

# Publication list of Prof. Luis Santos

## Preprints

1. *Excitation spectrum of a double supersolid in a trapped dipolar Bose mixture*, D. Scheiermann, A. Gallemí, and L. Santos, arXiv:2412.05215.
2. *Polarons and bipolarons in Rydberg-dressed extended Bose-Hubbard model*, G. A. Domnguez-Castro, L. Santos, L. A. Peña Ardila, arXiv:2411.06275.
3. *Emergent interaction-induced topology in Bose-Hubbard ladders*, D. Wellnitz, G. A. Dominguez-Castro, T. Bilitewski, M. Aidelsburger, A. M. Rey, and L. Santos, arXiv:2409.05109.
4. *Topological floating phase of dipolar bosons in an optical ladder*, H. Korbacher, G. A. Domnguez-Castro, M. Lacki, J. Zakrzewski, and L. Santos, arXiv:2407.15710.
5. *Non-Abelian vibron dynamics in trapped-ion arrays*, L. Timm, H. Weimer, and L. Santos, arXiv:2401.16022.
6. *Optimal squeezing for high-precision atom interferometers*, P. Feldmann, F. Anders, A. Idel, C. Schubert, D. Schlippert, L. Santos, E. M. Rasel, and C. Klempt, arXiv:2311.10241.
7. *Quantum simulation of dynamical phase transitions in noisy quantum devices*, Y. Javanmard, U. Liaubaite, T. J. Osborne, and L. Santos, arXiv:2211.08318.

## Papers in Journals

8. *Simulation of a Rohksar-Kivelson ladder on a NISQ device*, S. Gupta, Y. Javanmard, T. J. Osborne, and L. Santos, Sci. Rep. (accepted, 2024); arXiv:2401.16326.
9. *Relaxation in dipolar spin ladders: from pair production to false-vacuum decay* G. A. Dominguez-Castro, T. Bilitewski, D. Wellnitz, A. M. Rey, and L. Santos, Phys. Rev. A **110**, L021302 (2024); arXiv:2311.18091.
10. *Ground states of one-dimensional dipolar lattice bosons at unit filling*, M. Lacki, H. Korbacher, G. A. Dominguez-Castro, J. Zakrzewski, and L. Santos, Phys. Rev. B **109**, 125104 (2024); arXiv:2311.14606.
11. *Non-equilibrium dynamics of dipolar polarons* A. G. Volosniev, G. Bighin, L. Santos, and L. A. Peña Ardila, SciPost Phys. **15**, 232 (2023); arXiv:2305.17969.
12. *Excited-state phase diagram of a ferromagnetic quantum gas*, B. Meyer-Hoppe, F. Anders, P. Feldmann, L. Santos, and C. Klempt, Phys. Rev. Lett. **131**, 243402 (2023); arXiv:2301.10655.
13. *Tomography of a number-resolving detector by reconstruction of an atomic many-body quantum state*, M. Hetzel, L. Pezzè, C. Pür, M. Quensen, A. Hüper, J. Geng, J. Kruse, L. Santos, W. Ertmer, A. Smerzi, and C. Klempt, Phys. Rev. Lett. **131**, 260601 (2023); arXiv:2207.01270.
14. *Particle dynamics and ergodicity-breaking in twisted-bilayer optical lattices*, G. C. Paul, P. Recher, and L. Santos, Phys. Rev. A **108**, 053305 (2023); arXiv:2306.01588.
15. *Self-bound crystals of antiparallel dipolar mixtures*, M. Arazo, A. Gallemí, M. Guilleumas, R. Mayol, and L. Santos, Phys. Rev. Res. **5**, 043038 (2023); arXiv:2303.02087.

16. *Heat transport in a Coulomb ion crystal with a topological defect*, L. Timm, H. Weimer, L. Santos, and T. E. Mehlstäubler, Phys. Rev. B **108**, 134302 (2023) arXiv:2306.05845.
17. *Impurities in quasi-one-dimensional droplets of binary Bose mixtures*, S. Sinha, S. Biswas, L. Santos, and S. Sinha, Phys. Rev. A **108**, 023311 (2023); arXiv:2304.04261.
18. *Momentum-selective pair creation of spin excitations in dipolar bilayers*, T. Bilitewski, G. A. Domínguez-Castro, D. Wellnitz, A. M. Rey, and L. Santos, Phys. Rev. A **108**, 013313 (2023); arXiv:2302.09059.
19. *Transversal effects on the ground-state of hard-core dipolar bosons in one-dimensional optical lattices*, H. Korbmacher, G. A. Domínguez-Castro, W. Li, J. Zakrzewski, and L. Santos, Phys. Rev. A **107**, 063307 (2023); arXiv:2303.07217.
20. *Role of interaction-induced tunnelling in the dynamics of polar lattice bosons*, A. S. Aramthottil, M. Lacki, L. Santos, and J. Zakrzewski, Phys. Rev. B **107**, 104305 (2023); arXiv:2209.11644
21. *Catalyzation of supersolidity in binary dipolar condensates*, D. Scheiermann, L. A. Peña Ardila, T. Bland, R. N. Bisset, and L. Santos, Phys. Rev. A **107**, L021302 (2023); arXiv:2202.08259.
22. *Lattice control of non-ergodicity in a polar lattice gas*, H. Korbmacher, P. Sierant, W. Li, X. Deng, J. Zakrzewski, and L. Santos, Phys. Rev. A **107**, 013301 (2023); arXiv:2207.06186.
23. *Droplet arrays in doubly-dipolar Bose-Einstein condensates*, R. Ghosh, C. Mishra, L. Santos, and R. Nath, Phys. Rev. A **106**, 063318 (2022); arXiv:2210.01093.

24. *Creation and robustness of quantized vortices in a dipolar supersolid when crossing the superfluid-to-supersolid transition*, M. Šindik, A. Recati, S. M. Roccuzzo, L. Santos, S. Stringari, Phys. Rev. A **106**, L061303 (2022); arXiv:2206.14100.
25. Superfluid properties of a honeycomb dipolar supersolid, A. Gallemí and L. Santos, Phys. Rev. A **106**, 063301 (2022); arXiv:2209.10450.
26. *Alternating-domain supersolids in binary dipolar condensates*, T. Bland, E. Poli, L. A. Peña Ardila, L. Santos, F. Ferlaino, and R. N. Bisset, Phys. Rev. A **106**, 053322 (2022); arXiv:2203.11119.
27. *Can angular oscillations probe superfluidity in dipolar supersolids?*, M. A. Norcia, E. Poli, C. Politi, L. Klaus, T. Bland, M. J. Mark, L. Santos, R. N. Bisset, and F. Ferlaino, Phys. Rev. Lett. **129**, 040403 (2022); arXiv:2111.07768
28. *Anomalous buoyancy of quantum bubbles in immiscible Bose mixtures* D. Edler, L. A. Peña Ardila, C. R. Cabrera, and L. Santos, Phys. Rev. Research **4**, 033017 (2022); arXiv:2204.00606.
29. *Two-dimensional supersolidity in a circular trap*, T. Bland, E. Poli, C. Politi, L. Klaus, M. A. Norcia, F. Ferlaino, L. Santos, and R. N. Bisset, Phys. Rev. Lett. **128**, 195302 (2022); arXiv:2107.06680.
30. *Hilbert space shattering and disorder-free localization in polar lattice gases*, W. Li, X. Deng, and L. Santos, Phys. Rev. Lett. **127**, 260601 (2021); arXiv:2103.13780.
31. *Maintaining supersolidity in one and two dimensions*, E. Poli, T. Bland, C. Politi, L. Klaus, M. A. Norcia, F. Ferlaino, R. N. Bisset, and L. Santos, Phys. Rev. A **104**, 063307 (2021); arXiv:2108.02682.

32. *Quantum nanofriction in trapped ion chains with a topological defect*, L. Timm, L. A. Rüffert, H. Weimer, L. Santos, and T. E. Mehlstäubler, Phys. Rev. Research **39**, 043141 (2021); arXiv:2108.07635.
33. *Momentum entanglement for atom interferometry*, F. Anders, A. Idel, P. Feldmann, D. Bondarenko, S. Loriani, K. Lange, J. Peise, M. Gersemann, B. Meyer, S. Abend, C. Schubert, D. Schlippert, L. Santos, E. Rasel, and C. Klempert, Phys. Rev. Lett. **127**, 140402 (2021); arXiv:2010.15796.
34. *Quantum Zeno-based detection and state engineering of ultracold polar molecules*, A. Jamadagni, S. Ospelkaus, L. Santos, and H. Weimer, Phys. Rev. Research **3**, 033208 (2021); arXiv:1906.09263.
35. *Two-dimensional supersolidity in a dipolar quantum gas*, M. A. Norcia, C. Politi, L. Klaus, E. Poli, M. Sohmen, M. J. Mark, R. Bisset, L. Santos, and F. Ferlaino, Nature **596**, 357 (2021) ; arXiv:2102.05555.
36. *Topological inheritance in half-SSH Hubbard models*, S. Mondal, S. Greschner, L. Santos, and T. Mishra, Phys. Rev. A **104**, 013315 (2021); arXiv:2008.07224.
37. *Interferometric order parameter for excited-state quantum phase transitions in Bose-Einstein condensates*, P. Feldmann, C. Klempert, A. Smerzi, L. Santos, and M. Gessner, Phys. Rev. Lett. **126**, 230602 (2021); arXiv:2011.02823.
38. *Cluster dynamics in two-dimensional lattice gases with inter-site interactions*, W. Li, A. Dhar, X. Deng, and L. Santos, Phys. Rev. A **103**, 043331 (2021); arXiv:2012.02663.
39. *Quantum droplets of dipolar mixtures*, R. N. Bisset, L. A. Peña Ardila, and L. Santos, Phys. Rev. Lett. **126**, 025301 (2021); arXiv:2007.00404.

40. *Energy localization in interacting atomic chains with topological solitons*, L. Timm, H. Weimer, L. Santos, and T. E. Mehlstäubler, Phys. Rev. Research **2**, 033198 (2020); arXiv:1910.02135.
41. *Universal algebraic growth of entanglement entropy in many-body localized systems with power-law interactions*, X. Deng, G. Masella, G. Pupillo, and L. Santos, Phys. Rev. Lett. **125**, 010401 (2020); arXiv:1912.08131.
42. *Deconfining disordered phase in two-dimensional quantum link models*, L. Cardarelli, S. Greschner, and L. Santos, Phys. Rev. Lett. **124**, 123601 (2020); arXiv:1910.12829.
43. *Self-bound doubly-dipolar Bose-Einstein condensates*, C. Mishra, L. Santos, and R. Nath, Phys. Rev. Lett. **124**, 073402 (2020); arXiv:1907.08190.
44. *Disorderless quasi-localization of polar gases in one-dimensional lattices* W. Li, A. Dhar, X. Deng, K. Kasamatsu, L. Barbiero, and L. Santos, Phys. Rev. Lett. **124**, 010404 (2020); arXiv:1901.09762.
45. *Heralded Generation of Macroscopic Superposition States in a Spinor Bose-Einstein Condensate*, L. Pezzè, M. Gessner, P. Feldmann, C. Klempt, L. Santos, and A. Smerzi, Phys. Rev. Lett. **123**, 260403 (2019); arXiv:1712.03864.
46. *One-dimensional quasicrystals with power-law hopping*, X. Deng, S. Ray, S. Sinha, G. V. Shlyapnikov, and L. Santos, Phys. Rev. Lett. **123**, 025301 (2019); arXiv:1808.03585.
47. *Viewpoint: A quasicrystal for quantum simulations*, L. Santos, Physics **12**, 31 (2019).

48. *Observation of a dipolar quantum gas with metastable supersolid properties*, L. Tanzi, E. Lucioni, F. Fama, J. Catani, A. Fioretti, C. Gabbanini, R. N. Bisset, L. Santos, and G. Modugno, Phys. Rev. Lett. **122**, 130405 (2019); arXiv:1811.02613.
49. *Dimensional crossover for the beyond-mean-field correction in Bose gases*, T. Ilg, J. Kumlin, L. Santos, D. S. Petrov, and H. P. Büchler, Phys. Rev. A **98**, 051604(R) (2018); arXiv:1806.01784.
50. *Creation of entangled atomic states by an analogue of the dynamical Casimir effect*, K. Lange, J. Peise, B. Lücke, T. Gruber, A. Sala, A. Polls, W. Ertmer, B. Juliá-Díaz, L. Santos, and C. Klempert, New J. Phys. **20**, 103017 (2018); arXiv:1805.02560.
51. *Quenched dynamics and spin-charge separation in an interacting topological lattice*, L. Barbiero, L. Santos, and N. Goldman, Phys. Rev. B **97**, 201115(R) (2018); arXiv:1803.06957.
52. *Probing the exchange statistics of one-dimensional anyon models*, S. Greschner, L. Cardarelli, and L. Santos, Phys. Rev. A **97**, 053605 (2018) (Editor's suggestion); arXiv:1802.03970.
53. *Duality in Power-Law Localization in Disordered One-Dimensional Systems*, X. Deng, V. E. Kravtsov, G. V. Shlyapnikov, and L. Santos, Phys. Rev. Lett. **120**, 110602 (2018); arXiv:1706.04088.
54. *Interferometric sensitivity and entanglement by scanning through quantum phase transitions in spinor Bose-Einstein condensates*, P. Feldmann, M. Gessner, M. Gabbrielli, C. Klempert, L. Santos, L. Pezzè, and A. Smerzi, Phys. Rev. A **97**, 032339 (2018); arXiv:1712.03896.
55. *Observation of Roton Mode Population in a Dipolar Quantum Gas*, L. Chomaz, R. M. W. van Bijnen, D. Petter, G. Faraoni, S. Baier, J. H.

- Becher, M. J. Mark, F. Wächtler, L. Santos, and F. Ferlaino, Nature Phys. **14**, 442 (2018); arXiv:1705.06914.
56. *Hidden order and symmetry protected topological states in quantum link ladders*, L. Cardarelli, S. Greschner, and L. Santos, Phys. Rev. Lett. **119**, 180402 (2017); arXiv:1707.03225.
  57. *Tuning an effective spin chain of strongly interacting one-dimensional fermions with the transversal confinement*, F. Deuretzbacher, and L. Santos, Phys. Rev. A **96**, 013629 (2017); arXiv:1706.06513.
  58. *Quantum droplets in one-dimensional dipolar Bose-Einstein condensates*, C. Mishra, D. Edler, F. Wächtler, R. Nath, S. Sinha, and L. Santos, Phys. Rev. Lett. **119**, 050403 (2017); arXiv:1610.09176.
  59. *Spin-chain model for strongly interacting one-dimensional Bose-Fermi mixtures*, F. Deuretzbacher, D. Becker, J. Bjerlin, S. M. Reimann, and L. Santos, Phys. Rev. A **95**, 043630 (2017); arXiv:1611.04418.
  60. *Long-range transverse Ising model built with dipolar condensates in two-well arrays*, Y. Li, W. Pang, J. Xu, C. Lee, B. A. Malomed, and L. Santos, New J. Phys. **19**, 013030 (2017); arXiv:1608.04831.
  61. *Schwebende Quantentröpfchen*, Falk Wächtler und Luis Santos, Physik Journal **2**, 22 (2017).
  62. *Quantum-fluctuation-driven crossover from a dilute Bose-Einstein condensate to a macro-droplet in a dipolar quantum fluid*, L. Chomaz, S. Baier, D. Petter, M. J. Mark, F. Wächtler, L. Santos, and F. Ferlaino, Phys. Rev. X **6**, 041039 (2016); arXiv:1607.06613.
  63. *Ground-state properties and elementary excitations of quantum droplets in dipolar Bose-Einstein condensates*, F. Wächtler and L. Santos, Phys.

Rev. A **94**, 043618 (2016); arXiv:1605.08676 (2016).

64. *Improvement of an atomic clock using squeezed vacuum*, I. Kruse, K. Lange, J. Peise, B. Lücke, L. Pezzè, J. Arlt, W. Ertmer, C. Lisdat, L. Santos, A. Smerzi, and C. Klempt, Phys. Rev. Lett. **117**, 143004 (2016); arXiv:1605.07754.
65. *Engineering interactions and anyon statistics by multicolor lattice-depth modulations*, L. Cardarelli, S. Greschner, and L. Santos, Phys. Rev. A **94**, 023615 (2016); arXiv:1604.08829.
66. *Momentum distributions and numerical methods for strongly interacting one-dimensional spinor gases*, F. Deuretzbacher, D. Becker, and L. Santos, Phys. Rev. A **94**, 023606 (2016); arXiv:1602.06804.
67. *Quantum Levy flights and multifractality of dipolar excitations in a random system*, X. Deng, B. L. Altshuler, G. V. Shlyapnikov, and L. Santos, Phys. Rev. Lett. **117**, 020401 (2016); arXiv:1604.03820.
68. *Quantum filaments in dipolar Bose-Einstein condensates*, F. Wächtler and L. Santos, Phys. Rev. A **93**, 061603(R) (2016); arXiv:1601.04501.
69. *Density-induced geometric frustration of ultra-cold bosons in optical lattices*, T. Mishra, S. Greschner, and L. Santos, New J. of Phys. **18**, 045016 (2016); arXiv:1512.01138.
70. *Topological phases of lattice bosons with a dynamical gauge field*, D. Raventós, T. Graß, B. Juliá-Díaz, L. Santos, and M. Lewenstein, Phys. Rev. A **93**, 033605 (2016); arXiv:1511.08010.
71. *Frustration-induced supersolids in the absence of inter-site interactions*, T. Mishra, S. Greschner, and L. Santos, Phys. Rev. B **92**, 195149

- (2015); arXiv:1507.07759.
72. *Antiferromagnetic Heisenberg spin chain of few cold atoms in a one-dimensional trap*, S. Murmann, F. Deuretzbacher, G. Zürn, J. Bjerlin, S. M. Reimann, L. Santos, T. Lompe, and S. Jochim, Phys. Rev. Lett. **115**, 215301 (2015); arXiv:1507.01117.
  73. *Out-of-equilibrium states and quasi-many-body localization in polar lattice gases*, L. Barbiero, C. Menotti, A. Recati, and L. Santos, Phys. Rev. B **92**, 180406(R) (2015); arXiv:1505.02028.
  74. *Satisfying the Einstein-Podolsky-Rosen criterion with massive particles*, J. Peise, I. Kruse, K. Lange, B. Lücke, L. Pezzè, J. Arlt, W. Ertmer, K. Hammerer, L. Santos, A. Smerzi, and C. Klempt, Nature Communications **6**, 8984 (2015); arXiv:1511.07636.
  75. *Density-dependent synthetic magnetism for ultra-cold atoms in optical lattices*, S. Greschner, D. Huerga, G. Sun, D. Poletti, and L. Santos, Phys. Rev. B **92**, 115120 (2015); arXiv:1502.07944.
  76. *Two dimensional bright solitons in dipolar Bose-Einstein condensates with tilted dipoles*, M. Raghunandan, C. Mishra, K. Lakomy, P. Pedri, L. Santos, and R. Nath, Phys. Rev. A **92**, 013637 (2015); arXiv:1506.02254.
  77. *The anyon Hubbard model in one-dimensional optical lattices*, S. Greschner and L. Santos, Phys. Rev. Lett. **115**, 053002 (2015); arXiv:1501.07462.
  78. *Polar molecules in frustrated triangular lattices*, T. Mishra, S. Greschner, and L. Santos, Phys. Rev. A **91**, 043614 (2015); arXiv:1411.7270.
  79. *Position-dependent spin-orbit coupling for ultra-cold atoms*, S.-W. Su, S.-C. Gou, U.-K. Liu, I. B. Spielman, L. Santos, A. Acus, A. Mekys,

- J. Ruseckas, and G. Juzeliunas, New J. of Phys. **17**, 033045 (2015); arXiv:1411.7813.
80. *Interaction-free measurements by quantum Zeno stabilisation of ultra-cold atoms*, J. Peise, B. Lücke, L. Pezzé, F. Deuretzbacher, W. Ertmer, J. Arlt, A. Smerzi, L. Santos, and C. Klempert, Nature Communications **6**, 6811 (2015); arXiv:1511.07636.
81. *Dynamical synthetic gauge fields using periodically modulated interactions*, S. Greschner, G. Sun, D. Poletti, and L. Santos, Phys. Rev. Lett. **113**, 215303 (2014); arXiv:1311.3150.
82. *Exploring unconventional Hubbard models with doubly-modulated lattice gases*, S. Greschner, L. Santos, and D. Poletti, Phys. Rev. Lett. **113**, 183002 (2014); arXiv:1407.6196.
83. *Ring model for trapped condensates with synthetic spin-orbit coupling*, X. Chen, M. Rabinovic, B. Anderson, and L. Santos, Phys. Rev. A **90**, 043632 (2014); arXiv:1406.4938.
84. *Quantum magnetism without lattice in strongly-interacting one-dimensional spinor gases*, F. Deuretzbacher, D. Becker, J. Bjerlin, S. M. Reimann, and L. Santos, Phys. Rev. A **90**, 013611 (2014); arXiv: 1310.3705.
85. *Spin dynamics in a two-dimensional quantum gas*, P. L. Pedersen, M. Gajdacz, F. Deuretzbacher, L. Santos, C. Klempert, J. F. Sherson, A. J. Hilliard, and J. J. Arlt, Phys. Rev. A **89**, 051603(R) (2014); arXiv:1404.7385.
86. *Ferromagnetic spin-orbital liquid of dipolar fermions in zigzag lattices*, G. Sun, A. Kolezhuk, L. Santos, and T. Vekua, Phys. Rev. B **89**, 134420 (2014); arxiv:1308.5519.

87. *Detecting multiparticle entanglement of Dicke states*, B. Lücke, J. Peise, G. Vitagliano, J. Arlt, L. Santos, G. Toth, and C. Klempt, Phys. Rev. Lett. **112**, 155304 (2014); arXiv:1403.4542.
88. *Topological transitions of interacting bosons in one-dimensional bi-chromatic optical lattices*, X. Deng and L. Santos, Phys. Rev. A **89**, 033632 (2014); arXiv:1305.5908.
89. *Spontaneous symmetry breaking in spinor Bose-Einstein condensates*, M. Scherer, B. Lücke, O. Topic, G. Gebreyesus, F. Deuretzbacher, W. Ertmer, L. Santos, C. Klempt, and J. J. Arlt, Phys. Rev. A **88**, 053624 (2013); arXiv:1309.0424.
90. *Non-equilibrium quantum magnetism in a dipolar lattice gas*, A. de Paz, A. Sharma, A. Chotia, E. Marechal, J. Huckans, P. Pedri, L. Santos, O. Gorceix, L. Vernac, and B. Laburthe-Tolra, Phys. Rev. Lett. **111**, 185305 (2013); arXiv:1306.2754.
91. *Optik mit verschränkten Atomen*, B. Lücke, L. Santos and C. Klempt, Physik Journal **10**, 37 (2013).
92. *Spin-orbit coupled fermions in ladder-like optical lattices at half-filling*, G. Sun, J. Jaramillo, L. Santos, and T. Vekua, Phys. Rev. B **88**, 165101 (2013); arXiv:1307.1607.
93. *Self-bound many-body states of quasi-one-dimensional dipolar Fermi gases: exploiting Bose-Fermi mappings for generalized contact interactions*, F. Deuretzbacher, G. M. Bruun, C. J. Pethick, M. Jona-Lasinio, S. M. Reimann and L. Santos, Phys. Rev. A **88**, 033611 (2013); arXiv:1306.0405.
94. *Time-of-Flight Roton Spectroscopy in Dipolar Bose-Einstein Condensates*, M. Jona-Lasinio, K. Lakomy, and L. Santos, Phys. Rev. A **88**,

- 025603 (2013); arXiv:1307.6004.
95. *Roton confinement in dipolar Bose-Einstein condensates*, M. Jona-Lasinio, K. Lakomy, and L. Santos, Phys. Rev. A **88**, 013619 (2013); (E) Phys. Rev. A **88**, 049905 (2013); arXiv:1301.4907.
  96. *Polar bosons in one-dimensional disordered optical lattices*, X. Deng, R. Citro, E. Orignac, A. Minguzzi, and L. Santos, Phys. Rev. B **87**, 195101 (2013); arXiv:1203.0505.
  97. *Bosonization and entanglement spectrum for one-dimensional polar bosons on disordered lattices*, X. Deng, R. Citro, E. Orignac, A. Minguzzi, and L. Santos, New J. of Phys. **15**, 045023 (2013); arXiv:1302.0528.
  98. *Thermal spin fluctuations in spinor Bose-Einstein condensates*, M. Melé-Messeger, B. Juliá-Díaz, A. Polls, and L. Santos, Phys. Rev. A **87**, 033632 (2013); arXiv:1301.3406.
  99. *Ultra-cold bosons in zig-zag optical lattices*, S. Greschner, L. Santos, and T. Vekua, Phys. Rev. A **87**, 033609 (2013); arXiv:1202.5386.
  100. *Simulating an interacting gauge theory with ultracold Bose gases*, M. Edmonds, M. Valiente, G. Juzeliunas, L. Santos, and P. Öhberg, Phys. Rev. Lett. **110**, 085301 (2013); arXiv:1212.0445.
  101. *Confinement-induced collapse of a dipolar Bose-Einstein condensate*, J. Billy, E. A. L. Henn, S. Müller, T. Maier, H. Kadau, A. Griesmaier, M. Jona-Lasinio, L. Santos and T. Pfau, Phys. Rev. A **86**, 051603 (2012); arXiv:1205.5176.
  102. *Exploring spin-orbital models with dipolar fermions in zig-zag optical lattices*, G. Sun, G. Jackeli, L. Santos, and T. Vekua, Phys. Rev. B

- 86**, 155159 (2012); arXiv:1112.5082.
103. *Ultracold lattice gases with periodically modulated interactions*, A. Rapp, X. Deng and L. Santos, Phys. Rev. Lett. **109**, 203005 (2012); arXiv:1207.0641.
104. *Faraday patterns in coupled one-dimensional dipolar condensates*, K. Łakomy, R. Nath and L. Santos, Phys. Rev. A **86**, 023620 (2012); arXiv: 1207.1999.
105. *Soliton molecules in dipolar Bose-Einstein condensates*, K. Łakomy, R. Nath and L. Santos, Phys. Rev. A **86**, 013610 (2012); arXiv:1205.0982.
106. *Spontaneous crystallization and filamentation of solitons in dipolar condensates*, K. Łakomy, R. Nath and L. Santos, Phys. Rev. A **85**, 033618 (2012); arXiv:1107.3132.
107. *Trapped two-dimensional condensates with synthetic spin-orbit coupling*, S. Sinha, R. Nath, and L. Santos, Phys. Rev. Lett. **107**, 270401 (2011); arXiv:1109.2045.
108. *Non-local state-swapping of polar molecules in bilayers*, A. Pikovski, M. Klawunn, A. Recati, and L. Santos, Phys. Rev. A **84**, 061605(R) (2011); arXiv:1108.5642.
109. *Magnetic cooling of ultracold two-component fermions using high-spin Fermi gases*, M. Colomé-Tatché, C. Klempt, L. Santos, and T. Vekua, New J. of Phys. **13**, 113021 (2011); arXiv:1009.2606.
110. *Spin noise spectroscopy under resonant probing: coherent and non-linear effects*, H. Horn, G. M. Müller, E. M. Rasel, L. Santos, J. Hübner and M. Oestreich, Phys. Rev. A **84**, 043851 (2011); arXiv:1108.0591.

111. *Stability of a dipolar Bose-Einstein condensate in a one-dimensional lattice*, S. Müller, J. Billy, E. A. L. Henn, H. Kadau, A. Griesmaier, M. Jona-Lasinio, L. Santos, and T. Pfau, Phys. Rev. A **84**, 053601 (2011); arXiv:1105.5015.
112. *Twin Matter Waves for Interferometry Beyond the Classical Limit* B. Lücke, M. Scherer, J. Kruse, L. Pezz, F. Deuretzbacher, P. Hyllus, O. Topic, J. Peise, W. Ertmer, J. Arlt, L. Santos, A. Smerzi, and C. Klempert, Science **334**, 773 (2011); arXiv:1204.4102.
113. *Entanglement spectrum of one-dimensional extended Bose-Hubbard models*, X. Deng and L. Santos, Phys. Rev. B **84**, 085138 (2011); arXiv:1104.5157.
114. *Field-induced phase transitions of repulsive spin-1 bosons in optical lattices*, K. Rodriguez, A. Argüelles, A. K. Kolezhuk, L. Santos, and T. Vekua, Phys. Rev. Lett. **106**, 105302 (2011); arXiv:1009.3875.
115. *Repulsively-bound exciton-biexciton states in high-spin fermions in optical lattices*, A. Argüelles and L. Santos, Phys. Rev. A **83**, 033624 (2011); arXiv:1011.0388.
116. *Parametric amplification of matter waves in dipolar spinor Bose-Einstein condensates*, F. Deuretzbacher, G. Gebreyesus, O. Topic, M. Scherer, B. Lücke, W. Ertmer, J. Arlt, C. Klempert, and L. Santos, Phys. Rev. A **82**, 053608 (2010); arXiv:1005.2011.
117. *Interlayer superfluidity in bilayer systems of fermionic polar molecules*, A. Pikovski, M. Klawunn, G.V. Shlyapnikov, and L. Santos, Phys. Rev. Lett. **105**, 215302 (2010); arXiv:1008.3264.
118. *Two-dimensional scattering and bound states of polar molecules in bilayers*, M. Klawunn, A. Pikovski and L. Santos, Phys. Rev. A **82**,

044701 (2010); arXiv:1008.2444

119. *Spontaneous breaking of spatial and spin symmetry in spinor condensates*, M. Scherer, B. Lücke, G. Gebreyesus, O. Topic, F. Deuretzbacher, W. Ertmer, L. Santos, J.J. Arlt, C. Klempt, Phys. Rev. Lett. **105**, 135302 (2010); arXiv:1007.2342
120. *Mott-insulator phases of one dimensional spin-3/2 fermions in the presence of a quadratic Zeeman coupling*, K. Rodriguez, A. Argüelles, M. Colomé-Tatché, T. Vekua and L. Santos, Phys. Rev. Lett. **105**, 050402 (2010); arXiv:1002.0287.
121. *Resonant amplification of quantum fluctuations in a spinor gas*, O. Topic, M. Scherer, G. Gebreyesus, Th. Henninger, P. Hyllus, C. Klempt, W. Ertmer, L. Santos and J. Arlt, Laser Physics **20**, 1156 (2010).
122. *Parametric amplification of vacuum fluctuations in a spinor condensate*, C. Klempt , O. Topic, G. Gebreyesus, M. Scherer, Th. Henninger, P. Hyllus, W. Ertmer, L. Santos and J. Arlt, Phys. Rev. Lett. **104**, 195303 (2010); arXiv:0907.3413.
123. *Mesoscopic ensembles of polar bosons in triple-well potentials*, T. La-haye, T. Pfau and L. Santos, Phys. Rev. Lett. **104**, 170404 (2010); arXiv:0911.5288.
124. *Faraday patterns in dipolar Bose-Einstein condensates*, R. Nath and L. Santos, Phys. Rev. A **81**, 033626 (2010); arXiv:0902.3969.
125. *Chiral confinement in quasi-relativistic Bose-Einstein condensates*, M. Merkl, A. Jacob, F. Zimmer, P. Öhberg and L. Santos, Phys. Rev. Lett. **104**, 073603 (2010); arXiv:0908.3631.

126. *Bose-Fermi mixtures of self-assembled filaments of fermionic polar molecules*, M. Klawunn, J. Duhme, and L. Santos, Phys. Rev. A **81**, 013604 (2010); arXiv:0907.4612.
127. *Multi-resonant spinor dynamics in a Bose-Einstein condensate*, C. Klempert, O. Topic, G. Gebreyesus, M. Scherer, Th. Henninger, P. Hyllus, W. Ertmer, L. Santos and J. Arlt, Phys. Rev. Lett. **103**, 195302 (2009); arXiv:0902.2058.
128. *The physics of dipolar bosonic quantum gases*, T. Lahaye, C. Menotti, L. Santos, M. Lewenstein, and T. Pfau, Rep. Prog. Phys. **72** 126401 (2009); arXiv:0905.0386.
129. *Hybrid multi-site excitations in dipolar condensates in optical lattices*, M. Klawunn and L. Santos, Phys. Rev. A **80**, 013611 (2009); arXiv:0812.3543.
130. *Phase transition from straight into twisted vortex-lines in dipolar Bose-Einstein condensates*, M. Klawunn and L. Santos, New J. Phys. **11**, 055012 (2009); arXiv:0902.3058.
131. *Phonon instability in two-dimensional dipolar Bose-Einstein condensates*, R. Nath, P. Pedri and L. Santos, Phys. Rev. Lett. **102**, 050401 (2009); arXiv:0807.3683.
132. *Magnetic dipolar interaction in an atomic Bose-Einstein condensate interferometer*, M. Fattori, G. Roati, B. Deissler, M. Zaccanti, M. Jona-Lasinio, L. Santos, M. Inguscio, and G. Modugno, Phys. Rev. Lett. **101**, 190405 (2008); arXiv:0808.1506.
133. *Stability of dark solitons in three dimensional dipolar Bose-Einstein condensates*, R. Nath, P. Pedri, and L. Santos, Phys. Rev. Lett. **101**, 210402 (2008); arXiv:0712.3655.

134. *Transverse instability of straight vortex lines in dipolar Bose-Einstein condensates*, M. Klawunn, R. Nath, P. Pedri and L. Santos, Phys. Rev. Lett. **100**, 240403 (2008); arXiv:0707.0441.
135. *Double and negative reflection of cold atoms in non-Abelian gauge potentials*, G. Juzeliunas, J. Ruseckas, A. Jacob, L. Santos, and P. Öhberg, Phys. Rev. Lett. **100**, 200405 (2008); arXiv:0801.2056.
136. *Resonant spin-changing collisions in spinor Fermi gases*, N. Bornemann, P. Hyllus, and L. Santos, Phys. Rev. Lett. **100**, 205302 (2008); arXiv:0803.0239.
137. *Damped Bloch oscillations of Bose-Einstein condensates in disordered potential gradients*, S. Drenkelforth, G. Kleine Büning1, J. Will, T. Schulte, N. Murray, W. Ertmer, L. Santos, and J.J. Arlt, New J. Phys. **10**, 045027 (2008); arXiv:0801.3437.
138. *Landau levels of cold atoms in non Abelian gauge fields*, A. Jacob, P. Öhberg, G. Juzelinas, and L. Santos, New J. Phys. **10**, 045022 (2008); arXiv:0801.2935.
139. *Ultrarelativistic behavior of cold atoms in light fields*, G. Juzeliunas, J. Ruseckas, M. Lindberg, L. Santos, and P. Öhberg, Phys. Rev. A (R) **77**, 011802 (2008); arXiv:0712.1677.
140. *Dynamics of Bloch Oscillations in Disordered Lattice Potentials*, T. Schulte, S. Drenkelforth, G. Kleine Büning, W. Ertmer, J. Arlt, M. Lewenstein, and L. Santos, Phys. Rev. A **77**, 023610 (2008); arXiv:0707.3131.
141. *Cold atom dynamics in non-Abelian gauge fields*, A. Jacob, P. Öhberg, G. Juzeliunas, and L. Santos, Appl. Phys. B. **89**, 439 (2007); arXiv:0801.2928.

142. *Evidence for coherent collective Rydberg excitation in the strong blockade regime*, R. Heidemann, U. Raitzsch, V. Bendkowsky, B. Butscher, R. Löw, L. Santos, and T. Pfau, Phys. Rev. Lett. **99**, 163601 (2007); quant-ph/0701120.
143. *Dipolar gases in quasi one-dimensional geometries*, S. Sinha and L. Santos, Phys. Rev. Lett. **99**, 140406 (2007); cond-mat/0705.1668.
144. *Mott-insulator phases of non-locally coupled 1D dipolar Bose gases*, A. Argüelles and L. Santos, Phys. Rev. A **75**, 053613 (2007); (E) Phys. Rev. A **77**, 059904 (2008); cond-mat/0612522.
145. *Spinor condensates with a laser-induced quadratic Zeeman effect*, L. Santos, M. Fattori, J. Stuhler, and T. Pfau, Phys. Rev. A **75**, 053606 (2007); cond-mat/0612191.
146. *Scattering of two-dimensional solitons in dipolar Bose-Einstein condensates*, R. Nath, P. Pedri, and L. Santos, Phys. Rev. A **76**, 013606 (2007); cond-mat/0610703.
147. *Collective oscillations of dipolar Bose-Einstein condensates and accurate comparison between contact and dipolar interaction*, S. Giovanazzi, L. Santos, and T. Pfau, Phys. Rev. A **75**, 015604 (2007); cond-mat/0608291.
148. *Expansion dynamics of a dipolar Bose-Einstein condensate*, S. Giovanazzi, P. Pedri, L. Santos, A. Griesmaier, M. Fattori, T. Koch, J. Stuhler, and T. Pfau, Phys. Rev. A **74**, 013621 (2006); cond-mat/0605708.
149. *Spin-3 Chromium Bose-Einstein condensates*, L. Santos and T. Pfau, Phys. Rev. Lett. **96**, 190404 (2006); cond-mat/0510634.

150. *Cold atomic gases in optical lattices with disorder*, T. Schulte, S. Drenkelforth, J. Kruse, W. Ertmer, J. J. Arlt, A. Kantian, L. Sánchez-Palencia, L. Santos, A. Sanpera, K. Sacha, P. Zoller, M. Lewenstein, and J. Zakrzewski, *Acta Phys. Pol. A* **109**, 89 (2006).
151. *Mott insulator phase of one-dimensional atomic gases in a two-dimensional optical lattice*, D. Gangardt, P. Pedri, L. Santos, and G. V. Shlyapnikov, *Phys. Rev. Lett.* **96**, 040403 (2006); cond-mat/0408437.
152. *Random on-site interactions versus random on-site chemical potential in ultra cold atoms in optical lattices*, H. Gimperlein, S. Wessel, J. Schmiedmayer and L. Santos, *Appl. Phys. B* **82**, 217 (2006).
153. *Two-dimensional bright solitons in dipolar Bose-Einstein condensates*, P. Pedri and L. Santos, *Phys. Rev. Lett.* **95**, 200404 (2005); cond-mat/0503019.
154. *Observation of dipole-dipole interaction in a degenerate quantum gas*, J. Stuhler, A. Griesmaier, T. Koch, M. Fattori, T. Pfau, S. Giovanazzi, P. Pedri, and L. Santos, *Phys. Rev. Lett.* **95**, 150406 (2005); cond-mat/0508228.
155. *Bose-Einstein condensates in optical quasicrystal lattices*, L. Sánchez-Palencia and L. Santos, *Phys. Rev. A* **72**, 053607 (2005); cond-mat/0502529.
156. *Ultracold atoms in optical lattices with random on-site interactions*, H. Gimperlein, S. Wessel, J. Schmiedmayer, and L. Santos, *Phys. Rev. Lett.* **95**, 170401 (2005); cond-mat/0506572.
157. *Quantum gases in trimerized kagomé lattices*, B. Damski, H. Fehrmann, H.-U. Everts, M. Baranov, L. Santos and M. Lewenstein, *Phys. Rev.*

A **72**, 053612 (2005); cond-mat/0506580.

158. *Atomic Fermi gas in the trimerized Kagomé lattice at the filling 2/3*, B. Damski, H.-U. Everts, A. Honecker, H. Fehrmann, L. Santos, and M. Lewenstein, Phys. Rev. Lett. **95**, 060403 (2005); cond-mat/0412133.
159. *Cold atoms in non Abelian gauge potentials: from the Hofstadter “moth” to lattice gauge theory*, K. Osterloh, M. Baig, L. Santos, P. Zoller and M. Lewenstein, Phys. Rev. Lett. **95**, 010403 (2005); cond-mat/0502251.
160. *Sympathetic cooling of trapped fermions by bosons in the presence of particle losses*, Z. Idziaszek, L. Santos, and M. Lewenstein, Europhys. Lett. **70**, 572 (2005); cond-mat/0501613.
161. *Atomic quantum gases in Kagomé lattices*, L. Santos, M.A. Baranov, J.I. Cirac, H.-U. Everts, H. Fehrmann, and M. Lewenstein, Phys. Rev. Lett. **93**, 030601 (2004); cond-mat/0401502.
162. *Mean-field theory of Bose-Fermi mixtures in optical lattices*, H. Fehrmann, M. A. Baranov, B. Damski, L. Santos, and M. Lewenstein, Opt. Comm. **243**, 23 (2004); cond-mat/0307635.
163. *Quantum phases of Bose-Fermi mixtures in optical lattices*, H. Fehrmann, M. Baranov, M. Lewenstein, and L. Santos, Opt. Express **12**, 55 (2004);
164. *Creation of discrete solitons and observation of the Peierls-Nabarro barrier in Bose-Einstein Condensates*, V. Ahufinger, A. Sanpera, P. Pedri, L. Santos, M. Lewenstein, Phys. Rev. A **69**, 053604 (2004); cond-mat/0310042.
165. *Scissors modes of two-component degenerate gases: Bose-Bose and Bose-Fermi mixtures*, M. Rodriguez, P. Pedri, P. Törmä, and L. San-

- tos, Phys. Rev. A **69**, 023617 (2004); cond-mat/0310042.
166. *Atomic Bose-Fermi mixtures in optical lattices*, M. Lewenstein, L. Santos, M. A. Baranov and H. Fehrmann, Phys. Rev. Lett. **92**, 050401 (2004); cond-mat/0306180.
167. *Second Order Correlation Function of a Phase Fluctuating Bose-Einstein Condensate*, L. Cacciapuoti, D. Hellweg, M. Kottke, T. Schulte, K. Sengstock, W. Ertmer, J.J. Arlt, L. Santos, and M. Lewenstein, Phys. Rev. A **68**, 053612 (2003); cond-mat/0308135.
168. *Three-dimensional quasi-Tonks gas in an optical lattice*, P. Pedri and L. Santos, Phys. Rev. Lett. **91**, 110401 (2003); cond-mat/0304141.
169. *Violation of self-similarity in the expansion of a 1D Bose gas*, P. Pedri, L. Santos, P. Öhberg and S. Stringari, Phys. Rev. A **68**, 043601 (2003) (2003); cond-mat/0304660.
170. *Continuous optical loading of a Bose-Einstein Condensate in the Thomas-Fermi regime*, F. Floegel, L. Santos, and M. Lewenstein, Europhys. Lett. **63**, 812 (2003); cond-mat/0301474.
171. *Atomic Bose and Anderson glasses in optical lattices* B. Damski, J. Zdziarski, L. Santos, P. Zoller, and M. Lewenstein, Phys. Rev. Lett. **91**, 080403 (2003); cond-mat/0303065.
172. *Roton-maxon spectrum and stability of trapped dipolar condensates*, L. Santos, G. V. Shlyapnikov and M. Lewenstein, Phys. Rev. Lett. **90**, 250403 (2003); cond-mat/0301474.
173. *Laser cooling of a trapped two-component Fermi gas* Z. Idziaszek, L. Santos, M. Baranov, and M. Lewenstein, Phys. Rev. A **67**, 041403(R)

- (2003); cond-mat/0212538.
174. *Laser cooling of trapped Fermi gases* Z. Idziaszek, L. Santos, M. Baranov, and M. Lewenstein, J. Opt. B: Quantum Semiclass. Opt. **5**, 190 (2003); quant-ph/0211060.
175. *Creation of a dipolar superfluid in optical lattices*, B. Damski, L. Santos, E. Tiemann, M. Lewenstein, S. Kotochigova, P. Julienne, and P. Zoller, Phys. Rev. Lett. **90**, 110401 (2003); cond-mat/0208375.
176. *Characterization and control of phase fluctuations in elongated Bose-Einstein condensates*, H. Kreutzmann, A. Sanpera, L. Santos, M. Lewenstein, D. Hellweg, L. Cacciapuoti, M. Kottke, T. Schulte K. Sengstock, J. J. Arlt, W. Ertmer, Appl. Phys. B **76**, 165(2003); cond-mat/0210348.
177. *Atom Optics with rotating Bose-Einstein condensates*, I. Josopait, Ł. Dobrek, L. Santos, A. Sanpera and M. Lewenstein, Eur. Phys. Journal D **22**, 385 (2003); cond-mat/0211553.
178. *Dynamical transition from a quasi-one dimensional Bose-Einstein condensate to a Tonks-Girardeau gas*, P. Öhberg and L. Santos, Phys. Rev. Lett. **89**, 240402 (2002); cond-mat/0204611 (2002).
179. *Ground state and elementary excitations of single and binary Bose-Einstein condensates of trapped dipolar gases*, K. Góral and L. Santos, Phys. Rev. A **66**, 023613 (2002); cond-mat/0203542.
180. *Collapse dynamics of trapped Bose-Einstein condensates*, L. Santos and G. V. Shlyapnikov, Phys. Rev. A **66**, 011602 (2002), cond-mat/0112410.
181. *Vortex-vortex interaction in toroidaly-trapped Bose-Einstein Condensates*, T. Schulte, L. Santos, A. Sanpera and M. Lewenstein, Phys. Rev.

A **66**, 033602 (2002); cond-mat 0202481 (2002)

182. *Vortex-vortex interaction in two-component Bose-Einstein Condensates*, P. Öhberg and L. Santos, Phys. Rev. A **66**, 013616 (2002); cond-mat/0111108
183. *Quantum phases of dipolar bosons in optical lattices*, K. Góral, L. Santos, and M. Lewenstein, Phys. Rev. Lett. **88**, 170406 (2002); cond-mat/0112363.
184. *Ultracold dipolar gases - a challenge for experiments and theory*, M.A. Baranov, L. Dobrek, K. Góral, L. Santos, M. Lewenstein, Phys. Scripta **T102**, 74 (2002) (2002); cond-mat/0201100.
185. *Expansion of a Bose-Einstein condensate in an atomic waveguide*, L. Plaja and L. Santos, Phys. Rev. A **65**, 035602 (2001); cond-mat/0111275.
186. *Phase Fluctuations in Bose-Einstein Condensates*, D. Hellweg, S. Dettmer, P. Ryytty, J. Arlt, W. Ertmer, K. Sengstock, D. S. Petrov, G. V. Shlyapnikov, H. Kreutzmann, L. Santos and M. Lewenstein, Appl. Phys. B. **73**, 781 (2001); cond-mat/0201270
187. *Laser cooling of trapped Fermi gases deeeply below the Fermi Temperature*, Z. Idziaszek, L. Santos, and M. Lewenstein, Phys. Rev. A **64**, 051402 (2001); quant-ph/0010067.
188. *Solitons in two component Bose-Einstein condensates*, P. Öhberg and L. Santos, J. Phys. B **34**, 4721 (2001).
189. *Observation of Phase Fluctuations in Bose-Einstein Condensates*, S. Dettmer, D. Hellweg, P. Ryytty, J. Arlt, W. Ertmer, K. Sengstock, D. S. Petrov, G. V. Shlyapnikov, H. Kreutzmann, L. Santos and M.

- Lewenstein, Phys. Rev. Lett. **87**, 160406 (2001); cond-mat/0105525.
190. *Generation and evolution of vortex-antivortex pairs in Bose-Einstein Condensates*, J.-P. Martikainen, K.-A. Suominen, L. Santos, T. Schulte, Anna Sanpera, Phys. Rev. A **64**, 063602 (2001); cond-mat/0005136.
191. *Reversible quantum teleportation in optical lattices*, L. Santos and D. Bruss, J. Phys. A: Math. Gen. **34**, 7003 (2001); quant-ph/9908041.
192. *Four-wave mixing in degenerate atomic gases*, P. Villain, P. Öhberg, L. Santos, A. Sanpera, and M. Lewenstein, Phys. Rev. A, **64**, 023606 (2001); cond-mat/0005417.
193. *Loading of a Bose-Einstein condensate in the boson accumulation regime*, F. Floegel, L. Santos, and M. Lewenstein, Europhys. Lett. **54**, 279 (2001); quant-ph/0011107.
194. *Dark solitons in a two-component Bose-Einstein condensate*, P. Öhberg and L. Santos, Phys. Rev. Lett. **86**, 2918 (2001); cond-mat/0010232.
195. *Continuous optical loading of a Bose-Einstein Condensate*, L. Santos, F. Floegel, T. Pfau and M. Lewenstein, Phys. Rev. A **63**, 063408 (2001); quant-ph/0007003.
196. *Bose-Einstein condensation in trapped dipolar gases*, L. Santos, G. Shlyapnikov, P. Zoller, and M. Lewenstein, Phys. Rev. Lett. **85**, 1791 (2000); cond-mat/0005009. (E) Phys. Rev. Lett. **88**, 139904 (2002)
197. *Laser induced condensation of bosonic gases in traps*, L. Santos, Z. Idziaszek, J. I. Cirac, M. Lewenstein, J. of Phys. B **33**, 4131 (2000); quant-ph/0005107.

198. *Cooling of a small sample of Bose atoms with accidental degeneracy*, M. Lewenstein, J. I. Cirac, L. Santos, J. of Phys. B **33**, 4107 (2000); quant-ph/0005097.
199. *Time correlations of a laser-induced Bose-Einstein condensate*, T. Felbinger, L. Santos, M. Wilkens and M. Lewenstein, Phys. Rev. A **62**, 033603 (2000); cond-mat/0001382.
200. *Collisional effects on the collective laser cooling of trapped bosonic gases*, L. Santos and M. Lewenstein, Appl. Phys. B **69**, 363 (1999); quant-ph/9906070.
201. *Condensation of laser cooled gases*, L. Santos and M. Lewenstein, Eur. Phys. J. D **7**, 379 (1999).
202. *Bloch-like quantum multiple reflections of atoms*, L. Santos and L. Roso, Phys. Rev. A **60**, 2312 (1999); quant-ph/9811033.
203. *Dynamical cooling of trapped gases II: Many atom problem*, L. Santos and M. Lewenstein, Phys. Rev. A **60**, 3851 (1999).
204. *Dynamical cooling of trapped gases: one atom problem*, L. Santos and M. Lewenstein, Phys. Rev. A **59**, 613 (1999); quant-ph/9808014.
205. *Multilayer "dielectric" mirror for atoms*, L. Santos and L. Roso, Phys. Rev. A **58**, 2407 (1998).
206. *Excited atomic wavepackets after a nonadiabatic reflection on a laser mirror*, L. Santos and L. Roso, Quantum Semiclass. Opt. **10**, 555 (1998).

207. *Stopped reflection of an atomic wavepacket by a laser beam with an evanescent profile*, L. Roso, L. Plaja, L. Santos, L. Pumares and K. Rzążewski, Opt. Comm. **148**, 376 (1998).
208. *Fabry-Pérot-like transmission of an atomic beam through a two-Gaussian laser arrangement*, L. Santos and L. Roso, Phys. Rev. A **57**, 432 (1998).
209. *Band-like reflection spectrum of an atomic beam on a periodic laser profile*, L. Santos and L. Roso, J. Phys. B: At. Mol. Opt. Phys. **30**, 5169 (1997).
210. *Resonance fluorescence of an extended atomic wavepacket*, L. Pumares, L. Santos, L. Roso and K. Rzążewski, Phys. Rev. A **55**, 4386 (1997).