distribution of net baryon number at RHIC*, J. Phys. G **29**, L51 (2003) [arXiv:nucl-th/0307027].
29. B. Müller and A. Schäfer, *Entropy production in high energy processes*, arXiv:hep-ph/0306309 (unpublished).
30. R. J. Fries, B. Müller, C. Nonaka and S. A. Bass, *Hadron production in heavy ion collisions: Fragmentation and recombination from a dense parton phase*, Phys. Rev. C **68**, 044902 (2003) [arXiv:nucl-th/0306027].
31. R. J. Fries, B. Müller, C. Nonaka and S. A. Bass, *Hadronization in heavy ion collisions: Recombination and fragmentation of partons*, Phys. Rev. Lett. **90**, 202303 (2003) [arXiv:nucl-th/0301087].
32. T. S. Biró, B. Müller and S. G. Matinyan, *Chaotic quantization: Maybe the Lord plays dice, after all?*, Lect. Notes Phys. **633**, 164 (2003) [arXiv:hep-th/0301131].
33. S. A. Bass, B. Müller and D. K. Srivastava, *Net baryon density in Au + Au collisions at the Relativistic Heavy Ion Collider*, Phys. Rev. Lett. **91**, 052302 (2003) [arXiv:nucl-th/0212103].
34. S. A. Bass, B. Müller and D. K. Srivastava, *Semi-hard scattering of partons at SPS and RHIC: A study in contrast*, Phys. Rev. C **66**, 061902 (2002) [arXiv:nucl-th/0210042].

35. S. A. Bass, B. Müller and D. K. Srivastava, *Light from cascading partons in relativistic heavy-ion collisions*, Phys. Rev. Lett. **90**, 082301 (2003) [arXiv:nucl-th/0209030].
36. B. Müller, *Phenomenology of jet quenching in heavy ion collisions*, Phys. Rev. C **67**, 061901 (2003) [arXiv:nucl-th/0208038].
37. R. J. Fries, B. Müller and D. K. Srivastava, *High energy photons from passage of jets through quark gluon plasma*, Phys. Rev. Lett. **90**, 132301 (2003) [arXiv:nucl-th/0208001].
38. S. A. Bass, B. Müller and D. K. Srivastava, *Parton rescattering and screening in Au + Au collisions at RHIC*, Phys. Lett. B **551**, 277 (2003) [arXiv:nucl-th/0207042].
39. G. R. Shin and B. Müller, *A relativistic parton cascade with radiation*, J. Phys. G **28**, 2643 (2002) [arXiv:nucl-th/0207041].
40. B. Müller, *The anthropic principle revisited*, in: V. G. Gurzadyan, et al. (ed.): *From Integrable Models to Gauge Theories* (World Scientific, 2002) p. 251 [arXiv:astro-ph/0108259].
41. T. S. Biró, S. G. Matinyan and B. Müller, *Chaotic quantization of classical gauge fields*, Found. Phys. Lett. **14**, 471 (2001) [arXiv:hep-th/0105279].
42. M. Asakawa, H. Minakata and B. Müller, *Experimental signatures of anomaly induced DCC formation*, Phys. Rev. C **65**, 057901 (2002) [arXiv:nucl-th/0011031].
43. W. Pöschl and B. Müller, *Collision of SU(2) gauge fields in 3+1 dimensions*, Comput. Phys. Commun. **125**, 282 (2000).
44. M. Asakawa, U. W. Heinz and B. Müller, *Fluctuation probes of quark deconfinement*, Phys. Rev. Lett. **85**, 2072 (2000) [arXiv:hep-ph/0003169].
45. R. J. Fries, A. Schäfer, E. Stein and B. Müller, *Nuclear enhanced higher-twist effects in the Drell-Yan process*, Nucl. Phys. B **582**, 537 (2000) [arXiv:hep-ph/0002074].
46. J. Bolte, B. Müller and A. Schäfer, *Ergodic properties of classical SU(2) lattice gauge theory*, Phys. Rev. D **61**, 054506 (2000) [arXiv:hep-lat/9906037].
47. S. A. Bass, B. Müller, W. Pöschl, *Lattice gauge description of colliding nuclei*, J. Phys. G **25** (1999) L109-L115
48. W. Pöschl, B. Müller, *Real-time dynamics of colliding gauge fields and the “glue burst”*, Phys. Rev. D **60** (1999) 114505
49. S. A. Bass, B. Müller, *K-factors in parton cascades at RHIC and SPS*, Phys. Lett. B **471** (1999) 108-112
50. R. J. Fries, B. Müller, A. Schäfer, E. Stein, *Angular dependence of the nuclear enhancement of Drell-Yan pairs*, Phys. Rev. Lett. **83** (1999) 4261-4264
51. K. Geiger, B. Müller, *How dense does parton matter get in the Pb+Pb collisions at the CERN SPS?*, Heavy Ion Physics **7** (1998) 207-214

52. S. G. Matinyan, B. Müller, D. H. Rischke, *Classical gluon radiation in ultrarelativistic nuclear collisions: Space-time structure, instabilities, and thermalization*, Phys. Rev. C 57 (1998) 1927-1937
53. G. D. Moore, C. R. Hu, B. Müller, *Chern-Simons number diffusion with hard thermal loops*, Phys. Rev. D 58 (1998) 045001
54. M. Asakawa, H. Minakata, B. Müller, *Anomaly induced domain formation of disoriented chiral condensates*, Phys. Rev. D 58 (1998) 094011
55. S. G. Matinyan, B. Müller, *A model of charmonium absorption by light mesons*, Phys. Rev. C 58 (1998) 2994-2997
56. C. Greiner, B. Müller, *Classical fields near thermal equilibrium*, Phys. Rev. D 55 (1997) 1026-1046
57. D. K. Srivastava, M. G. Mustafa, B. Müller, *Chemical equilibration of an expanding quark-gluon plasma*, Phys. Lett. B 396 (1997) 45-49
58. U. Heinz, C.-R. Hu, S. Leupold, S. G. Matinyan, B. Müller, *Thermalization and Lyapunov exponents in the Yang-Mills-Higgs theory*, Phys. Rev. D 55 (1997) 2464-2476
59. S. G. Matinyan, B. Müller, *Quantum fluctuations and dynamical chaos*, Phys. Rev. Lett. 78 (1997) 2515-2518
60. C. R. Hu, B. Müller, *Classical lattice gauge fields with hard thermal loops* Phys. Lett. B 409 (1997) 377-381
61. S. G. Matinyan, D. H. Rischke, B. Müller, *Gluon radiation and coherent states in ultrarelativistic nuclear collisions*, Phys. Rev. C 56 (1997) 2191-2201
62. K. J. Eskola, B. Müller, X.-N. Wang, *Screening of initial parton production in ultrarelativistic heavy ion collisions*, Phys. Lett. B 374 (1996) 20-24
63. H. Minakata, B. Müller, *Disoriented chiral condensate and strong electromagnetic fields*, Phys. Lett. B 377 (1996) 135-139
64. C.-R. Hu, S. G. Matinyan, B. Müller, D. Sweet, *Wave packet collisions in Yang-Mills-Higgs theory*, Phys. Rev. D 53 (1996) 3823-3834
65. C.-R. Hu, S. G. Matinyan, B. Müller, *Symmetry restoration in gauge boson wave packet collisions in Yang-Mills-Higgs theory*, Phys. Rev. D 54 (1996) 2175-2181
66. T. S. Biró, C. Gong, B. Müller, *Lyapunov exponent and plasmon damping rate in nonabelian gauge theories*, Phys. Rev. D 52 (1995) 1260-1266
67. P. Lévai, B. Müller, X. N. Wang, *Open charm production in an equilibrating parton plasma*, Phys. Rev. C 51 (1995) 3326-3335
68. C.-R. Hu, S. G. Matinyan, B. Müller, A. Trayanov, T. M. Gould, S. D. Hsu, E. R. Poppitz, *Wave packet dynamics in SU(2) Yang-Mills theory*, Phys. Rev. D 52 (1995) 2402-2411
69. A. J. Schramm, B. Müller, *Pion fusion in peripheral pp collisions*, Phys. Rev. D (1995) 6616-6619

70. T. S. Biró, S. G. Matinyan, B. Müller, *Chaos driven by soft-hard mode coupling in thermal Yang-Mills theories*, Phys. Lett. B 362 (1995) 29-33
71. S. Mrówczyński, B. Müller, *Reheating after supercooling in the chiral phase transition*, Phys. Lett. B 363 (1995) 1-4
72. T. S. Biró, C. Gong, B. Müller, A. Trayanov, *Real-time dynamics of Yang-Mills theories on a lattice* Int. J. Mod. Phys. C 5 (1994) 113-149
73. C. Gong, B. Müller, T. S. Biró, *Variational approach to real-time evolution of Yang-Mills gauge fields on a lattice*, Nucl. Phys. A 568 (1994) 727-744
74. C. Gong, S. G. Matinyan, B. Müller, A. Trayanov, *Manifestation of infrared instabilities in high-energy processes in nonabelian gauge theories*, Phys. Rev. D 49 (1994) R607-R610
75. K. Geiger, B. Müller, *QCD evolution equations for high energy partons in nuclear matter*, Phys. Rev. D 50 (1994) 337-357
76. S. Gavin, B. Müller, *Larger domains of disoriented chiral condensate by annealing*, Phys. Lett. B 329 (1994) 486-492
77. S. Mrówczyński, B. Müller, *Wigner functional approach to quantum field dynamics*, Phys. Rev. D 50 (1994) 7542-7552
78. D. C. Ionescu, W. Greiner, B. Müller, G. Soff, *Collective excitations of the QED vacuum?*, Phys. Rev. A 47 (1993) 854-867
79. T. S. Biró, B. Müller, *Magnetic Screening in Thermal Yang-Mills Theories* Nucl. Phys. A 561 (1993) 477-500
80. T. S. Biró, E. van Doorn, B. Müller, M. H. Thoma, X. N. Wang, *Parton equilibration in relativistic heavy ion collisions*, Phys. Rev. C 48 (1993) 1275-1284
81. C. Greiner, C. Gong, B. Müller, *Pion condensation in relativistic heavy ion collisions*, Phys. Lett. B 316 (1993) 226-230
82. L. C. Biedenharn, B. Müller, M. Tarlini, *The Dirac-Coulomb problem for the κ -Poincaré quantum group*, Phys. Lett. B 318 (1993) 613-616
83. B. Müller, M. H. Thoma, *Vacuum polarization and electric charge of the positron*, Phys. Rev. Lett. 69 (1992) 3432-3434
84. N. Abou-El-Naga, K. Geiger, B. Müller, *QCD phenomenology of nucleon-nucleon cross sections*, J. Phys. G 18 (1992) 797-805
85. B. Müller, X. N. Wang, *Probing parton thermalization time with charm production*, Phys. Rev. Lett. 68 (1992) 2437-2439
86. T. Biro, B. Müller, X. N. Wang, *Color screening in relativistic heavy-ion collisions*, Phys. Lett. B 283 (1992) 171-173.
87. B. Müller, A. Trayanov, *Deterministic chaos in non-abelian lattice gauge theory*, Phys. Rev. Lett. 68 (1992) 3387-3390

88. D. J. Dean, M. Gyulassy, B. Müller, E. Remler, M. R. Strayer, A. S. Umar, J. S. Wu, *Modeling lepton-nucleus collisions with relativistic strings*, Phys. Rev. C 46 (1992) 2066-2076
89. S. Schramm, B. Müller, A. J. Schramm, *Exact Dirac propagator in a magnetic "sheet"*, Phys. Lett. A 164 (1992) 28-32
90. S. Schramm, B. Müller, A. J. Schramm, *W boson condensation in p-p collisions ?*, Phys. Lett. B 277 (1992) 512-514
91. S. Schramm, B. Müller, A. J. Schramm, *Quark-antiquark condensates in strong magnetic fields*, Mod. Phys. Lett. A 7 (1992) 973-981
92. G. Plunien, B. Müller, W. Greiner, G. Soff, *Nuclear polarization in heavy atoms and superheavy quasiatoms*, Phys. Rev. A 43 (1991) 5853-5866
93. B. Müller, S. Schramm, *Quark-gluon plasma signatures?* Phys. Rev. C 43 (1991) 2791-2797
94. P. Levai, B. Müller, *Transverse baryon flow as possible evidence for a quark-gluon plasma phase*, Phys. Rev. Lett. 67 (1991) 1519-1522
95. K. Geiger, B. Müller, *Parton cascades in highly relativistic nuclear collisions*, Nucl. Phys. B 369 (1991) 600-654
96. B. Müller, A. J. Schramm, *Higgs boson production in peripheral heavy ion collisions: Coherent double-pomeron exchange*, Nucl. Phys. A 523 (1991) 677-693
97. T. S. Biro, P. Levai, B. Müller, *Strangeness production with "massive" gluons*, Phys. Rev. D 42 (1990) 3078-3087
98. D. Harley, B. Müller, J. Rafelski, *Muon catalyzed fusion for nuclei with $Z > 1$* , J. Phys. G 16 (1990) 281-294
99. H. E. Rafelski, B. Müller, *PC Fortran programs for muon reactivation calculations in muon catalyzed fusion*, Comp. Phys. Commun. 59 (1990) 521-526
100. D. Harley, B. Müller, J. Rafelski, *Time independent description of the $t(d,n)\alpha$ fusion reaction in the presence of a muon*, Z. Phys. A 336 (1990) 303-312
101. D. C. Ionescu, J. Reinhardt, B. Müller, W. Greiner, G. Soff, *Localized bound states of fermions interacting via massive vector bosons*, J. Math. Phys. 31 (1990) 763-770
102. J. Rau, B. Müller, W. Greiner, G. Soff, *Production of supersymmetric particles in ultrarelativistic heavy ion collisions*, J. Phys. G 16 (1990) 211-220
103. J. Augustin, B. Müller, W. Greiner, *Magnetic neutrino scattering by crystals*, Phys. Rev. D 41 (1990) 1683-1686
104. B. Müller, A. J. Schramm, *Higgs boson production in peripheral heavy ion collisions: Electromagnetic production*, Phys. Rev. D 42 (1990) 3699-3704
105. J. Augustin, Stefan Graf, B. Müller, W. Greiner, *Production of hypothetical, light neutral particles in high-energy channeling*, Z. Phys. A 336 (1990) 353-356

106. K. Geiger, B. Müller, W. Greiner, $(\eta - \eta' - \iota)$ mixing, decay, and production mechanisms, Z. Phys. C 48 (1990) 257-271
107. T. Schönfeld, A. Schäfer, B. Müller, K. Sailer, J. Reinhardt, W. Greiner, Pair production in a flux tube, Phys. Lett. B 247 (1990) 5-12
108. Zs. Schram, K. Sailer, B. Müller, W. Greiner, Boson interferometry in string fragmentation, Z. Phys. C 47 (1990) 137-139
109. K. Sailer, T. Schönfeld, A. Schäfer, B. Müller, W. Greiner, Transverse size effects in string fragmentation, Phys. Lett. B 240 (1990) 381-388
110. G. Plunien, B. Müller, W. Greiner, G. Soff, Nuclear polarization contribution to the Lamb-shift in heavy atoms, Phys. Rev. A 39 (1989) 5428-5432
111. J. Augustin, B. Müller, W. Greiner, Spin exchange in low energy electron-ion collisions, Z. Phys. D 14 (1989) 317-326
112. A. Schäfer, G. Soff, P. Indelicato, B. Müller, W. Greiner, Atomic parity violation in U^{90+} , Phys. Rev. A 40 (1989) 7362-7365
113. C. Greiner, B. Müller, Pair correlations of neutral strange particles emitted in relativistic heavy ion collisions, Phys. Lett. B 219 (1989) 199-204
114. D. Neubauer, K. Sailer, B. Müller, H. Stöcker, W. Greiner, Short life-time of J/Ψ in hadronic matter at high energy density, Mod. Phys. Lett. 4 (1989) 1627-1634
115. B. Müller, H. E. Rafelski, J. Rafelski, Muon spectrum and convoy effects after muon catalyzed fusion, Phys. Rev. A 40 (1989) 2839-2842
116. K. Sailer, B. Müller, W. Greiner, Numerical simulation of the equation of state for hadronic matter within the string model, Int. J. Mod. Phys. A 4 (1989) 437-449
117. M. Grabiak, B. Müller, W. Greiner, G. Soff, P. Koch, Electroweak physics at ultrarelativistic heavy ion colliders, J. Phys. G 15 (1989) L25-L30
118. D. C. Ionescu, B. Müller, W. Greiner, Strongly bound bpositronium states in QED?, J. Phys. G 15 (1989) L103-L108
119. D. C. Ionescu, J. Reinhardt, B. Müller, W. Greiner, G. Soff, Reply to "Comment on Nonlinear interactions and poly-positronium bound states", J. Phys. G 15 (1989) 931-932
120. S. Graf, S. Schramm, J. Reinhardt, B. Müller, W. Greiner, Composite particle decay as a possible source of e^+e^- lines in heavy ion collisions, J. Phys. G 15 (1989) 1467-1494
121. T. deReus, U. Müller-Nehler, G. Soff, J. Reinhardt, B. Müller, W. Greiner, Coupled-channel results for atomic excitations in intermediate energy heavy ion collisions, Phys. Rev. C40 (1989) 752-761
122. M. Grabiak, B. Müller, W. Greiner, Exclusion of quasibound $e^+ - e^-$ states at MeV energies within the framework of QED, Ann. Phys. (NY) 185 (1988) 284-300
123. T. deReus, U. Müller-Nehler, G. Soff, O. Graf, B. Müller, W. Greiner, Can multiple structures in positron spectra be caused by atomic effects?, Z. Phys. D 8 (1988) 305-313

124. O. Graf, J. Reinhardt, B. Müller, W. Greiner, G. Soff, *Angular correlations of coincident electron-positron pairs produced in heavy ion collisions with nuclear time delay*, Phys. Rev. Lett. 61 (1988) 2831-2834
125. U. Müller, T. deReus, J. Reinhardt, B. Müller, W. Greiner, G. Soff, *Positron production in crossed beams of bare uranium nuclei*, Phys. Rev. A 37 (1988) 1149-1455
126. S. Graf, J. Reinhardt, U. Müller, B. Müller, W. Greiner, T. deReus, G. Soff, *Electronic excitations in heavy ion collisions with sequential fission*, Z. Phys. A 329 (1988) 365-369
127. A. F. M. Paulus, D. Vasak, B. Müller, W. Greiner, *Fission of heavy quarkonia in the deformed MIT-bag model*, J. Phys. G 14 (1988) 269-285
128. P. Koch, B. Müller, H. Stöcker, W. Greiner, *Antibaryon-baryon ratios as a signal for quark gluon plasma formation*, Mod. Phys. Lett. A 3 (1988) 737-742
129. R. Heuer, B. Müller, H. Stöcker, W. Greiner, *Coherent photon production in heavy ion collisions at intermediate energies*, Z. Phys. A 330 (1988) 315-318
130. K. Geiger, J. Reinhardt, B. Müller, W. Greiner, *Magnetic moment interactions in the e^-e^+ system*, Z. Phys. A 329 (1988) 77-88
131. S. Schramm, B. Müller, J. Reinhardt, W. Greiner, *Decay of a composite particle as a hypothetical explanation of e^+e^- coincidences observed at GSI*, Mod. Phys. Lett. A 3 (1988) 783-794
132. S. K. Kim, B. Müller, W. Greiner, *Bethe-Salpeter equation for a four fermion system I*, Mod. Phys. Lett. A 3 (1988) 953-963
133. D. C. Ionescu, J. Reinhardt, B. Müller, W. Greiner, G. Soff, *Nonlinear extensions of the Dirac equation and their implications in quantum electrodynamics*, Phys. Rev. A 38 (1988) 616-620
134. D. C. Ionescu, J. Reinhardt, B. Müller, W. Greiner, G. Soff, *Nonlinear interactions and poly-positronium bound states*, J. Phys. G 14 (1988) L143-L152
135. A. Schäfer, B. Müller, W. Greiner, *Local vacuum excitations in strong electromagnetic fields?*, Int. J. Mod. Phys. A 3 (1988) 1751-1757
136. T. deReus, J. Reinhardt, U. Müller, B. Müller, W. Greiner, G. Soff, *Positron and delta-electron emission in the systems $Ta+Th$ and $Au+U$* , Physica 144 C (1987) 237-246
137. G. Mehler, J. Reinhardt, B. Müller, W. Greiner, G. Soff, *Calculation of L_3 -subshell alignment within a coupled-state formalism*, Z. Phys. D 5 (1987) 143-145
138. G. Mehler, B. Müller, W. Greiner, G. Soff, *K-shell ionization by antiprotons*, Phys. Rev. A 36 (1987) 1454-1457
139. O. Graf, J. Reinhardt, T. deReus, B. Müller, W. Greiner, G. Soff, *Angular correlations of electron-positron pairs produced in heavy ion collisions*, Z. Phys. A 328 (1987) 81-84
140. T. Stahl, M. Uhlig, B. Müller, W. Greiner, D. Vasak, *Pion and photon bremsstrahlung in a heavy ion reaction model with friction*, Z. Phys. A 327 (1987) 311-322

141. B. Müller, N. Takigawa, *How adiabatic is quantum tunneling?*, Ann. Phys. (NY) 173 (1987) 163-184
142. M. Danos, B. Müller, J. Rafelski, *Comment on "Muon alpha-particle sticking probability in muon catalyzed fusion"*, Phys. Rev. A 35 (1987) 2741-2743
143. H. Heinz, B. Müller, W. Greiner, *The relativistic Fermi gas in a non-uniform velocity field*, Physica 140 A (1987) 567-584
144. G. Tupper, B. Müller, J. Rafelski, M. Danos, *On the detection of cosmic background neutrinos by acoustic phonon scattering*, Phys. Rev. D 35 (1987) 394-396
145. S. Schramm, B. Müller, W. Greiner, *Description of multi-particle cluster correlations in the groundstate of many-body systems*, J. Phys. G 13 (1987) L69-L73
146. M. Grabiak, G. Staadt, B. Müller, W. Greiner, A. Schäfer, *Spontaneously broken gauge theory in strong external fields*, Phys. Lett. 183 B (1987) 259-262
147. A. Schäfer, B. Müller, J. Reinhardt, *Consequences of a light vector boson in nuclear decays*, Mod. Phys. Lett. A 2 (1987) 159-162
148. J. Reinhardt, A. Scherdin, B. Müller, W. Greiner, *Resonant Bhabha scattering at MeV energies*, Z. Phys. A 327 (1987) 367-381
149. S. Schramm, J. Reinhardt, B. Müller, W. Greiner, *Electron-positron scattering matrix in supercritical heavy ion collisions*, Phys. Lett. 198 B (1987) 136-138
150. B. Müller, J. Reinhardt, *Comment on "Production mechanisms for a new neutral particle below 2 MeV"*, Phys. Rev. Lett. 56 (1986) 2108
151. B. Müller, J. Rafelski, *Production of light pseudoscalar particles in heavy ion collisions*, Phys. Rev. D 34 (1986) 2896-2899
152. W. E. Meyerhof, J. D. Molitoris, K. Danzmann, D. W. Spooner, F. S. Stephens, R. M. Diamond, E. M. Beck, A. Schäfer, B. Müller, *Search for correlated narrow-peak structure in the two-photon spectrum from 6-MeV/nucleon U + Th collisions*, Phys. Rev. Lett. 57 (1986) 2139-2142
153. J. Kirsch, B. Müller, W. Greiner, *MO-radiation interference phenomena as a "clock" for nuclear reactions*, Z. Phys. D 1 (1986) 47-50
154. T. deReus, J. Reinhardt, B. Müller, W. Greiner, G. Soff, *A new scaling law for electron emission in intermediate energy heavy-ion collisions*, Phys. Lett. 169 B (1986) 139-142; 173 B (1986) 491 (Erratum)
155. P. Koch, B. Müller, J. Rafelski, *Strangeness production and evolution in quark-gluon plasma*, Z. Phys. A 324 (1986) 453-463
156. M. Grabiak, B. Müller, W. Greiner, *Geometrical properties of gauge theories*, Ann. Phys. (NY) 172 (1986) 213-242
157. M. Danos, B. Müller, J. Rafelski, *Detuning reduction of muon sticking in resonant muon-catalyzed d-t fusion*, Phys. Rev. A 34 (1986) 3642-3645

158. B. Müller, A. Schäfer, *Improved bounds on the dimension of space-time*, Phys. Rev. Lett. 56 (1986) 1215-1218
159. A. Schäfer, B. Müller, *Bounds on the fractal dimension of space*, J. Phys. A19 (1986) 3891-3902
160. J. Reinhardt, A. Schäfer, B. Müller, W. Greiner, *Phenomenological consequences of a hypothetical light neutral particle in heavy ion collisions*, Phys. Rev. C 33 (1986) 194-207
161. S. Schramm, J. Reinhardt, U. Müller, B. Müller, W. Greiner, *Positron line structures in U-U collisions*, Z. Phys. A 323 (1986) 275-280
162. B. Müller, J. Reinhardt, W. Greiner, A. Schäfer, *Is there a tightly bound poly-positronium state?*, J. Phys. G 12 (1986) L109-L112 and 477 (Erratum)
163. U. Müller, T. deReus, J. Reinhardt, B. Müller, W. Greiner, *Systematics of spontaneous positron lines*, Z. Phys. A 323 (1986) 261-274
164. A. Schäfer, J. Reinhardt, W. Greiner, B. Müller, *Elementary light neutral bosons: New limits from precision experiments*, Mod. Phys. Lett. A 1 (1986) 1-7
165. A. Schäfer, J. Reinhardt, B. Müller, W. Greiner, *Models for new particle production in nuclear collisions*, Z. Phys. A 324 (1986) 243-259
166. J. Reinhardt, B. Müller, W. Greiner, *Comment on "New atomic mechanism for positron production in heavy-ion collisions"*, Phys. Rev. Lett. 55 (1985) 134
167. A. Schäfer, J. Reinhardt, B. Müller, W. Greiner, G. Soff, *Is there evidence for the production of a new particle in heavy-ion collisions?*, J. Phys. G 11 (1985) L69-L74
168. A. Schäfer, B. Müller, W. Greiner, *Dirac particles in the field of magnetic monopoles and of strong electric charges*, Nuovo Cim. 89 A (1985) 437-450
169. T. deReus, J. Reinhardt, B. Müller, U. Müller, G. Soff, W. Greiner, *Electromagnetic probes of nuclear collisions at intermediate energies*, Z. Phys. A 321 (1985) 589-592
170. G. Mehler, T. deReus, U. Müller, J. Reinhardt, B. Müller, W. Greiner, G. Soff, *Coupled state analysis of electron excitations in asymmetric collision systems*, Nucl. Instr. Meth. A 240 (1985) 559-566
171. A. Schäfer, B. Müller, W. Greiner, *Hartree-Fock calculation of parity violation in cesium*, Z. Phys. A 322 (1985) 539-545
172. B. Müller, J. M. Eisenberg, *Quark-gluon plasma cooling through pion emission in a chiral bag model*, Nucl. Phys. A 435 (1985) 791-809
173. D. Vasak, B. Müller, W. Greiner, *Pion and γ -ray bremsstrahlung in nuclear collisions at intermediate energies*, J. Phys. G 11 (1985) 1309-1322
174. J. Rafelski, B. Müller, *Muon sticking in muon catalyzed doorway d-t fusion*, Phys. Lett. 164 B (1985) 223-227
175. A. Schäfer, B. Müller, W. Greiner, *Spontaneous symmetry breaking in the presence of strong fields*, Phys. Lett. 149 B (1984) 455-458

176. T. H. J. deReus, J. Reinhardt, B. Müller, W. Greiner, G. Soff, U. Müller, *The influence of electron-electron interactions on inner-shell processes in heavy ion collisions*, J. Phys. B 17 (1984) 615-640
177. U. Heinz, J. Reinhardt, B. Müller, W. Greiner, W. T. Pinkston, *Nuclear time delay in resonant heavy-ion collisions*, Z. Phys. A 316 (1984) 341-344
178. U. Heinz, U. Müller, J. Reinhardt, B. Müller, W. Greiner, *Time structure and atomic excitation spectra in heavy-ion collisions with nuclear contact*, Ann. Phys. (NY) 158 (1984) 476-512
179. U. Müller, G. Soff, J. Reinhardt, T. deReus, B. Müller, W. Greiner, *Electron emission and positron production in deep-inelastic nuclear collisions*, Phys. Rev. C 30 (1984) 1199-1207
180. A. Schäfer, B. Müller, W. Greiner, *Electric and magnetic polarizability of the nucleon in the MIT-bag model*, Phys. Lett. 143 B (1984) 323-325
181. S. P. Klevansky, B. Müller, W. Greiner, *On the fission mechanism of an ellipsoidal MIT-bag*, J. Phys. G 10 (1984) 1487-1505
182. D. Vasak, W. Greiner, B. Müller, Th. Stahl, M. Uhlig, *Pionic bremsstrahlung in heavy-ion collisions*, Nucl. Phys. A 428 (1984) 291c-304c
183. U. Müller, G. Soff, T. deReus, J. Reinhardt, B. Müller, W. Greiner, *Positrons from supercritical fields of giant nuclear systems*, Z. Phys. A 313 (1983) 263-279
184. U. Heinz, J. Reinhardt, B. Müller, W. Greiner, U. Müller, *Beam energy dependence of spontaneous positron creation in delayed nuclear collisions*, Z. Phys. A 314 (1983) 125-126
185. P. Schlüter, T. deReus, J. Reinhardt, B. Müller, G. Soff, *Can the observed structures in positron spectra be caused by internal conversion?*, Z. Phys. A 314 (1983) 297-302
186. J. Kirsch, B. Müller, W. Greiner, *Interference effects in MO X-ray spectra caused by nuclear sticking in superheavy quasimolecules*, Phys. Lett. 94B (1983) 151-155
187. B. Müller, J. Reinhardt, W. Greiner, G. Soff, *Critical remarks on a scaling law for inner-shell ionization*, Z. Phys. A 311 (1983) 151-155
188. U. Heinz, B. Müller, W. Greiner, *Quantum mechanical treatment of electron-positron excitations in heavy ion collisions with nuclear contact*, Ann. Phys. (NY) 151 (1983) 227-261
189. J. Reinhardt, B. Müller, W. Greiner, U. Müller, *Description of atomic excitations in heavy ion reactions*, Phys. Rev. A 28 (1983) 2558-2561
190. D. Vasak, R. Shanker, B. Müller, W. Greiner, *Deformed solutions of the MIT quark bag model*, J. Phys. G 9 (1983) 511-520
191. R. Shanker, D. Vasak, C. S. Warke, B. Müller, W. Greiner, *String-like solutions and Regge trajectories in a cylindrically deformed quark bag model*, Z. Phys. C 18 (1983) 327-340
192. A. Schäfer, B. Müller, W. Greiner, *A new scheme for spontaneous symmetry breaking of color $SU(3)$* , Phys. Rev. Lett. 50 (1983) 2047-2050

193. D. Vasak, K. H. Wietschorke, B. Müller, W. Greiner, *Fission of bags by spontaneous quark-antiquark pair production in supercritical colour fields*, Z. Phys. C 21 (1983) 119-125
194. G. Soff, Paul Schlüter, B. Müller, W. Greiner, *The self-energy of electrons in critical fields*, Phys. Rev. Lett. 48 (1982) 1465-1468
195. G. Soff, T. deReus, B. Müller, W. Greiner, *Delta-electron production rates in the superheavy system Br+Pb*, Phys. Lett. 88A (1982) 398-399
196. B. Müller, J. Rafelski, *Self-consistent gluon screening of a strong SU(2) source*, Phys. Rev. D 25 (1982) 566-572
197. R. Shanker, C. S. Warke, W. Greiner, B. Müller, *Cylindrically deformed quark bags*, J. Phys. G 8 (1982) L33-L38
198. J. Rafelski, B. Müller, *Strangeness production in the quark-gluon plasma*, Phys. Rev. Lett. 48 (1982) 1066-1069; 56 (1986) 2334 (Erratum)
199. B. Müller, J. Rafelski, *Role of internal symmetry in $p\bar{p}$ -annihilation*, Phys. Lett. 116B (1982) 274-278
200. J. Reinhardt, B. Müller, W. Greiner, *Theory of positron production in heavy ion collisions*, Phys. Rev. A 24 (1981) 103-128
201. P. Gärtner, U. Heinz, B. Müller, W. Greiner, *Limiting charge for electrostatic point sources*, Z. Phys. A 300 (1981) 143-155
202. J. Reinhardt, U. Müller, B. Müller, W. Greiner, *The decay of the vacuum in the field of superheavy nuclear systems*, Z. Phys. A 303 (1981) 173-188
203. U. Heinz, W. Greiner, B. Müller, *Electron-translation effects in heavy ion scattering*, Phys. Rev. A 23 (1981) 562-596
204. G. Soff, B. Müller, W. Greiner, *Systematics of inner-shell ionization in superheavy quasimolecules*, Z. Phys. A 299 (1981) 189-194
205. B. Müller, J. Rafelski, *Temperature dependence of the bag constant and the effective Lagrangian for gauge fields at finite temperatures*, Phys. Lett. 101B (1981) 111-118
206. G. Schmidt, W. Greiner, U. Heinz, B. Müller, *Stability of massive objects in a new scalar-tensor theory*, Phys. Rev. D 24 (1981) 1484-1490
207. Y. Alhassid, B. Müller, S. E. Koonin, *Mean-field approximation for inclusive observables*, Phys. Rev. C 23 (1981) 487-491
208. J. Theis, B. Müller, *Variational principle for an improved basis set for the description of scattering processes*, Phys. Rev. A 24 (1981) 89-96
209. P. Gärtner, B. Müller, J. Reinhardt, W. Greiner, *Limiting charge for point nuclei*, Phys. Lett. 95 B (1980) 181-184
210. J. Kirsch, B. Müller, W. Greiner, *Unified theory of electrons and photons in heavy ion collisions*, Z. Naturforsch. 35a (1980) 579-589

211. G. Soff, J. Reinhardt, B. Müller, W. Greiner, *Coupled channel analysis of inner-shell vacancy formation in superheavy quasimolecules*, Z. Phys. A 294 (1980) 137-147
212. B. Müller, V. Oberacker, *Influence of nuclear trajectory variations on atomic excitation probabilities*, Phys. Rev. C 22 (1980) 1909-1913
213. U. Müller, J. Reinhardt, G. Soff, B. Müller, W. Greiner, *K-vacancy formation in deep-inelastic nuclear reactions*, Z. Phys. A 297 (1980) 357-358
214. M. Soffel, B. Müller, W. Greiner, *Radiation and the structure of space-time*, Gen. Rel. Grav. 12 (1980) 287-303
215. M. Soffel, B. Müller, W. Greiner, *Dirac particles in Rindler space*, Phys. Rev. D 22 (1980) 1935-1937
216. J. Hofmann, B. Müller, W. Greiner, *Phase transitions in nuclear matter*, Phys. Rev. C 22 (1980) 221-228
217. D. Vasak, B. Müller, W. Greiner, *Pion radiation from fast heavy ions*, Phys. Scripta 22 (1980) 25-35
218. D. Vasak, H. Stöcker, B. Müller, W. Greiner, *Pion bremsstrahlung and critical phenomena in relativistic nuclear collisions*, Phys. Lett. 93B (1980) 243-246
219. W. Schäfer, H. Stöcker, B. Müller, W. Greiner, *Mach-shock electron distributions from solids*, Z. Phys. B 36 (1980) 319-322
220. B. Müller, *Some comments on the relativistic Thomas-Fermi model*, Phys. Lett. 94 B (1980) 275-276
221. K. H. Wietschorke, B. Müller, W. Greiner, G. Soff, *Self-consistent determination of critical two-centre distances*, J. Phys. B 12 (1979) L31-33
222. T. H. Rihan, B. Müller, W. Greiner, *On the adequacy of first-order perturbation theory for calculations of inner-shell ionization*, J. Phys. B 12 (1979) 761-774
223. G. Soff, W. Greiner, W. Betz, B. Müller, *Electrons in superheavy quasimolecules*, Phys. Rev. A 20 (1979) 169-193
224. J. Theis, J. Reinhardt, B. Müller, *How good is the adiabatic basis in heavy ion collisions?*, J. Phys. B 12 (1979) L479-L483
225. J. Reinhardt, B. Müller, W. Greiner, G. Soff, *Delta-electrons: an atomic clock for deep inelastic collisions*, Z. Phys. A 292 (1979) 211-212
226. J. Kirsch, W. Betz, J. Reinhardt, B. Müller, W. Greiner, G. Soff, *The impact parameter dependence of the Pb+Pb K-MO spectrum*, Z. Phys. A 292 (1979) 227-234
227. J. Reinhardt, B. Müller, W. Greiner, G. Soff, *Role of multi-step processes in heavy ion inner-shell excitations*, Phys. Rev. Lett. 43 (1979) 1307-1310
228. G. Soff, J. Reinhardt, B. Müller, W. Greiner, *Delta-electron emission in deep-inelastic heavy ion collisions*, Phys. Rev. Lett. 43 (1979) 1981-1984

229. M. Soffel, B. Müller, W. Greiner, *Vacuum with spin in the ECSK-theory of gravitation*, Phys. Lett. 70A (1979) 167-170
230. A. Müller, B. Müller, W. Greiner, *Cosmological particle production*, Phys. Lett. 74A (1979) 281-284
231. B. Müller, W. Greiner, *Phase transitions and shock waves in nuclei*, Phys. Lett. 82B (1979) 195-198
232. W. Greiner, B. Müller, G. Soff, *Delta electrons as a probe of strong magnetic fields in heavy ion collisions*, Phys. Lett. 69 A (1978) 27-30
233. B. Müller, G. Soff, W. Greiner, V. Ceausescu, *Scaling behaviour of inner-shell ionization in superheavy quasimolecules*, Z. Phys. A 285 (1978) 27-30
234. G. Heiligenthal, W. Betz, G. Soff, B. Müller, W. Greiner, *The influence of rotational coupling on K-vacancy formation in U-Pb collisions*, Z. Phys. A 285 (1978) 105-106
235. G. Soff, W. Betz, B. Müller, W. Greiner, E. Merzbacher, *Inner shell ionization in the Pb-Pb quasimolecule*, Phys. Lett. 65A (1978) 19-22
236. J. Kirsch, W. Betz, J. Reinhardt, G. Soff, B. Müller, W. Greiner, *K-X-ray spectrum of the Pb+Pb quasimolecules*, Phys. Lett. 72B (1978) 298-302
237. T. H. Rihan, N. S. Aly, E. Merzbacher, B. Müller, W. Greiner, *Relaxation times in intermediate quasimolecules*, Z. Phys. A 285 (1978) 397-403
238. G. Soff, B. Müller, W. Greiner, *Spectroscopy of electronic states in superheavy quasimolecules*, Phys. Rev. Lett. 40 (1978) 540-544
239. A. Müller, U. Heinz, B. Müller, W. Greiner, *On gravitation theories with limiting curvature*, J. Phys. A 11 (1978) 1781-1798
240. M. Soffel, U. Heinz, B. Müller, W. Greiner, *A self-consistent solution of the coupled Dirac-Einstein equations in the mean-field Hartree approximation*, Lett. Nuovo Cim. 22 (1978) 391-396
241. W. Schäfer, H. Stöcker, B. Müller, W. Greiner, *Mach cones induced by fast heavy ions in electron plasma*, Z. Phys. A 288 (1978) 349-352
242. J. Rafelski, B. Müller, W. Greiner, *Spontaneous decay of supercritical nuclear composites*, Z. Phys. A 285 (1978) 49-52
243. J. Reinhardt, V. Oberacker, B. Müller, W. Greiner, G. Soff, *Positron emission in Pb-Pb and Pb-U collisions*, Phys. Lett. 78 B (1978) 183-188
244. G. Soff, J. Reinhardt, B. Müller, W. Greiner, *Shake-off of the vacuum polarization in quasimolecular collisions of very heavy ions*, Phys. Rev. Lett. 38 (1977) 592-595
245. G. Soff, H. J. Lustig, B. Müller, *On the identification of superheavy elements from L and M spectra*, J. Phys. G 3 (1977) 583-590
246. G. Soff, B. Müller, *Transition rates of electrons in superheavy elements*, Z. Phys. A 280 (1977) 243-247

247. M. Soffel, B. Müller, W. Greiner, *Particles in a stationary spherically symmetric gravitational field*, J. Phys. A 10 (1977) 551-560
248. M. Soffel, B. Müller, W. Greiner, *The electrostatic and gravitational field of spherically symmetric objects*, Phys. Lett. 62A (1977) 67-69
249. H. J. Fink, B. Müller, W. Greiner, *Parastatistics as an effective description of complex particles*, J. Phys. G 3 (1977) 1119-1131
250. B. Müller, W. Greiner, J. Rafelski, *Interpretation of external fields as temperature*, Phys. Lett. 63A (1977) 181-183
251. J. Rafelski, B. Müller, *Magnetic splitting of quasimolecular electronic states in strong fields*, Phys. Rev. Lett. 36 (1976) 517-520
252. J. Rafelski, B. Müller, *The critical distance in collisions of heavy ions*, Phys. Lett. 65B (1976) 205-208
253. J. Rafelski, B. Müller, *Vector coupling and bound states of fermions in three space dimensions*, Phys. Rev. D 14 (1976) 3532-3535
254. B. Müller, W. Greiner, *The two center Dirac equation*, Z. Naturforsch. 31a (1976) 1-30
255. M. Gros, B. Müller, W. Greiner, *Radiative transitions induced in heavy ion collisions*, J. Phys. B 9 (1976) 1849-1856
256. W. Betz, G. Soff, B. Müller, W. Greiner, *Direct formation of quasimolecular $1s\sigma$ vacancies in uranium-uranium collisions*, Phys. Rev. Lett. 37 (1976) 1046-1049
257. B. Müller, J. Rafelski, *Stabilization of the charged vacuum created by very strong electrical fields in nuclear matter*, Phys. Rev. Lett. 34 (1975) 349-352
258. B. Müller, R. K. Smith, W. Greiner, *Spectroscopy of superheavy two-centre orbitals*, Phys. Lett. 53B (1975) 401-404
259. R. K. Smith, B. Müller, W. Greiner, *Dynamical theory of intermediate molecular phenomena in heavy ion scattering*, J. Phys. B 8 (1975) 75-101
260. R. K. Smith, B. Müller, W. Greiner, J. S. Greenberg, C. K. Davis, *Sudden rearrangements in intermediate molecular systems*, Phys. Rev. Lett. 34 (1975) 117-120
261. J. Rafelski, B. Müller, W. Greiner, *The charged vacuum in overcritical fields*, Nucl. Phys. B 68 (1974) 585-604
262. R. K. Smith, H. Peitz, B. Müller, W. Greiner, *Induced decay of the neutral vacuum in overcritical fields occurring in heavy ion collisions*, Phys. Rev. Lett. 32 (1974) 554-556
263. G. Soff, B. Müller, J. Rafelski, *Precise values for critical fields in quantum electrodynamics*, Z. Naturforsch. 29a (1974) 1267-1275
264. J. Rafelski, B. Müller, G. Soff, W. Greiner, *Critical discussion of the vacuum polarization measurements in muonic atoms*, Ann. Phys. (NY) 88 (1974) 419-453

265. B. Müller, W. Greiner, *The change of the vacuum in superheavy quasimolecules*, Phys. Scripta 10 A (1974) 170-174
266. B. Müller, R. K. Smith, W. Greiner, *Induced radiative transitions of intermediate molecules in heavy ion collisions*, Phys. Lett. 49B (1974) 219-223
267. G. Soff, B. Müller, *Transition energies in the ionized Br+Br quasimolecule*, Lett. Nuovo Cim. 9 (1974) 557-560
268. B. Müller, W. Greiner, *Theory of induced molecular-orbital K X-rays in heavy ion collisions*, Phys. Rev. Lett. 33 (1974) 469-473
269. H. Peitz, B. Müller, J. Rafelski, W. Greiner, *Autoionization spectra of positrons in heavy ion collisions*, Lett. Nuovo Cim. 8 (1973) 37-42
270. G. Soff, B. Müller, J. Rafelski, W. Greiner, *Solution of the Dirac equation for scalar potentials and its implications in atomic physics*, Z. Naturforsch. 28a (1973) 1389-1396
271. B. Müller, J. Rafelski, W. Greiner, *Electron wave functions in overcritical electrostatic potentials*, Il Nuovo Cim. 18A (1973) 551-573
272. B. Müller, J. Rafelski, W. Greiner, *Solution of the Dirac equation with two Coulomb centres*, Phys. Lett. 47B (1973) 5-7
273. B. Müller, J. Rafelski, W. Greiner, *Autoionization of positrons in heavy ion collisions*, Z. Phys. 257 (1972) 183-211
274. B. Müller, J. Rafelski, W. Greiner, *Electron shells in overcritical external fields*, Z. Phys. 257 (1972) 62-77
275. J. Rafelski, B. Müller, W. Greiner, *Superheavy electronic molecules*, Lett. Nuovo Cim. 4 (1972) 469-474
276. B. Müller, H. Peitz, J. Rafelski, W. Greiner, *Solution of the Dirac equation for strong external fields*, Phys. Rev. Lett. 28 (1972) 1235-1238

BOOKS AND EDITED VOLUMES OF BERNDT MUELLER

1. *Quark-Gluon Plasma: Theoretical Foundations (An Annotated Reprint Volume)*, Cambridge University Press (Cambridge, 2003), ca. 650 pp. (with J. I. Kapusta and J. Rafelski).
2. *Non-Perturbative QCD*, World Scientific (Singapore, 2002), 408 pp. (edited, with H. M. Fried).
3. *Quantum Chromodynamics*, World Scientific (Singapore, 2000), 385 pp. (edited, with H. M. Fried).
4. *Gauge Theory of Weak Interactions*, 3rd edition, Springer-Verlag (Berlin-Heidelberg-New York, 2000), 402 pp. (with W. Greiner).
5. *RHIC Physics and Beyond – Kay Kay Gee Day*, AIP Conference Proceedings 482 (Woodbury, 1999), 167 pp. (with R. D. Pisarski).
6. *Quantum Chromodynamics*, World Scientific (Singapore, 1999), 473 pp. (edited, with H. M. Fried).
7. *Quantum Chromodynamics: Collisions, Confinement, and Chaos*, World Scientific (Singapore, 1997), 414 pp. (edited, with H. M. Fried).
8. *Chaos and Gauge Field Theory*, World Scientific (Singapore, 1995), 288 pp. (with T. S. Biró and S. G. Matinyan).
9. *Quantum Infrared Physics*, World Scientific (Singapore, 1995), 537 pp. (edited, with H. M. Fried).
10. *Quantum mechanics II: Symmetries*, Springer-Verlag (Berlin-Heidelberg-New York, 1994), 496 pp. (with W. Greiner).
11. *QCD Vacuum Structure*, World Scientific (Singapore, 1993), 368 pp. (edited, with H. M. Fried).
12. *Vacuum structure in intense fields*, NATO- ASI Series B: Physics Vol. 255, Plenum Press (New York, 1991), 443 pp. (edited, with H. M. Fried).
13. *Neural networks: An Introduction*, Second edition, Springer-Verlag (Berlin-Heidelberg-New York, 1990, 1995), 329 pp. (with J. Reinhardt and M. T. Strickland).
14. *Quantum electrodynamics of strong fields*, Springer-Verlag (Berlin-Heidelberg, 1985), 594 pp. (with W. Greiner and J. Rafelski).
15. *The Structured Vacuum - Thinking about Nothing*, Verlag Harri Deutsch (Frankfurt am Main, 1985), 198 pp. (with J. Rafelski).
16. *The physics of the quark-gluon plasma*, Lecture Notes in Physics (Springer-Verlag) 225 (1985) 142 pp.

INVITED PRESENTATIONS OF BERNDT MUELLER (SINCE 2000)

1. *Hard Probes at the LHC: A theoretical perspective*, Hard Probes 2006, Asilomar, June 15, 2006
2. *The flavors of the quark-gluon plasma*, Int. Conf. on Strangeness in Quark Matter (SQM2006), UCLA, March 31, 2006
3. *Using lattice QCD to understand the data from RHIC*, Modeling the QCD Equation of State at RHIC, LLNL, February 09, 2006
4. *Going with the flow: What RHIC has taught us so far*, Seminar, Tokyo Metropolitan University, Japan, October 27, 2005
5. *Going with the flow: What RHIC has taught us so far*, Physics Colloquium, Osaka University (Japan), October 17, 2005
6. *Going with the flow: What the data from RHIC have taught us so far*, Physics Colloquium, Yale University, October 14, 2005
7. *A nearly perfect ink: The strongly coupled quark-gluon plasma at RHIC*, DNP Fall Meeting, Maui, September 18, 2005
8. *Summary Lecture*, Workshop on quark-gluon plasma thermalization, Vienna (Austria), August 12, 2005
9. *Theoretical Summary*, Quark Matter 2005, Budapest (Hungary), August 9, 2005
10. *A nearly perfect ink: Theoretical challenges from RHIC*, Lattice 2005, Dublin (Ireland), July 29, 2005
11. *A nearly perfect ink*, Physics Division Colloquium, Los Alamos National Laboratory, June 02, 2005
12. *The re-combinatorics of thermal quarks*, The Berkeley School, Lawrence Berkeley National Laboratory, May 20, 2005
13. *A colorful wake for Gerhard Soff*, Memorial Symposium, Institut für Theoretische Physik, Universität Frankfurt, Germany, April 25, 2005
14. *What have we learned from RHIC so far?* Korean Physical Society Meeting, Seoul, Korea, April 22, 2005
15. *Quark-gluon plasma: An overview*, Heavy Ion Meeting, Ewha Women's University, Seoul, Korea, April 21, 2005
16. *Who is afraid of a quark-gluon plasma?* Physics Colloquium, Andong National University, Korea, April 19, 2005
17. *Theoretical challenges from RHIC*, Modern Challenges for Lattice Field Theory, KITP, Santa Barbara, March 30, 2005
18. *Hadronization in Au+Au at RHIC*, Nuclear Physics Winter School, Schleching, Germany, February 19, 2005

19. *Probing color deconfinement at RHIC*, LNS Colloquium, MIT, February 14, 2005
20. *Who is afraid of a quark-gluon plasma?* Physics Colloquium, UNC Wilmington, January 28, 2005
21. *Hard probes of hot and dense matter*, Hard Probes 2004, Ericeira, Portugal, November 4, 2004
22. *The road to the quark-gluon plasma is circular and 2.4 miles long*, Fall Meeting of the Japanese Physical Society, Kochi (Japan), September 29, 2004
23. *Heavy ions at the SPS - What is there left to do?* CERN-SPSC Symposium, Villars, Switzerland, September 25, 2004
24. *From partons to hadrons at RHIC*, CERN - Heavy Ion Forum, Geneva, Switzerland, September 21, 2004
25. *Heavy ions - Prospects at LHC*, Physics at the LHC, Vienna, Austria, June 15, 2004
26. *Evolution of physics goals and resource needs*, NSAC Workshop on Heavy Ion Physics, Brookhaven National Laboratory, June 03, 2004
27. *Hadronic signals of deconfinement at RHIC*, Workshop on New Discoveries at RHIC, Brookhaven National Laboratory, May 15, 2004
28. *Experiencing life near the Big Bang: How hadrons are signaling the formation of deconfined quark-gluon matter at RHIC*, Physics Colloquium, UCLA, April 07, 2004
29. *Messages from a different world: Probing quark deconfinement with RHIC*, Physics Colloquium, Texas A&M University, March 24, 2004
30. *From partons to hadrons at RHIC*, DNP Fall Meeting, Tucson, AZ, 29 October 2003
31. *Three lecture course on Heavy Ion Physics at the LHC*, 57th Scottish Universities Summer School in Physics (SUSSP57), St. Andrews, Scotland, 18 August 2003
32. *Hadron production at intermediate and high transverse momenta at RHIC*, Conference on Intersections between Particle and Nuclear Physics (CIPANP), New York City, 20 May 2003
33. *Heavy ions at the LHC: Theoretical issues*, LHC2003 Workshop, Fermilab, May 2, 2003
34. *Understanding the Universe: How RHIC is helping us*, Physics Colloquium, George Washington University, 24 April 2003
35. *How relativistic heavy ions help us understand the Universe*, Howel Pugh Lecture, LBNL, 16 April 2003
36. *Understanding the world we live in: How relativistic heavy ions can help*, Physics Colloquium, McGill University, 08 November 2002
37. *Chaotic Quantization: Maybe the Lord plays dice, after all?* First Int. Workshop on Decoherence, Information, Complexity and Entropy (DICE2002), Piombino, Italy, 03 September 2002

38. *Where do we go from here? The RHIC program after its discovery phase*, STAR Workshop on Future Physics and Detectors, Bar Harbor, Maine, 17-20 June 2002
39. *Thus spoke the o-RHIC-le: What the first results from Brookhaven are telling us*, Physics Colloquium, UC Riverside, 16 May 2002
40. *Four lectures on quark-gluon plasma: Properties, creation, signatures*, PASI New States of Matter in Hadronic Interactions, Campos do Jordao, Brazil, 7-18 January 2002
41. *The o-RHIC-le has begun to speak: What are the first results telling us?* DNP Fall Meeting, Maui (Hawaii), 19 October 2001
42. *Statistical fluctuations as probes of quark deconfinement*, Symposium on Statistical QCD, Bielefeld (Germany), 26 August 2001
43. *Heavy ion physics at RHIC: First results and their interpretation*, University of Durham (England), 21 August 2001
44. *Some thoughts about equilibration*, Workshop on Thermalization and Chemical Equilibration in Heavy Ion Collisions at RHIC, Brookhaven National Laboratory, 20 July 2001
45. *RHIC Physics Program – Theoretical Survey*, CERN-LHCC Meeting, Geneva (Switzerland), 16 May 2001
46. *Four Lectures on Quark-Gluon Plasma Physics*, 15th Taiwan Spring School on Particles and Fields, Chiai (Taiwan), March 2001
47. *Fluctuation Probes of Deconfinement*, National Taiwan University, Taipei (Taiwan), March 2001
48. *Relativistic Heavy Ion Physics – Theoretical Overview*, Frontiers in Contemporary Physics, Nashville, TN, March 2001
49. *Physics Opportunities with ALICE*, ALICE Workshop, GSI Darmstadt (Germany), August 2000
50. *Fluctuation Probes of QCD Dynamics*, Workshop on QCD in a Nuclear Environment, Regensburg (Germany), August 2000
51. *Quantum Field Dynamics from Classical Field Theory*, Workshop on Non-Equilibrium Quantum Field Theory, Brookhaven National Laboratory, July 2000
52. *Who is Afraid of Quark-Gluon Plasma*, Physics Colloquium, University of Texas, Austin, TX, April 2000
53. *After the Morning Show: Preparing for Prime Time in Relativistic Heavy Ion Physics*, Workshop on the Future of Heavy Ion Physics, IST, Lisbon (Portugal), April 2000
54. *Colored Chaos*, CNLS Colloquium, Los Alamos National Laboratory, January 2000