

## Pre-prints

1. *Selective protected state preparation of coupled dissipative quantum emitters*  
D. Plankensteiner, L. Ostermann, H. Ritsch and **C. Genes**  
[arXiv:1504.08148 \(2015\) \(accepted - Scientific Reports -November issue \)](#)
2. *Direct observation of ultrafast many-body electron dynamics in a strongly-correlated ultracold Rydberg gas*  
N. Takei, C. Sommer, **C. Genes**, G. Pupillo, H. Goto, K. Koyasu, H. Chiba, M. Weidemüller and K. Ohmori  
[arXiv:1504.03635 \(2015\) \(submitted to Science\)](#)

## Articles in journals

3. *A Realization of a Quasi-Random Walk for Atoms in Time-Dependent Optical Potentials*  
T. Hinkel, T. Griesser, H. Ritsch and **C. Genes**  
[Atoms 2015, 3\(3\), 433-449 \(2015\)](#)
4. *Conductivity in Organic Semiconductors Hybridized with the Vacuum Field*  
E. Orgiu, J. George, J. Hutchison, E. Devaux, J. F. Dayen, B. Doudin, F. Stellacci, C. Genet, J. Schachenmayer, **C. Genes**, G. Pupillo, P. Samori and T. W. Ebbesen  
[Nat. Mat. \(2015\)](#)
5. *Cavity enhanced transport of excitons*  
J. Schachenmayer, **C. Genes**, E. Tignone, and G. Pupillo  
[Phys. Rev. Lett. 114, 196403 \(2015\)](#)
6. *Protected subspace Ramsey metrology*  
L. Ostermann, D. Plankensteiner, H. Ritsch and **C. Genes**  
[Phys. Rev. A 90, 053823 \(2014\)](#)
7. *Transmissive optomechanical platforms with engineered spatial defects*  
E. Tignone, G. Pupillo and **C. Genes**  
[Phys. Rev. A 90, 053831 \(2014\)](#)
8. *Hybrid cavity mechanics with doped systems*  
A. Dantan, B. Nair, G. Pupillo and **C. Genes**  
[Phys. Rev. A 90, 033820 \(2014\)](#)
9. *Reconfigurable long-range phonon dynamics in optomechanical arrays*  
A. Xuereb, **C. Genes**, G. Pupillo, M. Paternostro and A. Dantan  
[Phys. Rev. Lett. 112, 133604 \(2014\).](#)
10. *Collectively-enhanced optomechanical coupling in periodic arrays of scatterers*  
A. Xuereb, **C. Genes** and A. Dantan  
[Phys. Rev. A. 88, 053803 \(2013\).](#)
11. *Enhanced optomechanical readout using optical coalescence*  
**C. Genes**, A. Xuereb, G. Pupillo and A. Dantan  
[Phys. Rev. A. 88, 033855 \(2013\).](#)
12. *Protected state enhanced quantum metrology with interacting two-level ensembles*  
L. Ostermann, H. Ritsch and **C. Genes**  
[Phys. Rev. Lett. 111, 123602 \(2013\).](#)

13. *Strong coupling and long-range collective interactions in optomechanical arrays*  
A. Xuereb, **C. Genes** and A. Dantan  
*Phys. Rev. Lett.* 109, 223601 (2012).
14. *Quantum-correlated motion and heralded entanglement of distant optomechanically coupled objects*  
A. W. Niedenzu, R. M. Sandner, **C. Genes** and H. Ritsch  
*Journal of Physics B: Atomic, Molecular and Optical Physics* 45, 245501, (2012).
15. *Atom-mirror cooling and entanglement using cavity Electromagnetic Induced Transparency*  
**C. Genes**, H. Ritsch, M. Drewsen and A. Dantan  
*Phys. Rev. A.* 84, 051801 (2011).
16. *Optical lattices with micromechanical mirrors*  
K. Stannigel, **C. Genes**, P. Zoller, P. Treutlein, S. Camerer, D. Hunger and T. W. Hänsch  
*Phys. Rev. A.* 82, 021803 (2010).
17. *Optomechanical approach to cooling of small polarisable particles in a strongly pumped ring cavity*  
R. J. Schulze, **C. Genes** and H. Ritsch  
*Phys. Rev. A.* 81, 063820 (2010).
18. *Single-atom cavity QED and optomechanics*  
M. Wallquist, K. Hammerer, P. Zoller, **C. Genes**, P. Zoller, M. Ludwig, F. Marquardt, P. Treutlein, J. Ye and H. J. Kimble  
*Phys. Rev. A.* 81, 021816 (2010).
19. *Phase-noise induced limitations on cooling and coherent evolution in optomechanical systems*  
P. Rabl, **C. Genes**, K. Hammerer and M. Aspelmeyer  
*Phys. Rev. A.* 81, 062819 (2009).
20. *Micromechanical oscillator ground-state cooling via resonant intracavity optical gain or absorption*  
**C. Genes**, H. Ritsch and D. Vitali  
*Phys. Rev. A.* 80, 061803 (2009).
21. *Strong coupling of a mechanical oscillator and a single atom*  
K. Hammerer, M. Wallquist, **C. Genes**, M. Ludwig, F. Marquardt, P. Treutlein, P. Zoller, J. Ye and H. J. Kimble  
*Phys. Rev. Lett.* 103, 063005 (2009).
22. *Cavity-assisted squeezing of a mechanical oscillator*  
K. Jähne, **C. Genes**, K. Hammerer, M. Wallquist, E. S. Polzik and P. Zoller  
*Phys. Rev. A.* 79, 063819 (2009).
23. *Sub-Plank-scale structures in a vibrating molecule in the presence of decoherence*  
S. Ghosh, U. Roy, **C. Genes** and D. Vitali  
*Phys. Rev. A.* 79, 052104 (2009).
24. *Robust entanglement of a micromechanical resonator with output optical fields*  
**C. Genes**, A. Mari, P. Tombesi and D. Vitali  
*Phys. Rev. A.* 78, 032316 (2008).
25. *Simultaneous cooling and entanglement of mechanical modes of a micromirror in an optical cavity*  
**C. Genes**, D. Vitali and P. Tombesi  
*New J. Phys.* 10, 095009 (2008).

26. *Emergence of atom-light-mirror entanglement inside an optical cavity*  
C. Genes, D. Vitali and P. Tombesi  
*Phys. Rev. A.* 77, 050307 (2008).
27. *Ground state cooling of a micromechanical oscillator: Comparing cold damping and cavity-assisted cooling schemes*  
C. Genes, D. Vitali, P. Tombesi, S. Gigan and M. Aspelmeyer  
*Phys. Rev. A.* 77, 033804 (2008).
28. *Self-cooling of a movable mirror to the ground state using radiation pressure*  
A. Dantan, C. Genes, D. Vitali and M. Pinard  
*Phys. Rev. A.* 77, 011804 (2008).
29. *Atomic entanglement generation with reduced decoherence via four-wave mixing*  
C. Genes and P. R. Berman  
*Phys. Rev. A.* 73, 063828 (2006).
30. *Cooperative spin decoherence and population transfer*  
C. Genes and P. R. Berman  
*Phys. Rev. A.* 73, 053809 (2006).
31. *Generating conditional atomic entanglement by measuring photon number in a single output channel*  
C. Genes and P. R. Berman  
*Phys. Rev. A.* 73, 013801 (2006).
32. *Spin squeezing via atom-cavity field coupling*  
C. Genes, P. R. Berman and A. G. Rojo  
*Phys. Rev. A.* 68, 043809 (2003).

## **Books and book contributions**

33. *Hybrid mechanical systems*  
P. Treutlein, C. Genes, K. Hammerer, M. Poggio and P. Rabl  
*Cavity Optomechanics*, (Springer, Berlin) (2014).
34. *Nonclassical states of light and mechanics*  
K. Hammerer, C. Genes, D. Vitali, P. Tombesi, G. Milburn and D. Bouwmeester  
*Cavity Optomechanics*, (Springer, Berlin) (2014).
35. *Quantum, effects in optomechanical systems*  
C. Genes, A. Mari, P. Tombesi and D. Vitali  
*Advances in Atomic, Molecular and Optical Physics* 57, 33-86 (2009).
36. *Exploiting optomechanical interactions in quantum information*  
C. Genes, P. Tombesi and D. Vitali  
*Advances in information optics and photonics* 6, 489-512 (2008).
37. *Atomic entanglement and decoherence*  
C. Genes  
ISBN-10:3-8364-6393-8, VDM Verlag (2008).