Ralf Betzholz

Personal Details

Name	Ralf Betzholz
Year of birth	1985
Email	ralf_betzholz@hust.edu.cn
Office Address	Luoyu Road 1037, Science Building N817, 430074 Wuhan, China
Group	Interdisciplinary Center
Title	Associate Professor
ORCiD	0000-0003-2570-7267

Education

2011 **Diplom (B.Sc. + M.Sc. equivalent)**, *Saarland University, Germany*.

2016 **Ph.D.**, *Saarland University*, Germany.

Employment

2017 - 2020 **Postdoctoral fellowship**, *Huazhong University of Science and Technology*, Wuhan, China.

2020 - present **Associate Professor**, *Huazhong University of Science and Technology*, Wuhan, China.

Publications

Physical Review A

R. Betzholz, Y. Liu*, and J. Cai
"Pulsed quantum-state reconstruction of a thermalizing harmonic oscillator"
Phys. Rev. A ***104***, *012421 (2021)*

Quantum Science and Technology

R. Betzholz, B. G. Taketani, and J. M. Torres*
"Breakdown signatures of the phenomenological Lindblad master equation in the strong optomechanical coupling regime"
Quantum Sci. Technol. ***6***, *015005 (2021)*

Physical Review A

J. Tian, Y. Liu, P. Yang, H. Liu*, R. Betzholz, R. Said, F. Jelezko, and J. Cai
"Optimal quantum control using phase-modulated driving fields"
Phys. Rev. A ***102***, *043707 (2020)*

New Journal of Physics	W. Song*, T. Du, H. Liu, R. Betzholz, and J. Cai "Nanotube Double Quantum Dot Spin Transducer for Scalable Quantum Information Processing" *New J. Phys.* ***22***, *063029 (2020)*
Physical Review Letters	P. Yang, M. Yu, R. Betzholz*, C. Arenz, and J. Cai* "Complete Quantum-State Tomography with a Local Random Field" *Phys. Rev. Lett.* ***124***, *010405 (2020)*
Physical Review Letters	Y. Liu, J. Tian, R. Betzholz*, and J. Cai* "Pulsed Quantum-State Reconstruction of Dark Systems" *Phys. Rev. Lett.* ***122***, *110406 (2019)*
Journal of Tissue Engineering and Regenerative Medicine	M. Jang, A. Kleber, T. Ruckelshausen, R. Betzholz, and A. Manz* "Differentiation of the human liver progenitor cell line (HepaRG) on a microfluidic-based biochip" *J. Tissue. Eng. Regen. Med.* ***13***, *482 (2019)*
Journal of Physics A	J. M. Torres, R. Betzholz*, and M. Bienert "Optomechanical damping basis" *J. Phys. A,* ***52***, *08LT02 (2019)*
Physical Review B	P. Cao, R. Betzholz*, and J. Cai "Scalable nuclear-spin entanglement mediated by a mechanical oscillator" *Phys. Rev. B* ***98***, *165404 (2018)*
Physical Review B	P. Cao, R. Betzholz*, S. Zhang, and J. Cai* "Entangling distant solid-state spins via thermal phonons" *Phys. Rev. B* ***96***, *245418 (2017)*
Physical Review A	L. Giannelli, R. Betzholz, L. Kreiner, M. Bienert, and G. Morigi "Laser and cavity cooling of a mechanical resonator with a Nitrogen-Vacancy center in diamond" *Phys. Rev. A* ***94***, *053835 (2016)*
European Physical Journal D	R. Betzholz* and M. Bienert "Resonance fluorescence of a laser-cooled atom in a non-harmonic potential" *Eur. Phys. J. D* ***70***, *215 (2016)*
Physical Review A	T. Holz, R. Betzholz*, and M. Bienert "Suppression of Rabi oscillations in hybrid optomechanical systems" *Phys. Rev. A* ***92***, *043822 (2015)*
Physical Review A	R. Betzholz, J. M. Torres, and M. Bienert "Quantum optical master equation for solid-state quantum emitters" *Phys. Rev. A* ***90***, *063818 (2014)*
Europhysics Letters	R. Betzholz, H. Gao*, Z. Zhao*, and U. Hartmann "Phenomenological theory of the giant magnetoimpedance of composite wires" *EPL* ***101***, *17005 (2013)*

Luoyu Road 1037, Science Building N817 – 430074, Wuhan, China
✉ *ralf_betzholz@hust.edu.cn*