

**PUBLICATION METRICS**

- Clarivate Analytics <http://www.highlycited.com/> in Physics (1% top cited) in 2014-2023
- Total number of citations to date: WoK > 43,300 (GoS: >69'000) – 8100 cited/year
- Hirsch-Index (N papers cited N times): WoK: 91 (GoS: 108)
- Journal publications : Nature (20), Science (13), Nature Photonics (14), Comm. (33), Physics (11), Nanotech (4), PRL (23)
- For a complete list of publications, please refer to <https://www.epfl.ch/labs/k-lab/publications/>

**PEER REVIEWED PUBLICATIONS AS PRINCIPAL INVESTIGATOR AND (CO-) CORRESPONDING AUTHOR**

1. T. Blésin, W. Kao, A. Siddharth, R. N. Wang, A. Attanasio, H. Tian, S. A. Bhave, T. J. Kippenberg  
*"Bidirectional microwave-optical transduction based on integration of high-overtone bulk acoustic resonators and photonic circuits"*  
**Nature Communications (2024)**
2. Y. Liu, Z. Qiu, X. Ji, A. Bancora, G. Lihachev, J. Riemensberger, R. N. Wang, A. Voloshin, T. J. Kippenberg  
*"A fully hybrid integrated erbium-based laser"*  
**Nature Photonics (2024)**
3. S. Kono, J. Pan, M. Chegnizadeh, X. Wang, A. Youssefi, M. Scigliuzzo, T. J. Kippenberg  
*"Mechanically induced correlated errors on superconducting qubits with relaxation times exceeding 0.4 milliseconds"*  
**Nature Communications (2024)**
4. C. Wang, Z. Li, J. Riemensberger, G. Lihachev, M. Churaev, W. Kao, X. Ji, J. Zhang, T. Blésin, A. Davydova, Y. Chen, K. Huang, X. Wang, X. Ou, T. J. Kippenberg  
*"Lithium tantalate photonic integrated circuits for volume manufacturing"*  
**Nature (2024)**
5. A. Lukashchuk, H. K. Yildirim, A. Bancora, G. Lihachev, Y. Liu, Z. Qiu, X. Ji, A. Voloshin, S. A. Bhave, E. Charbon, T. J. Kippenberg  
*"Photonic-electronic integrated circuit-based coherent LiDAR engine"*  
**Nature Communications (2024)**
6. N. J. Engelsens, A. Beccari, T. J. Kippenberg  
*"Ultrahigh-quality-factor micro- and nanomechanical resonators using dissipation dilution"*  
**Nature Nanotechnology (2024)**
7. G. Huang, A. Beccari, N. J. Engelsens, T. J. Kippenberg  
*"Room-temperature quantum optomechanics using an ultra-low noise cavity"*  
**Nature (2024)**
8. Y. Yang, J-W. Henke, A. S. Raja, F. J. Kappert, G. Huang, G. Arend, Z. Qiu, A. Feist, R. N. Wang, A. Tusnin, A. Tikan, C. Ropers, T. J. Kippenberg  
*"Free-electron interaction with nonlinear optical states in microresonators"*  
**Science (2024)**
9. A. Siddharth, A. Attanasio, S. Bianconi, G. Lihachev, J. Zhang, Z. Qiu, A. Bancora, S. Kenning, R. N. Wang, A. Voloshin, S. A. Bhave, J. Riemensberger, T. J. Kippenberg  
*"Piezoelectrically tunable, narrow linewidth photonic integrated extended-DBR lasers"*  
**Optica (2024)**
10. A. Tusnin, A. Tikan, K. Komagata, T. J. Kippenberg  
*"Nonlinear dynamics and Kerr frequency comb formation in lattices of coupled microresonators"*  
**Communications Physics (2023)**
11. D. Pidgayko, A. Tusnin, J. Riemensberger, A. Stroganov, A. Tikan, T. J. Kippenberg  
*"Voltage-tunable optical parametric oscillator with an alternating dispersion dimer integrated on chip"*  
**Optica (2023)**
12. A. C. Triscari, A. Tusnin, A. Tikan, T. J. Kippenberg  
*"Quiet point engineering for low-noise microwave generation with soliton microcombs"*  
**Communications Physics (2023)**
13. Z. Li, R. N. Wang, G. Lihachev, J. Zhang, Z. Tan, M. Churaev, N. Kuznetsov, A. Siddharth, M. J.

- Bereyhi, J. Riemensberger, [Tobias J. Kippenberg](#)  
*"High density lithium niobate photonic integrated circuits"*  
**Nature Communications (2023)**
14. A. Youssefi, S. Kono, M. Chegnizadeh, [T. J. Kippenberg](#)  
*"A squeezed mechanical oscillator with millisecond quantum decoherence"*  
**Nature Physics (2023)**
15. A. Lukashchuk, J. Riemensberger, A. Tusnin, J. Liu, [T. J. Kippenberg](#)  
*"Chaotic microcomb-based parallel ranging"*  
**Nature Photonics (2023)**
16. G. Huang, N. J. Engelsen, O. Kfir, C. Ropers, [T. J. Kippenberg](#)  
*"Electron-Photon Quantum State Heralding Using Photonic Integrated Circuits"*  
**PRX Quantum (2023)**
17. A. Lukashchuk, J. Riemensberger, A. Stroganov, G. Navickaite, [T. J. Kippenberg](#)  
*"Chaotic microcomb inertia-free parallel ranging"*  
**APL Photonics (2023)**
18. M. Churayev, R. N. Wang, A. Riedhauser, V. Snigirev, T. Blésin, C. Moehl, M. H. Anderson, A. Siddharth, Y. Popoff, U. Drechsler, D. Caimi, S. Hoenl, J. Riemensberger, J. Liu, P. Seidler, [T. J. Kippenberg](#)  
*"A heterogeneously integrated lithium niobate-on-silicon nitride photonic platform"*  
**Nature Communications (2023)**
19. M. Anderson, A. Tikan, A. Tusnin, J. Riemensberger, A. Davydova, R. N. Wang, [T. J. Kippenberg](#)  
*"Dissipative solitons and switching waves in dispersion-modulated Kerr cavities"*  
**Physical Review X (2023)**
20. V. Snigirev, A. Riedhauser, G. Lihachev, M. Churayev, J. Riemensberger, R. N. Wang, A. Siddharth, G. Huang, C. Moehl, Y. Popoff, U. Drechsler, D. Caimi, S. Hoenl, J. Liu, P. Seidler, [T. J. Kippenberg](#)  
*"Ultrafast tunable lasers using lithium niobate integrated photonics"*  
**Nature (2023)**
21. A. Youssefi, S. Kono, A. BR. Nancora, M. Chegnizadeh, J. Pan, T. Vovk, [T. J. Kippenberg](#)  
*"Topological lattices realized in superconducting circuit optomechanics"*  
**Nature (2022)**
22. J. Riemensberger, N. Kuznetsov, J. Liu, J. He, R. N. Wang, [T. J. Kippenberg](#)  
*"A photonic integrated continuous-travelling-wave parametric amplifier"*  
**Nature (2022)**
23. M. Anderson, W. Weng, G. Lihachev, A. Tikan, J. Liu, [T. J. Kippenberg](#)  
*"Zero-dispersion Kerr solitons in optical microresonators"*  
**Nature Communications (2022)**
24. A. Feist, G. Huang, G. Arend, Y. Yang, J. -W. Henke, A. S. Raja, F. J. Kappert, R. N. Wang, H. Lourenço-Martins, Z. Qiu, J. Liu, O. Kfir, [T. J. Kippenberg](#), C. Ropers  
*"Cavity-mediated electron-photon pairs"*  
**Science (2022)**
25. A. Shams-Ansari, G. Huang, L. He, Z. Li, J. Holzgrafe, M. Jankowski, M. Churayev, P. Kharel, R. Cheng, D. Zhu, N. Sinclair, B. Desiatov, M. Zhang, [T. J. Kippenberg](#), M. Loncar  
*"Reduced material loss in thin-film lithium niobate waveguides"*  
**APL Photonics (2022)**
26. G. Lihachev, J. Riemensberger, W. Weng, J. Liu, H. Tan, A. Siddharth, V. Snigirev, V. Shadymov, A. Voloshin, R. N. Wang, J. He, S. A. Bhave, [T. J. Kippenberg](#)  
*"Low-noise frequency-agile photonic integrated lasers for coherent ranging"*  
**Nature Communications (2022)**
27. Y. Liu, Z. Qiu, X. Ji, A. Lukashchuk, J. J. He, J. Riemensberger, M. Hafermann, R. N. Wang, J. Liu, C. Ronning, [T. J. Kippenberg](#)  
*"A photonic integrated circuit-based erbium-doped amplifier"*  
**Science (2022)**
28. M. Gao, Q. F. Yang, Q. X. Ji, H. Wang, L. Wu, B. Shen, J. Liu, G. Huang, L. Chang, W. Xie, S. P. Yu, S. B. Papp, J. E. Bowers, [T. J. Kippenberg](#), K. J. Vahala

- "Probing material absorption and optical nonlinearity of integrated photonic materials"*  
**Nature Communications (2022)**
29. A. Lukashchuk, J. Riemensberger, M. Karpov, J. Liu, [T. J. Kippenberg](#)  
*"Dual chirped microcomb based parallel ranging at megapixel-line rates"*  
**Nature Communications (2022)**
  30. M. J. Beryyhi, A. Arabmoheghi, A. Beccari, S. A. Fedorov, G. Huang, [T. J. Kippenberg](#), N. J. Engelsen  
*"Perimeter modes of nanomechanical resonators exhibit quality factors exceeding  $10^9$  at room temperature"*  
**Physical Review X (2022)**
  31. M. J. Beryyhi, A. Beccari, R. Groth, S. A. Fedorov, A. Arabmoheghi, [T. J. Kippenberg](#), N. J. Engelsen  
*"Hierarchical tensile structures with ultralow mechanical dissipation"*  
**Nature Communications (2022)**
  32. A. Beccari, D. A. Visani, S. A. Fedorov, M. J. Beryyhi, V. Boureau, N. J. Engelsen, [T. J. Kippenberg](#)  
*"Strained crystalline nanomechanical resonators with ultralow dissipation"*  
**Nature Physics (2022)**
  33. L. Qiu, G. Huang, I. Shomroni, J. Pan, P. Seidler, [T. J. Kippenberg](#)  
*"Dissipative quantum feedback in measurements using a parametrically coupled microcavity"*  
**PRX Quantum (2022)**
  34. X. Ji, J. Liu, J. He, R. N. Wang, Z. Qiu, J. Riemensberger, [T. J. Kippenberg](#)  
*"Compact, spatial-mode-interaction-free, ultralow-loss, nonlinear photonic integrated circuits"*  
**Communications Physics (2022)**
  35. G. Lihachev, W. Weng, J. Liu, L. Chang, J. Guo, J. He, R. N. Wang, M. Anderson, Y. Liu, J. E. Bowers, [T. J. Kippenberg](#)  
*"Platicon microcomb generation using laser self-injection locking"*  
**Nature Communications (2022)**
  36. A. Siddharth, T. Wunderer, G. Lihachev, A. S. Voloshin, C. Haller, R. N. Wang, M. Teepe, Z. Yang, J. Liu, J. Riemensberger, N. Grandjean, N. Johnson, [T. J. Kippenberg](#)  
*"Near ultraviolet photonic integrated lasers based on silicon nitride"*  
**APL Photonics (2022)**
  37. A. Tikan, A. Tusnin, J. Riemensberger, M. Churaev, X. Ji, K. Komagata, R. N. Wang, J. Liu, [T. J. Kippenberg](#)  
*"Protected generation of dissipative Kerr solitons in supermodes of coupled optical microresonators"*  
**Science Advances (2022)**
  38. W. Weng, J. J. He, A. Kaszubowska-Anandarajah, P. M. Anandarajah, [T. J. Kippenberg](#)  
*"Microresonator dissipative kerr solitons synchronized to an optoelectronic oscillator"*  
**Physical Review A (2022)**
  39. A. Beccari, D. A. Visani, S. A. Fedorov, M. Beryyhi, V. Boureau, N. J. Engelsen, [T. J. Kippenberg](#)  
*"Strained crystalline nanomechanical resonators with quality factors above 10 billion"*  
**Nature Physics (2022)**
  40. J. -W. Henke, A. S. Raja, A. Feist, G. Huang, G. Arend, Y. Yang, J. Kappert, R. N. Wang, M. Möller, J. Pan, J. Liu, O. Kfir, C. Ropers, [T. J. Kippenberg](#)  
*"Integrated photonics enables continuous-beam electron phase modulation"*  
**Nature (2021)**
  41. T. Blésin, H. Tian, S. A. Bhave, [T. J. Kippenberg](#)  
*"Quantum coherent microwave-optical transduction using high-overtone bulk acoustic resonances"*  
**Physical Review A (2021)**
  42. H. Tian, J. Liu, A. Siddharth, R. N. Wang, T. Blésin, J. He, [T. J. Kippenberg](#), S. A. Bhave  
*"Magnetic-free silicon nitride integrated optical isolator"*  
**Nature Photonics (2021)**
  43. A. S. Raja, S. Lange, M. Karpov, K. Shi, X. Fu, R. Behrendt, D. Cletheroe, A. Lukashchuk, I. Haller, F. Karinou, B. Thomsen, K. Jozwik, J. Liu, P. Costa, [T. J. Kippenberg](#), H. Ballani  
*"Ultrafast optical circuit switching for data centers using integrated soliton microcombs"*  
**Nature Communications (2021)**
  44. W. Weng, M. Anderson, A. Siddharth, J. He, A. S. Raja, [T. J. Kippenberg](#)

- "Coherent terahertz-to-microwave link using electro-optic-modulated Turing rolls"*  
**Physical Review A (2021)**
45. K. Komagata, A. Tusnín, J. Riemensberger, M. Churaev, H. Guo, A. Tikan, [T. J. Kippenberg](#)  
*"Dissipative Kerr solitons in a photonic dimer on both sides of exceptional point"*  
**Communications Physics (2021)**
46. M. Bereyhi, [T. J. Kippenberg](#)  
*"Nanofabrication meets open science"*  
**Nature Nanotechnology (2021)**
47. C. Xiang, J. Liu, J. Guo, L. Chang, R. N. Wang, W. Weng, J. Peters, W. Xie, Z. Zhang, J. Riemensberger, J. Selvidge, [T. J. Kippenberg](#), J.E. Bowers  
*"Laser soliton microcombs heterogeneously intergrated on solicon"*  
**Science (2021)**
48. M. Anderson, R. Bouchand, J. Liu, W. Weng, E. Obrzud, T. Herr, [T. J. Kippenberg](#)  
*"Photonic chip-based resonant supercontinuum via pulse-driven Kerr microresonator solitons"*  
**Optica (2021)**
49. A. Youssefi, I. Shomroni, Y. J. Joshi, N. R. Bernier, A. Lukashchuk, P. Uhrich, L. Qiu, [T. J. Kippenberg](#)  
*"A cryogenic electro-optic interconnect for superconducting devices"*  
**Nature Electronics (2021)**
50. J. Liu, G. Huang, R. N. Wang, J. He, A. S. Raja, T. Liu, N. J. Engelsen, [T. J. Kippenberg](#)  
*"High-yield, wafer-scale fabrication of ultralow-loss, dispersion-engineered silicon nitride photonic circuits"*  
**Nature Communications (2021)**
51. J. He, I. Paradisanos, T. Liu, A. R. Cadore, J. Liu, M. Churaev, R. N. Wang, A. S. Raja, C. Javerzac-Galy, Ph. Rölli, D. De Fazio, B. L. T. Rosa, S. Tongay, G. Soavi, A. C. Ferrari, [T. J. Kippenberg](#)  
*"Low-loss integrated nanophotonic circuits with layered semiconductor materials"*  
**Nano Letters (2021)**
52. W. Weng, A. Kaszubowska-Anandarajah, J. He, P. D. Lakshmijayasimha, E. Lucas, J. Liu, P. M. Anandarajah, [T. J. Kippenberg](#)  
*"Gain-switched semiconductor laser driven soliton microcombs"*  
**Nature Communications (2021)**
53. P. J. Marchand, J. Riemensberger, J. C. Skehan, J-J. Ho, M. H. P. Pfeiffer, J. Liu, C. Hauger, T. Lasser, [T. J. Kippenberg](#)  
*"Soliton microcomb based spectral domain optical coherence tomography"*  
**Nature Communications (2021)**
54. A. S. Voloshin, N. M. Kondratiev, G. Lihachev, J. Liu, V. E. Lobanov, N. Y. Dmitriev, W. Weng, [T. J. Kippenberg](#), I. A. Bilenko  
*"Dynamics of soliton self-injection locking in optical microresonators"*  
**Nature Communications (2021)**
55. J. Feldmann, N. Youngblood, M. Karpov, H. Gehring, X. Li, M. Stappers, M. Le Gallo, X. Fu, A. Lukashchuk, A. S. Raja, J. Liu, C. D. Wright, A. Sebastian, [T. J. Kippenberg](#), W. H. P. Pernice, H. Bhaskaran  
*"Parallel convolutional processing using an integrated photonic tensor core"*  
**Nature (2021)**
56. A. Tikan, J. Riemensberger, K. Komagata, S. Hönl, M. Churaev, C. Skehan, H. Guo, R. N. Wang, J. Liu, P. Seidler, [T. J. Kippenberg](#)  
*"Emergent nonlinear phenomena in a driven dissipative photonic dimer"*  
**Nature Physics (2021)**
57. S. A. Fedorov, A. Beccari, A. Arabmoheghi, D. J. Wilson, N. J. Engelsen, [T. J. Kippenberg](#)  
*"Thermal intermodulation noise in cavity-based measurements"*  
**Optica (2020)**
58. H. Guo, W. Weng, J. Liu, F. Yang, W. Hänsel, C.-S. Brès, L. Thevenaz, R. Holzwarth, [T. J. Kippenberg](#)  
*"Nanophotonic supercontinuum based mid-infrared dual-comb spectroscopy"*  
**Optica (2020)**

59. P. Roelli, D. Martin-Cano, [T. J. Kippenberg](#), C. Galland  
*"Molecular platform for frequency upconversion at the single-photon level"*  
**Physical Review X (2020)**
60. W. Weng, A. Kaszubowska-Anandarajah, J. Liu, P. M. Anandarajah, [T. J. Kippenberg](#)  
*"Frequency division using a soliton-injected semiconductor gain-switched frequency comb"*  
**Science Advances (2020)**
61. J. Hu, J. He, J. Liu, A. S. Raja, M. Karpov, A. Lukashchuk, [T. J. Kippenberg](#), C.-S. Brès  
*"Reconfigurable radiofrequency filters based on versatile soliton microcombs"*  
**Nature Communications (2020)**
62. A. K. Tusnin, A. M. Tikan, [T. J. Kippenberg](#)  
*"Nonlinear states and dynamics in a synthetic frequency dimension"*  
**Physical Review A (2020)**
63. J. Liu, H. Tian, E. Lucas, A. S. Raja, G. Lihachev, R. N. Wang, J. He, T. Liu, M. Anderson, W. Weng, S. A. Bhave, [T. J. Kippenberg](#)  
*"Monolithic piezoelectric control of soliton microcombs"*  
**Nature (2020)**
64. B. Shen, L. Chang, J. Liu, H. Wang, Q-F. Yang, C. Xiang, R. N. Wang, J. He, T. Liu, W. Xie, J. Guo, D. Kinghorn, L. Wu, Q-X. Ji, [T. J. Kippenberg](#), K. Vahala, J. E. Bowers  
*"Integrated turnkey soliton microcombs"*  
**Nature (2020)**
65. H. Tian, J. Liu, B. Dong, J. C. Skehan, M. Zervas, [T. J. Kippenberg](#), S. A. Bhave  
*"Hybrid integrated photonics using bulk acoustic resonators"*  
**Nature Communications (2020)**
66. J. Liu, E. Lucas, A. S. Raja, J. He, J. Riemensberger, R. N. Wang, M. Karpov, H. R. Guo, R. Bouchand, [T. J. Kippenberg](#)  
*"Photonic microwave generation in the X- and K-band using integrated soliton microcombs"*  
**Nature Photonics (2020)**
67. W. Weng, R. Bouchand, E. Lucas, E. Obrzud, T. Herr, [T. J. Kippenberg](#)  
*"Heteronuclear soliton molecules in optical microresonators"*  
**Nature Communications (2020)**
68. J. Riemensberger, A. Lukashchuk, M. Karpov, W. Weng, E. Lucas, J. Liu, [T. J. Kippenberg](#)  
*"Massively parallel coherent laser ranging using a soliton microcomb"*  
**Nature (2020)**
69. L. Qiu, I. Shomroni, P. Seidler, [T. J. Kippenberg](#)  
*"Laser cooling of a nanomechanical oscillator to the zero-point energy"*  
**Physical Review Letters (2020)**
70. W. Weng, R. Bouchand, [T. J. Kippenberg](#)  
*"Formation and collision of multistability-enabled composite dissipative Kerr solitons"*  
**Physical Review X (2020)**
71. I. Shomroni, L. Qiu, [T. J. Kippenberg](#)  
*"Optomechanical generation of a mechanical catlike state by phonon subtraction"*  
**Physical Review A (2020)**
72. A. S. Raja, J. Liu, N. Volet, R. N. Wang, J. He, E. Lucas, R. Bouchand, P. Morton, J. E. Bowers, [T. J. Kippenberg](#)  
*"Chip-based soliton microcomb module using a hybrid semiconductor laser"*  
**Optics Express (2020)**
73. E. Lucas, P. Brochard, R. Bouchand, S. Schilt, T. Südmeyer, [T. J. Kippenberg](#)  
*"Ultralow-noise photonic microwave synthesis using a soliton microcomb-based transfer oscillator"*  
**Nature Communications (2020)**
74. S. A. Fedorov, A. Beccari, N. J. Engelsens, [T. J. Kippenberg](#)  
*"Fractal-like Mechanical Resonators with a Soft-Clamped Fundamental Mode"*  
**Physical Review Letters (2020)**
75. D. J. Wilson, K. Schneider, S. Hoenl, M. Anderson, Y. Baumgartner, L. Czornomaz, [T. J. Kippenberg](#), P. Seidler  
*"Integrated gallium phosphide nonlinear photonics"*

**Nature Photonics (2020)**

76. W. Weng, R. Bouchand, E. Lucas, [T. J. Kippenberg](#)  
*"Polychromatic Cherenkov Radiation Induced Group Velocity Symmetry Breaking in Counterpropagating Dissipative Kerr Solitons"*  
**Physical Review Letters (2019)**
77. L. Qiu, I. Shomroni, M. A. Ioannou, N. Piro, D. Malz, A. Nunnenkamp, [T. J. Kippenberg](#)  
*"Floquet dynamics in the quantum measurement of mechanical motion"*  
**Physical Review A (2019)**
78. I. Shomroni, A. Youssefi, N. Sauerwein, L. Qiu, P. Seidler, D. Malz, A. Nunnenkamp, [T. J. Kippenberg](#)  
*"Two-Tone Optomechanical Instability and Its Fundamental Implications for Backaction-Evading Measurements"*  
**Physical Review X (2019)**
79. M. Karpov, M. H. P. Pfeiffer, H. Guo, W. Weng, J. Liu, [T. J. Kippenberg](#)  
*"Dynamics of soliton crystals in optical microresonators"*  
**Nature Physics (2019)**
80. G. Huang, E. Lucas, J. Liu, A. S. Raja, G. Lihachev, M. L. Gorodetsky, N. J. Engelsens, [T. J. Kippenberg](#)  
*"Thermorefractive noise in silicon-nitride microresonators"*  
**Physical Review A (2019)**
81. I. Shomroni, L. Qiu, D. Malz, A. Nunnenkamp, [T. J. Kippenberg](#)  
*"Optical Backaction-Evading Measurement of a Mechanical Oscillator"*  
**Nature Communications (2019)**
82. A. S. Raja, A. S. Voloshin, H. Guo, S. E. Agafonova, J. Liu, A. S. Gorodnitskiy, M. Karpov, N. G. Pavlov, E. Lucas, R. R. Galiev, A. E. Shitikov, J. D. Jost, M. L. Gorodetsky, [T. J. Kippenberg](#)  
*"Electrically pumped photonic integrated soliton microcomb"*  
**Nature Communications (2019)**
83. M. J. Beryhi, A. Beccari, S. A. Fedorov, A. H. Ghadimi, R. Schilling, D. J. Wilson, N. J. Engelsens, [T. J. Kippenberg](#)  
*"Clamp-tapering increases the quality factor of stressed nanobeams"*  
**Nano Letters (2019)**
84. S. A. Fedorov, N. J. Engelsens, A. H. Ghadimi, M. J. Beryhi, R. Schilling, D. J. Wilson, [T. J. Kippenberg](#)  
*"Generalized dissipation dilution in strained mechanical resonators"*  
**Physical Review B (2019)**
85. W. Weng, E. Lucas, G. Lihachev, V. E. Lobanov, H. Guo, M. L. Gorodetsky, [T. J. Kippenberg](#)  
*"Spectral purification of microwave signals with disciplined dissipative Kerr solitons"*  
**Physical Review Letters (2019)**
86. E. Lucas, G. Lihachev, R. Bouchand, N. G. Pavlov, A. S. Raja, M. Karpov, M. L. Gorodetsky, [T. J. Kippenberg](#)  
*"Spatial multiplexing of soliton microcombs"*  
**Nature Photonics (2018)**
87. J. Liu, A. S. Raja, M. Karpov, B. Ghadiani, M. H. P. Pfeiffer, B. T. Du, N. J. Engelsens, H. Guo, M. Zervas, [T. J. Kippenberg](#)  
*"Ultralow-power chip-based soliton microcombs for photonic integration"*  
**Optica (2018)**
88. L. D. Tóth, N. R. Bernier, A. K. Feofanov, [T. J. Kippenberg](#)  
*"A maser based on dynamical backaction on microwave light"*  
**Physics Letters A (2018)**
89. S. A. Fedorov, V. Sudhir, R. Schilling, H. Schütz, D. J. Wilson, [T. J. Kippenberg](#)  
*"Evidence for structural damping in a high-stress silicon nitride nanobeam and its implications for Quantum optomechanics"*  
**Physics Letters A (2018)**
90. N. R. Bernier, L. D. Tóth, A. K. Feofanov, [T. J. Kippenberg](#)

- "Level attraction in a microwave optomechanical circuit"*  
**Physical Review A (2018)**
91. M. H. P. Pfeiffer, J. Liu, A. S. Raja, T. Morais, B. Ghadiani, T. J. Kippenberg  
*"Ultra-smooth silicon nitride waveguides based on the Damascene reflow process: fabrication and loss origins"*  
**Optica (2018)**
92. J. Liu, A. S. Raja, M. H. P. Pfeiffer, C. Herkommer, H. Guo, M. Zervas, M. Geiselmann, T. J. Kippenberg  
*"Double inverse nanotapers for efficient light coupling to integrated photonic devices"*  
**Optic Letters (2018)**
93. M. H. P. Pfeiffer, C. Herkommer, J. Liu, T. Morais, M. Zervas, M. Geiselmann, T. J. Kippenberg  
*"Photonic Damascene Process for Low-Loss, High-Confinement Silicon Nitride Waveguides"*  
**IEEE Journal of Selected Topics in Quantum Electronics (2018)**
94. H. Guo, C. Herkommer, A. Billat, D. Grassani, C. Zhang, M. H. P. Pfeiffer, W. Weng, C.-S. Brès, T. J. Kippenberg  
*"Mid-infrared frequency comb via coherent dispersive wave generation in silicon nitride nanophotonic waveguides"*  
**Nature Photonics (2018)**
95. A. H. Ghadimi, S. A. Fedorov, N. J. Engelsen, M. J. Beryhi, R. Schilling, D. J. Wilson, T. J. Kippenberg  
*"Elastic strain engineering for ultralow mechanical dissipation"*  
**Science (2018)**
96. M. Anderson, N. G. Pavlov, J. D. Jost, G. Lihachev, J. Liu, T. Morais, M. Zervas, M. L. Gorodetsky, T. J. Kippenberg  
*"Highly efficient coupling of crystalline microresonators to integrated photonic waveguides"*  
**Optics Letters (2018)**
97. C. Javerzac-Galy, A. Kumar, R. D. Schilling, N. Piro, S. Khorasani, M. Barbone, I. Goykhman, J. B. Khurgin, C. Ferrari, T. J. Kippenberg  
*"Excitonic emission of monolayer semiconductors near-field coupled to high-Q microresonators"*  
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*"Photonic chip-based soliton frequency combs covering the biological imaging window"*  
**Nature Communications (2018)**
99. P. Trocha, M. Karpov, D. Ganin, M. H. P. Pfeiffer, A. Kordts, S. Wolf, J. Krockenberger, P. Marin-Palomo, C. Weimann, S. Randel, W. Freude, T. J. Kippenberg, C. Koos  
*"Ultrafast optical ranging using microresonator soliton frequency combs"*  
**Science (2018)**
100. T. J. Kippenberg, A. L. Gaeta, M. Lipson, M. L. Gorodetsky  
*"Dissipative Kerr solitons in optical microresonators"*  
**Science (2018)**
101. D. Malz, D. Toth, Laszlo, N. Bernier, A. K. Feofanov, T. J. Kippenberg, A. Nunnenkamp.  
*"Quantum-Limited Directional Amplifiers with Optomechanics"*  
**Physical Review Letters (2018)**
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**Physical Review X (2017)**
103. E. Lucas, M. Karpov, H. Guo, M. L. Gorodetsky, T. J. Kippenberg  
*"Breathing dissipative solitons in optical microresonators"*  
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104. V. Sudhir, R. Schilling, S. A. Fedorov, H. Schütz, D. J. Wilson, T. J. Kippenberg  
*"Quantum correlations of light from a room-temperature mechanical oscillator"*  
**Physical Review X (2017)**
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106. L. D. Tóth, N. R. Bernier, A. Nunnenkamp, A. K. Feofanov, T. J. Kippenberg  
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107. M. H. P. Pfeiffer, C. Herkommer, J. Liu, H. Guo, M. Karpov, E. Lucas, M. Zervas, T. J. Kippenberg  
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**Optica (2017)**
108. P. Marin-Palomo, J. N. Kemal, M. Karpov, A. Kordts, J. Pfeifle, M. H. P. Pfeiffer, P. Trocha, S. Wolf, V. Brasch, M. H. Anderson, R. Rosenberger, K. Vijayan, W. Freude, T. J. Kippenberg, C. Koos  
*"Microresonator-based solitons for massively parallel coherent optical communications"*  
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109. A. H. Ghadimi, D. J. Wilson, T. J. Kippenberg  
*"Radiation and Internal Loss Engineering of High-Stress Silicon Nitride Nanobeams"*  
**Nano Letters (2017)**
110. E. Lucas, J. D. Jost, T. J. Kippenberg  
*"Detuning-dependent properties and dispersion-induced instabilities of temporal dissipative Kerr solitons in optical microresonators"*  
**Physical Review A (2017)**
111. M. H. P. Pfeiffer, J. Liu, M. Geiselmann, T. J. Kippenberg  
*"Coupling Ideality of Integrated Planar High-Q Microresonators"*  
**Physical Review Applied (2017)**
112. V. Sudhir, D. J. Wilson, R. Schilling, H. Schütz, A. H. Ghadimi, A. Nunnenkamp, T. J. Kippenberg  
*"Appearance and disappearance of quantum correlations in measurement-based feedback control of a mechanical oscillator"*  
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*"Universal dynamics and deterministic switching of dissipative Kerr solitons in optical microresonators"*  
**Nature Physics (2017)**
114. V. Brasch, E. Lucas, J. D. Jost, M. Geiselmann, T. J. Kippenberg  
*"Self-referenced photonic chip soliton Kerr frequency comb"*  
**Light: Science & Applications (2017)**
115. V. Brasch, M. Geiselmann, M. H. P. Pfeiffer, T. J. Kippenberg  
*"Bringing short-lived dissipative Kerr soliton states in microresonators into a steady state"*  
**Optics Express (2016)**
116. C. Lecaplain, C. Javerzac-Galy, M. L. Gorodetsky, T. J. Kippenberg  
*"Mid-infrared ultra-high-Q resonators based on fluoride crystalline materials"*  
**Nature Communications (2016)**
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*"On-chip microwave-to-optical quantum coherent converter based on a superconducting resonator coupled to an electro-optic microresonator"*  
**Physical Review A (2016)**
118. J. Liu, V. Brasch, M. H. P. Pfeiffer, A. Kordts, A. N. Kamel, H. Guo, M. Geiselmann, and T. J. Kippenberg  
*"Frequency-comb-assisted broadband precision spectroscopy with cascaded diode lasers"*  
**Optics Letters (2016)**
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*"A strongly coupled Lambda-type micromechanical system"*  
**Applied Physics Letters (2016)**
120. R. Schilling, H. Schütz, A. H. Ghadimi, V. Sudhir, D. J. Wilson, T. J. Kippenberg  
*"Near-field integration of a SiN nanobeam and a SiO<sub>2</sub> microcavity for Heisenberg-limited displacement sensing"*  
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121. M. H. P. Pfeiffer, A. Kordts, V. Brasch, M. Zervas, M. Geiselmann, J. D. Jost, T. J. Kippenberg

- "Photonic Damascene process for integrated high-Q microresonator based nonlinear photonics"*  
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122. M. Karpov, H. Guo, A. Kordts, V. Brasch, M. Pfeiffer, M. Zervas, M. Geiselmann, T. J. Kippenberg  
*"Raman Self-Frequency Shift of Dissipative Kerr Solitons in an Optical Microresonator"*  
**Physical Review Letters (2016)**
123. A. Kordts, M. H. P. Pfeiffer, H. Guo, V. Brasch, T. J. Kippenberg  
*"Higher order mode suppression in high-Q anomalous dispersion SiN microresonators for temporal dissipative Kerr soliton formation"*  
**Optics Letters (2016)**
124. P. Roelli, C. Galland, N. Piro and T. J. Kippenberg  
*"Molecular cavity optomechanics as a theory of plasmon-enhanced Raman scattering"*  
**Nature Nanotechnology (2016)**
125. V. Brasch, M. Geiselmann, T. Herr, G. Lihachev, M. H. P. Pfeiffer, M. L. Gorodetsky, T. J. Kippenberg  
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**Optica (2015)**
129. V. Brasch, Q. Chen, S. Schiller, T. J. Kippenberg  
*"Radiation hardness of high-Q silicon nitride microresonators for space compatible integrated optics"*  
**Optics Express (2014)**
130. M. Aspelmeyer, T. J. Kippenberg, F. Marquardt  
*"Cavity optomechanics"*  
**Reviews of Modern Physics (2014)**
131. T. Herr, V. Brasch, J.D. Jost, I. Migordiskiy, M. L. Gorodetsky, T. J. Kippenberg  
*"Mode spectrum and temporal soliton formation in optical microresonators"*  
**Physical Review Letters (2014)**
132. A. Nunnenkamp, V. Sudhir, A. **Roulet**, A. Feovanov, T. J. Kippenberg  
*"Quantum-limited amplification and parametric instability in the reversed dissipation regime of cavity optomechanics"*  
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133. C. Galland, N. Sangouard, N. Piro, N. Gisin, T. J. Kippenberg  
*"Heralded Single-Phonon Preparation, Storage, and Readout in Cavity Optomechanics"*  
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**Nature Photonics (2014)**
135. T. Herr, V. Brasch, J.D. Jost, C.Y. Wang, N. M. Kondratiev, M. L. Gorodetsky, T. J. Kippenberg  
*"Temporal solitons in optical microresonators"*  
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136. E. Gavartin, P. Verlot, T. J. Kippenberg  
*"Stabilization of a linear nanomechanical oscillator to its ultimate thermodynamic limit"*  
**Nature Communications (2013)**
137. R. Thijssen, E. Verhagen, T. J. Kippenberg, A. Polman  
*"Plasmon nanomechanical coupling for nanoscale transduction"*  
**Nano Letters (2013)**

138. T. Ramos, V. Sudhir, K. Stannigel, P. Zoller, [T. J. Kippenberg](#)  
*"Nonlinear Quantum Optomechanics via Individual Intrinsic Two-Level Defects"*  
**Physical Review Letters (2013)**
139. R. Riviere, O. Arcizet, A. Schliesser, [T. J. Kippenberg](#)  
*"Evanescent straight tapered-fiber coupling of ultra-high  $Q$  optomechanical micro-resonators in a low-vibration helium-4 exchange-gas cryostat"*  
**Review of Scientific Instruments (2013)**
140. [T. J. Kippenberg](#), A. Schliesser, M. L. Gorodetsky  
*"Phase noise measurement of external cavity diode lasers and implications for optomechanical sideband cooling of GHz mechanical modes"*  
**New Journal of Physics (2013)**
141. X. Zhou, F. Hocke, A. Schliesser, A. Marx, H. Huebl, R. Gross, [T. J. Kippenberg](#)  
*"Slowing, advancing and switching of microwave signals using circuit nanoelectromechanics"*  
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142. C. Y. Wang, T. Herr, P. Del'Haye, A. Schliesser, J. Hofer, R. Holzwarth, T. W. Hänsch, N. Picqué, [T. J. Kippenberg](#)  
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**Nature Communications (2013)**
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**Optics Express (2012)**
144. E. Gavartin, P. Verlot, [T. J. Kippenberg](#)  
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**Nature Nanotechnology (2012)**
145. T. Herr, K. Hartinger, J. Riemensberger, C. Y. Wang, E. Gavartin, R. Holzwarth, M. L. Gorodetsky, [T. J. Kippenberg](#)  
*"Universal formation dynamics and noise of Kerr-frequency combs in microresonators"*  
**Nature Photonics (2012)**
146. E. Verhagen, S. Deléglise, S. Weis, A. Schliesser, [T. J. Kippenberg](#)  
*"Quantum-coherent coupling of a mechanical oscillator to an optical cavity mode"*  
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147. G. Anetsberger, E. M. Weig, J. P. Kotthaus, [T. J. Kippenberg](#)  
*"Cavity optomechanics and cooling nanomechanical oscillators using microresonator enhanced evanescent near-field coupling"*  
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148. P. Del'Haye, T. Herr, E. Gavartin, M. L. Gorodetsky, R. Holzwarth, [T. J. Kippenberg](#)  
*"Octave spanning tunable frequency comb from a microresonator"*  
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150. R. Riviere, S. Deléglise, S. Weis, E. Gavartin, O. Arcizet, A. Schliesser, [T. J. Kippenberg](#)  
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*"Optomechanical coupling in a two-dimensional photonic crystal defect cavity"*  
**Physical Review Letters (2011)**
152. G. Anetsberger, E. Gavartin, O. Arcizet, Q. P. Unterreithmeier, E. M. Weig, M. L. Gorodetsky, J. P. Kotthaus, [T. J. Kippenberg](#)  
*"Measuring nanomechanical motion with an imprecision below the standard quantum limit"*  
**Physical Review A, Rapid Communication (2010)**
153. S. Weis, R. Riviere, S. Deléglise, E. Gavartin, O. Arcizet, A. Schliesser, [T. J. Kippenberg](#)  
*"Optomechanically Induced Transparency"*  
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154. M. L. Gorodetsky, A. Schliesser, G. Anetsberger, S. Deléglise, T. J. Kippenberg  
*"Determination of the vacuum optomechanical coupling rate using frequency noise calibration"*  
**Optics Express (2010)**
155. J. Hofer, A. Schliesser, T. J. Kippenberg  
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**Physical Review A, Rapid Communication (2010)**
156. J. Dobrindt, T. J. Kippenberg  
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157. G. Anetsberger, O. Arcizet, Q. P. Unterreithmeier, E. M. Weig, J. P. Kotthaus, T. J. Kippenberg  
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**Nature Photonics (2009)**
160. T. J. Kippenberg, A. Tchebotareva, J. Kalkman, A. Polman, K. J. Vahala  
*"Purcell-Factor Enhanced Scattering from Si Nanocrystals in an Optical Microcavity"*  
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161. O. Arcizet, R. Riviere, A. Schliesser, G. Anetsberger, T. J. Kippenberg  
*"Cryogenic properties of optomechanical silica microcavities"*  
**Physical Review A (2009)**
162. J. Dobrindt, I. Wilson-Rae, T. J. Kippenberg  
*"Parametric Normal-Mode Splitting in Cavity Optomechanics"*  
**Physical Review Letters (2008)**
163. T. J. Kippenberg  
*"Photonics: Nanomechanics gets the shakes"*  
**News and Views Commentary, Nature (2008)**
164. G. Anetsberger, R. Riviere, A. Schließer, O. Arcizet, T. J. Kippenberg  
*"Ultralow-Dissipation Optomechanical Resonators on a Chip"*  
**Nature Photonics (2008)**
165. A. Schliesser, G. Anetsberger, R. Riviere, O. Arcizet, T. J. Kippenberg  
*"High-Sensitivity Monitoring of Micromechanical Vibration using Optical Whispering Gallery Mode Resonators"*  
**New Journal of Physics (2008)**
166. I. Wilson-Rae, N. Nooshi, J. Dobrindt, T. J. Kippenberg, W. Zwerger  
*"Cavity-assisted backaction cooling of mechanical resonators"*  
**New Journal of Physics (2008)**
167. P. Del'Haye, O. Arcizet, A. Schliesser, R. Holzwarth, T. J. Kippenberg  
*"Full stabilization of a microresonator-based optical frequency comb"*  
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168. T. J. Kippenberg, K. J. Vahala  
*"Cavity Optomechanics: Back-Action at the Mesoscale"*  
**Science (2008)**
169. A. Schliesser, R. Riviere, G. Anetsberger, O. Arcizet, T. J. Kippenberg  
*"Resolved-sideband Cooling of a Mechanical Oscillator"*  
**Nature Physics (2008)**
170. P. Del'Haye, A. Schliesser, O. Arcizet, T. Wilken, R. Holtzwarth, T. J. Kippenberg  
*"Optical frequency comb generation from a monolithic microresonator"*  
**Nature (2007) & Nature News and Views**

171. T. J. Kippenberg, K. J. Vahala  
*"Cavity Opto-mechanics"*  
**Review Article, Optics Express (2007)**
172. I. Wilson-Rae, N. Nooshi, W. Zwerger, T. J. Kippenberg  
*"Theory of ground state cooling of a mechanical oscillator using dynamical backaction"*  
**Physical Review Letters (2007)**
173. R. Ma, A. Schliesser, P. Del'Haye, A. Dabirian, T. J. Kippenberg  
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174. A. Schliesser, P. Del'Haye, N. Nooshi, K. J. Vahala and T. J. Kippenberg  
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**PEER REVIEWED PUBLICATIONS FROM COLLABORATIONS (AS NON-CORRESPONDING AUTHOR)**


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175. X. Su, K. Zou, H. Zhou, H. Song, Y. Wang, R. Zeng, Z. Jiang, Y. Duan, M. Karpov, T. J. Kippenberg, M. Tur, D. N. Christodoulides, A. E. Willner  
*"Temporally and longitudinally tailored dynamic space-time wave packets"*  
**Optics Express (2024)**
176. M. Clementi, E. Nitiss, J. Liu, E. Durán-Valdeiglesias, S. Belahsene, H. Debrégeas, T. J. Kippenberg, C.-S. Brès  
*"A chip-scale second-harmonic source via injection-locked all-optical poling"*  
**Light-Science & Applications (2023)**
177. A. Ayan, J. Liu, T. J. Kippenberg, C. S. Brès  
*"Towards efficient broadband parametric conversion in ultra-long Si<sub>3</sub>N<sub>4</sub> waveguides"*  
**Optics Express (2023)**
178. K. Zou, K. Pang, H. Song, M. Karpov, X. Su, R. Zhang, H. Song, H. Zhou, T. J. Kippenberg, M. Tur, A. E. Willner  
*"Space-time wave packets with reduced divergence and tunable group velocity generated in free space after multi-mode fiber propagation"*  
**Optics Letters (2023)**
179. D. Drayss, D. Fang, C. Füllner, G. Lihachev, T. Henauer, Y. Chen, H. Peng, P. Marin-Palomo, T. Zwick, W. Freude, T. J. Kippenberg, S. Randel, C. Koos  
*"Non-sliced optical arbitrary waveform measurement (OAWM) using soliton microcombs"*  
**Optica (2023)**
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*"Single-frequency violet and blue laser emission from AlGaInN photonic integrated circuit chips"*  
**Optics Letters (2023)**
181. T. Brydges, A. S. Raja, A. Gelmini, G. Likhachev, A. Petitjean, A. Siddharth, H. Tian, R. N. Wang, S. A. Bhave, H. Zbinden, T. J. Kippenberg, R. Thew  
*"Integrated Photon-Pair Source with Monolithic Piezoelectric Frequency Tunability"*  
**Physical Review A (2022)**
182. K. V. Myilswamy, S. Seshadri, H.-H. Lu, M. S. Alshaykh, J. Liu, T. J. Kippenberg, A. M. Weiner, J. M. Lukens  
*"Time-resolved Hanbury Brown-Twiss interferometry of on-chip biphoton frequency combs using Vernier phase modulation"*  
**Physical Review Applied (2023)**
183. P. Maier, Y. Chen, Y. Xu, Y. Bao, M. Blaicher, D. Geskus, R. Dekker, J. Liu, P. -I. Dietrich, H. Peng, S. Randel, W. Freude, T. J. Kippenberg, C. Koos  
*"Sub-kHz-linewidth external-cavity laser (ECL) with Si<sub>3</sub>N<sub>4</sub> resonator used as a tunable pump for a Kerr frequency comb"*  
**Journal of Lightwave Technology (2023)**
184. N. P. O'Malley, K. A. McKinzie, M. S. Alshaykh, J. Liu, D. E. Leaird, T. J. Kippenberg, J. D. McKinney, A. M. Weiner  
*"Architecture for integrated RF photonic downconversion of electronic signals"*

**Optics Letters (2023)**

185. J. Hu, E. Nitiss, J. J. He, J. Liu, O. Yakar, W. Weng, T. J. Kippenberg, C.-S. Brès  
*"Photo-induced cascaded harmonic and comb generation in silicon nitride microresonators"*  
**Science Advances (2022)**
186. A. Minoofar, K. Zou, K. Pang, H. Song, M. Karpov, M. Yessenov, Z. Zhao, H. Q. Song, H. Zhou, Xi. Su, T. J. Kippenberg, A. F. Abouraddy, M. Tur, A. E. Willner  
*"Generation of OAM-carrying space-time wave packets with time-dependent beam radii using a coherent combination of multiple LG modes on multiple frequencies"*  
**Optics Express (2022)**
187. K. Zou, X. Su, M. Yessenov, K. Pang, N. Karapetyan, M. Karpov, H. Song, R. Zhang, H. Zhou, T. J. Kippenberg, M. Tur, A. F. Abouraddy, A. E. Willner  
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**Optics Letters (2022)**
188. K. Pang, K. H. Zou, Z. Zhao, H. Song, Y. Y. Zhou, M. Karpov, M. Yessenov, A. Shiri, H. Q. Song, R. Z. Zhang, H. B. Zhou, X. Z. Xinzhou, N. Z. Hu, A. Minoofar, T. J. Kippenberg, R. W. Boyd, A. F. Abouraddy, M. Tur, A. E. Willner  
*"Experimental demonstration of dynamic spatiotemporal structured beams that simultaneously exhibit two orbital angular momenta by combining multiple frequency lines, each carrying multiple Laguerre-Gaussian modes"*  
**Optics Letters (2022)**
189. H. H. Lu, K. V. Myilswamy, R. S. Bennink, S. Seshadri, M. S. Alshaykh, J. Liu, T. J. Kippenberg, D. E. Leaird, A. M. Weiner, J. M. Lukens  
*"Bayesian tomography of high-dimensional on-chip biphoton frequency combs with randomized measurements"*  
**Nature Communications (2022)**
190. K. Pang, K. Zou, Hao Song, M. Karpov, M. Yessenov, Z. Zhao, A. Minoofar, R. Zhang, H. Song, H. Zhou, X. Su, N. Hu, T. J. Kippenberg, A. F. Abouraddy, M. Tur, A. E. Willner  
*"Synthesis of near-diffraction-free orbital-angular-momentum space-time wave packets having a controllable group velocity using a frequency comb"*  
**Optics Express (2022)**
191. S. Hoenl, Y. Popoff, D. Caimi, A. Beccari, T. J. Kippenberg, Paul Seidler  
*"Microwave-to-optical conversion with a gallium phosphide photonic crystal cavity"*  
**Nature Communications (2022)**
192. A. Ayan, F. Mazeas, J. Liu, T. J. Kippenberg, C.-S. Brès  
*"Polarization selective ultra-broadband wavelength conversion in silicon nitride waveguides"*  
**Optics Express (2022)**
193. M. Piccardo, V. Ginis, A. Forbes, S. Mahler, A. A. Friesem, N. Davidson, H. Ren, A. H. Dorrah, F. Capasso, F. T. Dullo, B. S. Ahluwalia, A. Ambrosio, S. Gigan, N. Treps, M. Hiekkamäki, R. Fickler, M. Kues, D. Moss, R. Morandotti, J. Riemensberger, T. J. Kippenberg, J. Faist, G. Scalari, N. Picqué, T. W. Hänsch  
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