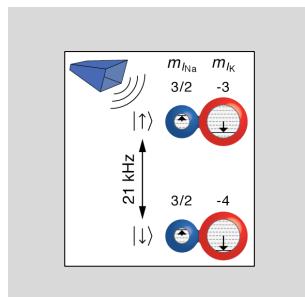


# Publications

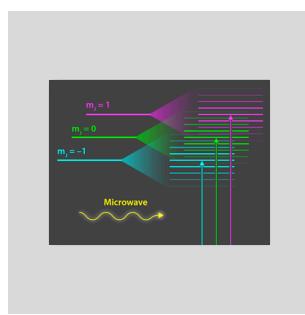
**Summary:** **19 publications** in refereed journals, thereof  
**4** in **Nature/Science**, **9** in **PRL/Nature Comm/Nature Physics**

**Citation Metrics:** **h-index 18**, **citations: >3200**, avg. citations per article: >160

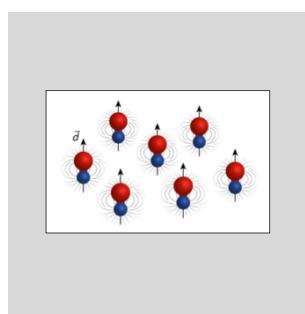
## Highlights



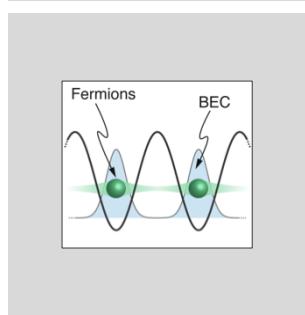
Jee Woo Park, Zoe Z. Yan, Huanqian Loh, **Sebastian A. Will**, and Martin W. Zwierlein  
*Second-Scale Nuclear Spin Coherence Time of Trapped Ultracold  $^{23}\text{Na}^{40}\text{K}$  Molecules*  
Science **357**, 372-375 (2017)



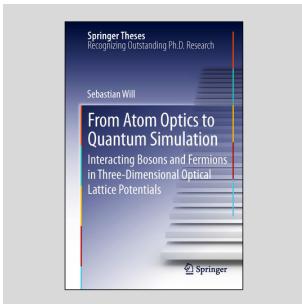
**Sebastian A. Will**, Jee Woo Park, Zoe Z. Yan, Huanqian Loh, and Martin W. Zwierlein  
*Coherent Microwave Control of Ultracold  $^{23}\text{Na}^{40}\text{K}$  Molecules*  
Phys. Rev. Lett. **116**, 225306 (2016)



Jee Woo Park, **Sebastian A. Will**, and Martin W. Zwierlein  
*Ultracold Dipolar Gas of Fermionic  $^{23}\text{Na}^{40}\text{K}$  Molecules in Their Absolute Ground State*  
Phys. Rev. Lett. **114**, 205302 (2015)



**Sebastian Will**, Deepak Iyer, and Marcos Rigol  
*Observation of Coherent Quench Dynamics in a Metallic Many-Body State of Fermionic Atoms*  
Nature Communications **6**, 6009 (2015)

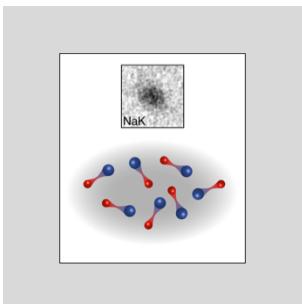


**Sebastian Will**

*From Atom Optics to Quantum Simulation - Interacting Bosons and Fermions in Three-Dimensional Optical Lattice Potentials*

**Springer Theses**, Springer, Heidelberg, ISBN 978-3-642-33632  
(2013)

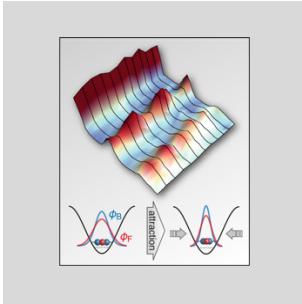
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Cheng-Hsun Wu, Jee Woo Park, Peyman Ahmadi, **Sebastian Will**, and Martin W. Zwierlein

*Ultracold Fermionic Feshbach Molecules of  $^{23}\text{Na}^{40}\text{K}$*

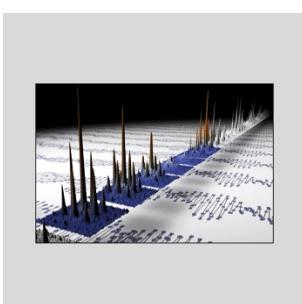
Phys. Rev. Lett. **109**, 085301 (2012)



**Sebastian Will**, Thorsten Best, Simon Braun, Ulrich Schneider, and Immanuel Bloch

*Coherent Interaction of a Single Fermion with a Small Bosonic Field*

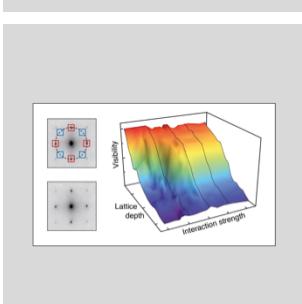
Phys. Rev. Lett. **106**, 115305 (2011)



**Sebastian Will**, Thorsten Best, Ulrich Schneider, Lucia Hackermüller, Dirk-Sören Lühmann, and Immanuel Bloch

*Time-Resolved Observation of Coherent Multi-Body Interactions in Quantum Phase Revivals*

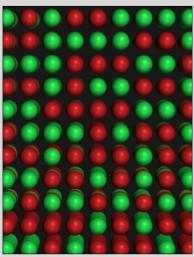
Nature **465**, 197-201 (2010)



Thorsten Best, **Sebastian Will**, Ulrich Schneider, Lucia Hackermüller, Dirk-Sören Lühmann, Dries van Oosten, and Immanuel Bloch

*Role of Interactions in  $^{87}\text{Rb}-^{40}\text{K}$  Bose-Fermi Mixtures in a 3D Optical Lattice*

Phys. Rev. Lett. **102**, 030408 (2009)



Ulrich Schneider, Lucia Hackermüller, **Sebastian Will**, Thorsten Best, Immanuel Bloch, Theo Costi, Rolf Helmes, Daniel Rasch, and Achim Rosch  
*Metallic and Insulating Phases of Repulsively Interacting Fermions in a 3D Optical Lattice*  
Science **322**, 1520-1525 (2008)

## In Preparation

- 3 Aden Lam, Claire Warner, Nicollò Bigagli, Ian Stevenson, **Sebastian Will**  
*Compact 2D Magneto-Optical Trap for Ultracold Atom Experiments*  
to be submitted to Review of Scientific Instruments
- 2 **Sebastian Will**  
*Quantum Control of Ultracold Dipolar Molecules*  
Nature Reviews Physics (invited review)
- 1 **Sebastian Will**  
*Ultracold Dipolar Molecules: Properties, Applications, Prospects*  
Rep. Prog. Phys. (invited review)

## Journal Articles (refereed)

- 19 Zoe Z. Yan, Jee Woo Park, Yiqi Ni, Huanqian Loh, **Sebastian Will**, Tijs Karman, and Martin W. Zwierlein  
*Resonant dipolar collisions of ultracold molecules induced by microwave dressing*  
arXiv:2003.02830 (2020) (under review, Phys. Rev. Lett.)
- 18 Jee Woo Park, Zoe Z. Yan, Huanqian Loh, **Sebastian A. Will**, and Martin W. Zwierlein  
*Second-Scale Nuclear Spin Coherence Time of Trapped Ultracold  $^{23}\text{Na}^{40}\text{K}$  Molecules*  
Science **357**, 372-375 (2017)
- 17 **Sebastian A. Will**, Jee Woo Park, Zoe Z. Yan, Huanqian Loh, and Martin W. Zwierlein  
*Coherent Microwave Control of Ultracold  $^{23}\text{Na}^{40}\text{K}$  Molecules*  
Phys. Rev. Lett. **116**, 225306 (2016)
- 16 Jee Woo Park, **Sebastian A. Will**, and Martin W. Zwierlein  
*Two-Photon Pathway to Ultracold Ground State Molecules of  $^{23}\text{Na}^{40}\text{K}$*   
New J. Phys. **17**, 075016 (2015)
- 15 Jee Woo Park, **Sebastian A. Will**, and Martin W. Zwierlein  
*Ultracold Dipolar Gas of Fermionic  $^{23}\text{Na}^{40}\text{K}$  Molecules in Their Absolute Ground State*  
Phys. Rev. Lett. **114**, 205302 (2015)

- 14** Sebastian Will, Deepak Iyer, and Marcos Rigol  
*Observation of Coherent Quench Dynamics in a Metallic Many-Body State of Fermionic Atoms*  
Nature Communications **6**, 6009 (2015)
- 13** Deepak Iyer, Rubem Mondaini, **Sebastian Will**, and Marcos Rigol  
*Coherent Quench Dynamics in the One-Dimensional Fermi-Hubbard Model*  
Phys. Rev. A **90**, 031602(R) (2014)
- 12** Cheng-Hsun Wu, Jee Woo Park, Peyman Ahmadi, **Sebastian Will**, and Martin W. Zwierlein  
*Ultracold Fermionic Feshbach Molecules of  $^{23}\text{Na}^{40}\text{K}$*   
Phys. Rev. Lett. **109**, 085301 (2012)
- 11** Jee Woo Park, Cheng-Hsun Wu, Ibon Santiago, Tobias G. Tiecke, **Sebastian Will**, Peyman Ahmadi, and Martin W. Zwierlein  
*Quantum Degenerate Bose-Fermi Mixture of Chemically Different Atomic Species with Widely Tunable Interactions*  
Phys. Rev. A **85**, 051602(R) (2012)
- 10** **Sebastian Will**, Thorsten Best, Simon Braun, Ulrich Schneider, and Immanuel Bloch  
*Coherent Interaction of a Single Fermion with a Small Bosonic Field*  
Phys. Rev. Lett. **106**, 115305 (2011)
- 9** Michael Buchhold, Ulf Bissbort, **Sebastian Will**, and Walter Hofstetter  
*Creating Exotic Condensates Through the Interplay of Quantum Phase Revival and Trap Dynamics*  
Phys. Rev. A **84**, 023631 (2011)
- 8** Ulrich Schneider, Lucia Hackermüller, Philipp Ronzheimer, **Sebastian Will**, Simon Braun, Immanuel Bloch, Eugene Demler, Stephan Mandt, David Rasch, and Achim Rosch  
*Fermionic Transport and Out-of-Equilibrium Dynamics in a Homogeneous Hubbard Model with Ultracold Atoms*  
Nature Physics **8**, 213-218 (2012)
- 7** **Sebastian Will**, Thorsten Best, Ulrich Schneider, Lucia Hackermüller, Dirk-Sören Lühmann, and Immanuel Bloch  
*Time-Resolved Observation of Coherent Multi-Body Interactions in Quantum Phase Revivals*  
Nature **465**, 197-201 (2010)
- 6** Lucia Hackermüller, Ulrich Schneider, Maria Moreno-Cardoner, Takuya Kitagawa, Thorsten Best, **Sebastian Will**, Eugene Demler, Ehud Altman, Immanuel Bloch, and Belén Paredes  
*Anomalous Expansion of Attractively Interacting Fermionic Atoms in an Optical Lattice*  
Science **327**, 1621-1624 (2010)
- 5** **Sebastian Will**, Belén Paredes, Lucia Hackermüller, Ulrich Schneider, Thorsten Best, Maria Moreno-Cardoner and Immanuel Bloch  
*Strongly Correlated Bosons and Fermions in Optical Lattices*  
Proceedings of the XIX ICOLS, **191**, World Scientific (2009)

- 4 Thorsten Best, **Sebastian Will**, Ulrich Schneider, Lucia Hackermüller, Dirk-Sören Lühmann, Dries van Oosten, and Immanuel Bloch  
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*Metallic and Insulating Phases of Repulsively Interacting Fermions in a 3D Optical Lattice*  
Science **322**, 1520-1525 (2008)
- 2 Caleb Christensen, **Sebastian Will**, Michele Saba, Gyu-Boong Jo, Yong-Il Shin, Wolfgang Ketterle, and David Pritchard  
*Trapping of Ultracold Atoms in a Hollow-Core Photonic Crystal Fiber*  
Phys. Rev. A **78**, 033429 (2008)
- 1 Gyu-Boong Jo, Yong-Il Shin, **Sebastian Will**, Thomas Pasquini, Michele Saba, Wolfgang Ketterle, Dave Pritchard, Mukund Vengalattore, and Mara Prentiss  
*Long Phase Coherence Time and Number Squeezing of Two Bose-Einstein Condensates on an Atom Chip*  
Phys. Rev. Lett. **98**, 030407 (2007)

## Book

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