# Eric Oelker

## List of Publications by Year in Descending Order



| | | | |
|---|---|---|---|
| 22 papers | 5,744 citations | 17 h-index | 25 g-index |
| 25 ext. papers | 6,973 ext. citations | 14.4 avg, IF | 4.02 L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 22 | Resolving the gravitational redshift across a millimetre-scale atomic sample.. *Nature*, **2022**, 602, 420-424 | 50.4 | 15 |
| 21 | Thermal noise and mechanical loss of SiO/TaO optical coatings at cryogenic temperatures. *Optics Letters*, **2021**, 46, 592-595 | 3 | 4 |
| 20 | Half-minute-scale atomic coherence and high relative stability in a tweezer clock. *Nature*, **2020**, 588, 408-413 | 50.4 | 33 |
| 19 | Optical atomic clock comparison through turbulent air. *Physical Review Research*, **2020**, 2, | 3.9 | 4 |
| 18 | Precision Metrology Meets Cosmology: Improved Constraints on Ultralight Dark Matter from Atom-Cavity Frequency Comparisons. *Physical Review Letters*, **2020**, 125, 201302 | 7.4 | 37 |
| 17 | Seconds-scale coherence on an optical clock transition in a tweezer array. *Science*, **2019**, 366, 93-97 | 33.3 | 43 |
| 16 | Demonstration of 4.8 □10□7 stability at 1 s for two independent optical clocks. *Nature Photonics*, **2019**, 13, 714-719 | 33.9 | 143 |
| 15 | Demonstration of a Timescale Based on a Stable Optical Carrier. *Physical Review Letters*, **2019**, 123, 173201 | 7.4 | 17 |
| 14 | JILA SrI optical lattice clock with uncertainty of $2.0 times 10^{-18}$. *Metrologia*, **2019**, 56, 065004 | 2.1 | 70 |
| 13 | Crystalline optical cavity at 4  K with thermal-noise-limited instability and ultralow drift. *Optica*, **2019**, 6, 240 | 8.6 | 57 |
| 12 | Quantum-Enhanced Advanced LIGO Detectors in the Era of Gravitational-Wave Astronomy. *Physical Review Letters*, **2019**, 123, 231107 | 7.4 | 182 |
| 11 | Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA. *Living Reviews in Relativity*, **2018**, 21, 3 | 32.5 | 543 |
| 10 | Prospects for observing and localizing gravitational-wave transients with Advanced LIGO, Advanced Virgo and KAGRA **2018**, 21, 1 | | 2 |
| 9 | The basic physics of the binary black hole merger GW150914. *Annalen Der Physik*, **2017**, 529, 1600209 | 2.6 | 45 |
| 8 | Search for Gravitational Waves Associated with Gamma-Ray Bursts during the First Advanced LIGO Observing Run and Implications for the Origin of GRB 150906B. *Astrophysical Journal*, **2017**, 841, 89 | 4.7 | 42 |
| 7 | Ultrastable Silicon Cavity in a Continuously Operating Closed-Cycle Cryostat at 4□K. *Physical Review Letters*, **2017**, 119, 243601 | 7.4 | 43 |
| 6 | GW170104: Observation of a 50-Solar-Mass Binary Black Hole Coalescence at Redshift 0.2. *Physical Review Letters*, **2017**, 118, 221101 | 7.4 | 1609 |

# List of Publications

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|---|---|---|---|
| 5 | Audio-Band Frequency-Dependent Squeezing for Gravitational-Wave Detectors. *Physical Review Letters*, **2016**, 116, 041102 | 7.4 | 61 |
| 4 | GW151226: Observation of Gravitational Waves from a 22-Solar-Mass Binary Black Hole Coalescence. *Physical Review Letters*, **2016**, 116, 241103 | 7.4 | 2136 |
| 3 | Ultra-low phase noise squeezed vacuum source for gravitational wave detectors. *Optica*, **2016**, 3, 682 | 8.6 | 43 |
| 2 | Squeezed light for advanced gravitational wave detectors and beyond. *Optics Express*, **2014**, 22, 21106-21 | 3.3 | 43 |
| 1 | Enhanced sensitivity of the LIGO gravitational wave detector by using squeezed states of light. *Nature Photonics*, **2013**, 7, 613-619 | 33.9 | 572 |