

Selected Publications by Univ. Prof. Dr. Markus Arndt

Quantum Nanophysics Group, Faculty of Physics, University of Vienna

- 1) Y.Y. Fein, P. Geyer, P. Zwick, F. Kiałka, S. Pedalino, M. Mayor, S. Gerlich, M. Arndt, *Quantum superposition of molecules beyond 25 kDa*, **Nature Physics 15, 1242 (2019)**. DOI 10.1038/s41567-019-0663-9
- 2) G. Wachter, S. Kuhn, S. Minniberger, C. Salter, P. Asenbaum, J. Millen, M. Schneider, J. Schalko, U. Schmid, A. Felgner, D. Hüser, M. Arndt, M. Trupke, *Silicon microcavity arrays with open access and a finesse of half a million*, **Light: Science & Applications 8:37, 1-7 (2019)**.
- 3) J. Schätti, P. Rieser, U. Sezer, G. Richter, P. Geyer, G. G. Rondina, D. Häussinger, M. Mayor, A. Shayeghi, V. Köhler, M. Arndt, *Pushing the mass limit for intact launch and photoionization of large neutral biopolymers*, **Commun. Chem. 1, 93 (2018)**
- 4) C. Brand, B.A. Stickler, C. Knobloch, A. Shayeghi, K. Hornberger, M. Arndt, *Conformer Selection by Matter-Wave Interference*, **Phys. Rev. Lett. 121, 173002 (2018)**.
- 5) M. Debiossac, J. Schätti, M. Kriegleder, P. Geyer, A. Shayeghi, M. Mayor, M. Arndt, V. Köhler, *Tailored photocleavable peptides: Fragmentation and neutralization pathways in high vacuum*, **Phys Chem Chem Phys 20, 11412-11417 (2018)**.
- 6) S. Kuhn, B. A. Stickler, A. Kosloff, F. Patolsky, K. Hornberger, M. Arndt, J. Millen, *Optically driven ultra-stable nanomechanical rotor*, **Nature Communications 8, 1670 (2017)**
- 7) J. P. Cotter, C. Brand, C. Knobloch, Y. Lilach, O. Cheshnovsky, M. Arndt, *In search of multipath interference using large molecules*, **Science Advances 3, e1602478 (2017)**, DOI: 10.1126/sciadv.1602478
- 8) L. Mairhofer, S. Eibenberger, J. P. Cotter, M. Romirer, A. Shayeghi, M. Arndt, *Quantum-assisted metrology of neutral vitamins in the gas-phase*, **Angew. Chem. Int. Ed. 56, 10947 (2017)**, DOI: 10.1002/anie.201704916
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- 9) C. Brand, M. Sclafani, C. Knobloch, Y. Lilach, T. Juffmann, J. Kotakoski, C. Mangler, A. Winter, A. Turchanin, J. Meyer, O. Cheshnovsky, M. Arndt, *An atomically thin matter-wave beam splitter*, **Nature Nanotechnology 10, 845 - 848 (2015)**, DOI: 10.1038/nnano.2015.179
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- 10) M. Arndt, C. Brand,
Interference of atomic clocks,
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- 11) M. Tomandl, T. Mieling, C. Losert-Valiente Kroon, M. Hopf, M. Arndt,
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- 14) J. P. Cotter, S. Eibenberger, L. Mairhofer, X. Cheng, P. Asenbaum, M. Arndt;
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- 22) K. Hornberger, S. Gerlich, S. Nimmrichter, P. Haslinger, M. Arndt,
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- 27) S. Gerlich, M. Gring, H. Ulbricht, K. Hornberger, J. Tüxen, M. Mayor, M. Arndt,
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