PUBLICATION METRICS

- **Clarivate Analytics http://www.highlycited.com/ in Physics (1% top cited)** in 2014-2025
- Total number of citations to date: WoK > 54,254 (GoS: >85,591) – 9,300 cited/year
- Hirsch-Index (N papers cited N times): WoK: 106 (GoS: 125)
- Journal publications : Nature (23), Science (14), Nature Photonics (15), Comm. (35), Physics (13), Nanotech (4), PRL (24)
- **For a complete list of publications, please refer to https://www.epfl.ch/labs/k-lab/publications/**

INDEX

PEER REVIEWED PUBLICATIONS AS PRINCIPAL INVESTIGATOR AND (CO-) CORRESPONDING AUTHOR 1

PEER REVIEWED PUBLICATIONS FROM COLLABORATIONS (AS NON-CORRESPONDING AUTHOR) 13

PEER REVIEWED PUBLICATIONS (PHD AND POSTDOC) 18

PUBLICATIONS ON ARXIV.ORG 20

BOOK CHAPTER 21

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

1. B. Kharbanda, A. Arabmoheghi, L. Catalini, M. Bereyhi, G. Benga, A. Zicoschi, C. L. Degen, T. J. Kippenberg, A. Eichler, N. J. Engelsen
   "On-chip frequency-noise cancellation in nanomechanical resonators using cavity optomechanics"
   Physical Review A (2026)
2. X. Ji, X. Yang, Y. Liu, Z. Qiu, G. Lihachev, S. Bianconi, J. Sun, A. Voloshin, T. Kim, J. C. Olson, T. J. Kippenberg
   "Wafer-scale manufacturing of ultra-broadband, high-power erbium-doped integrated lasers"
   Nature Communications (2026)
3. J. Cai, A. Kotz, H. Larocque, C. Wang, X. Ji, J. Zhang, D. Drayss, X. Ou, Ch. Koos, T. J. Kippenberg
   "Heterogeneously integrated lithium tantalate-on-silicon nitride modulators for high-speed communications"
   Nature Communications (2026)
4. M. Lin, Z. Li, A. Kotz, H. Larocque, J. Riemensberger, C. Koos, T. J. Kippenberg
   "Copper damascene process-based high-performance thin-film lithium tantalate modulators"
   Nature Communications (2026)
5. X. Ji, X. Li, Z. Qiu, R. N. Wang, M. Divall, A. Gelash, G. Lihachev, T. J. Kippenberg
   "Deterministic soliton microcombs in Cu-free photonic integrated circuits"
   Nature (2025)
6. G. Arend, G. Huang, A. Feist, Y. Yang, J-W. Henke, Z. Qiu, H. Jeng, A. S. Raja, R. Haindl, R. N. Wang, T. J. Kippenberg, Claus Ropers
   "Electrons herald non-classical light"
   Nature Physics (2025)
7. Y. Yang, P. Cattaneo, A. S. Raja, B. Weaver, R. N. Wang, A. Sapozhnik, F. Carbone, T. LaGrange, T. J. Kippenberg
   "Unifying frequency metrology across microwave, optical, and free-electron domains"
   Nature Communications (2025)
8. A.Voloshin, A. Attanasio, A. Siddharth, S. Bianconi, , A. Bancora, V. Shadymov, S. Leni, R. N. Wang, J. Riemensberger, S. A. Bhave, T. J. Kippenberg
   "Monolithic piezoelectrically tunable hybrid integrated laser with sub-fiber laser coherence"
   Optica (2025)
9. S. U. Hulyal, J. Hu, C. Wang, J. Cai, G. Lihachev, T. J. Kippenberg
   "Arrayed waveguide gratings in lithium tantalate integrated photonics"
   Optica (2025)
10. Z. Qiu, N. Singh, Y. Liu, X. Ji, R. N. Wang, F. X. Kärtner, T. J. Kippenberg
    "Large-scale photonic chip based pulse interleaver for low-noise microwave generation"

Nature Communications (2025)

11. A. Youssefi, M. Chegnizadeh, M. Scigliuzzo, T. J. Kippenberg
"Compact superconducting vacuum-gap capacitors with low microwave loss and high mechanical coherence for scalable quantum circuits"
Physical Review Applied (2025)
12. A. Siddharth, S. Bianconi, R. N. Wang, Z. Qiu, A. S. Voloshin, M. J. Bereyhi, J. Riemensberger, T. J. Kippenberg
"Ultrafast tunable photonic-integrated extended-DBR Pockels laser"
Nature Photonics (2025)
13. N. Kuznetsov, A. Nardi, J. Riemensberger, A. Davydova, M. Churaev, P. Seidler, T. J. Kippenberg
"An ultra-broadband photonic-chip-based parametric amplifier"
Nature (2025)
14. J. Zhang, C. Wang, C. Denney, J. Riemensberger, G. Lihachev, J. Hu, W. Kao, T. Blésin, N. Kuznetsov, Z. Li, M. Churaev, X. Ou, , G. Santamaria-Botello, T. J. Kippenberg
"Ultrabroadband integrated electro-optic frequency comb in lithium tantalate"
Nature (2025)
15. Y. Xia, G. Huang, A. Beccari, A. Zicoschi, A. Arabmoheghi, N. J. Engelsen, T. J. Kippenberg
"Motional sideband asymmetry of a solid-state mechanical resonator at room temperature"
Physical Review Letters (2025)
16. J. Zhang, Z. Li, J. Riemensberger, G. Lihachev, G. Huang, T. J. Kippenberg
"Fundamental charge noise in electro-optic photonic integrated circuits"
Nature Physics (2025)
17. M. Chegnizadeh, M. Scigliuzzo, A. Youssefi, S. Kono, E. Guzovskii, T. J. Kippenberg
"Quantum collective motion of macroscopic mechanical oscillators"
Science (2024)
18. C. Wang, D. Fang, J. Zhang, A. Kotz, G. Lihachev, M. Churaev, Z. Li, A. Schwarzenberger, X. Ou, C. Koos, T. J. Kippenberg
"Ultrabroadband thin-film lithium tantalate modulator for high-speed communications"
Optica (2024)
19. G. Lihachev, A. Bancora, V. Snigirev, H. Tian, J. Riemensberger, V. Shadymov, A. Siddharth, A. Attanasio, R. N. Wang, D. Visani, A. Voloshin, S. Bhave, T. J. Kippenberg
"Frequency agile photonic integrated external cavity laser"
APL Photonics (2024)
20. X. Ji, R. N. Wang, Y. Liu, J. Riemensberger, Z. Qiu, T. J. Kippenberg
"Efficient mass manufacturing of high-density, ultra-low-loss Si_3N_4 photonic integrated circuits"
(Optica 2024)
21. 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)
22. 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)
23. 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)
24. 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)
25. 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)

26. N. J. Engelsen, A. Beccari, T. J. Kippenberg
"Ultrahigh-quality-factor micro- and nanomechanical resonators using dissipation dilution"
Nature Nanotechnology (2024)

27. G. Huang, A. Beccari, N. J. Engelsen, T. J. Kippenberg
"Room-temperature quantum optomechanics using an ultra-low noise cavity"
Nature (2024)

28. 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)

29. 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)

30. A. Tusnin, A. Tikan, K. Komagata, T. J. Kippenberg
"Nonlinear dynamics and Kerr frequency comb formation in lattices of coupled microresonators"
Communications Physics (2023)

31. 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)

32. A. C. Triscari, A. Tusnin, A. Tikan, T. J. Kippenberg
"Quiet point engineering for low-noise microwave generation with soliton microcombs"
Communications Physics (2023)

33. 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)

34. A. Youssefi, S. Kono, M. Chegnizadeh, T. J. Kippenberg
"A squeezed mechanical oscillator with millisecond quantum decoherence"
Nature Physics (2023)

35. A. Lukashchuk, J. Riemensberger, A. Tusnin, J. Liu, T. J. Kippenberg
"Chaotic microcomb-based parallel ranging"
Nature Photonics (2023)

36. G. Huang, N. J. Engelsen, O. Kfir, C. Ropers, T. J. Kippenberg
"Electron-Photon Quantum State Heralding Using Photonic Integrated Circuits"
PRX Quantum (2023)

37. A. Lukashchuk, J. Riemensberger, A. Stroganov, G. Navickaite, T. J. Kippenberg
"Chaotic microcomb inertia-free parallel ranging"
APL Photonics (2023)

38. M. Churaev, 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)

39. 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)

40. V. Snigirev, A. Riedhauser, G. Lihachev, M. Churaev, 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)

41. 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)

42. J. Riemensberger, N. Kuznetsov, J. Liu, J. He, R. N. Wang, T. J. Kippenberg
"A photonic integrated continuous-travelling-wave parametric amplifier"
Nature (2022)

43. M. Anderson, W. Weng, G. Lihachev, A. Tikan, J. Liu, T. J. Kippenberg
"Zero-dispersion Kerr solitons in optical microresonators"
Nature Communications (2022)

44. 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)

45. A. Shams-Ansari, G. Huang, L. He, Z. Li, J. Holzgrafe, M. Jankowski, M. Churaev, 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)

46. 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)

47. 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)

48. 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)

49. A. Lukashchuk, J. Riemensberger, M. Karpov, J. Liu, T. J. Kippenberg
"Dual chirped microcomb based parallel ranging at megapixel-line rates"
Nature Communications (2022)

50. M. J. Bereyhi, 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)

51. M. J. Bereyhi, 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)

52. A. Beccari, D. A. Visani, S. A. Fedorov, M. J. Bereyhi, V. Boureau, N. J. Engelsen, T. J. Kippenberg
"Strained crystalline nanomechanical resonators with ultralow dissipation"
Nature Physics (2022)

53. 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)

54. 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)

55. 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)

56. 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)

57. 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)

58. 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)

59. A. Beccari, D. A. Visani, S. A. Fedorov, M. Bereyhi, V. Boureau, N. J. Engelsen, T. J. Kippenberg
"Strained crystalline nanomechanical resonators with quality factors above 10 billion"
Nature Physics (2022)

60. 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)

61. 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)

62. 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)

63. 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)

64. 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)

65. K. Komagata, A. Tusnin, 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)

66. M. Bereyhi, T. J. Kippenberg
"Nanofabrication meets open science"
Nature Nanotechnology (2021)

67. 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)

68. 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)

69. 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)

70. 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)

71. 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)

72. 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)

73. 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)

74. 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)

75. 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)

76. 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)

77. 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)

78. 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)

79. P. Roelli, D. Martin-Cano, T. J. Kippenberg, C. Galland
"Molecular platform for frequency upconversion at the single-photon level"
Physical Review X (2020)

80. 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)

81. 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)

82. A. K. Tusnin, A. M. Tikan, T. J. Kippenberg
"Nonlinear states and dynamics in a synthetic frequency dimension"
Physical Review A (2020)

83. 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)

84. 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)

85. 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)

86. 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)

87. W. Weng, R. Bouchand, E. Lucas, E. Obrzud, T. Herr, T. J. Kippenberg

"Heteronuclear soliton molecules in optical microresonators"
Nature Communications (2020)

88. 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)

89. L. Qiu, I. Shomroni, P. Seidler, T. J. Kippenberg
"Laser cooling of a nanomechanical oscillator to the zero-point energy"
Physical Review Letters (2020)

90. W. Weng, R. Bouchand, T. J. Kippenberg
"Formation and collision of multistability-enabled composite dissipative Kerr solitons"
Physical Review X (2020)

91. I. Shomroni, L. Qiu, T. J. Kippenberg
"Optomechanical generation of a mechanical catlike state by phonon subtraction"
Physical Review A (2020)

92. 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)

93. 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)

94. S. A. Fedorov, A. Beccari, N. J. Engelsen, T. J. Kippenberg
"Fractal-like Mechanical Resonators with a Soft-Clamped Fundamental Mode"
Physical Review Letters (2020)

95. 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)

96. 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)

97. 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)

98. 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)

99. 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)

100. G. Huang, E. Lucas, J. Liu, A. S. Raja, G. Lihachev, M. L. Gorodetsky, N. J. Engelsen, T. J. Kippenberg
"Thermorefractive noise in silicon-nitride microresonators"
Physical Review A (2019)

101. I. Shomroni, L. Qiu, D. Malz, A. Nunnenkamp, T. J. Kippenberg
"Optical Backaction-Evading Measurement of a Mechanical Oscillator"
Nature Communications (2019)

102. 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)

103. M. J. Bereyhi, A. Beccari, S. A. Fedorov, A. H. Ghadimi, R. Schilling, D. J. Wilson, N. J. Engelsen,

T. J. Kippenberg
"Clamp-tapering increases the quality factor of stressed nanobeams"
Nano Letters (2019)

104. S. A. Fedorov, N. J. Engelsen, A. H. Ghadimi, M. J. Bereyhi, R. Schilling, D. J. Wilson, T. J. Kippenberg
"Generalized dissipation dilution in strained mechanical resonators"
Physical Review B (2019)

105. 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)

106. 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)

107. J. Liu, A. S. Raja, M. Karpov, B. Ghadiani, M. H. P. Pfeiffer, B. T. Du, N. J. Engelsen, H. Guo, M. Zervas, T. J. Kippenberg
"Ultralow-power chip-based soliton microcombs for photonic integration"
Optica (2018)

108. 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)

109. 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)

110. N. R. Bernier, L. D. Tóth, A. K. Feofanov, T. J. Kippenberg
"Level attraction in a microwave optomechanical circuit"
Physical Review A (2018)

111. 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)

112. 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)

113. 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)

114. 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)

115. A. H. Ghadimi, S. A. Fedorov, N. J. Engelsen, M. J. Bereyhi, R. Schilling, D. J. Wilson, T. J. Kippenberg
"Elastic strain engineering for ultralow mechanical dissipation"
Science (2018)

116. 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)

117. 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"

Nano Letters (2018)

118. M. Karpov, M. H. P. Pfeiffer, J. Liu, A. Lukashchuk, T. J. Kippenberg
"Photonic chip-based soliton frequency combs covering the biological imaging window"
Nature Communications (2018)

119. 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)

120. T. J. Kippenberg, A. L. Gaeta, M. Lipson, M. L. Gorodetsky
"Dissipative Kerr solitons in optical microresonators"
Science (2018)

121. 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)

122. H. Guo, E. Lucas, M. H. P. Pfeiffer, M. Karpov, M. Anderson, J. Liu, M. Geiselmann, J. D. Jost, T. J. Kippenberg
"Intermode breather solitons in optical microresonators"
Physical Review X (2017)

123. E. Lucas, M. Karpov, H. Guo, M. L. Gorodetsky, T. J. Kippenberg
"Breathing dissipative solitons in optical microresonators"
Nature Communications (2017)

124. 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)

125. N. R. Bernier, L. D. Tóth, A. Koottandavida, A. Nunnenkamp, A. K. Feofanov, T. J. Kippenberg
"Nonreciprocal reconfigurable microwave optomechanical circuit"
Nature Communications (2017)

126. L. D. Tóth, N. R. Bernier, A. Nunnenkamp, A. K. Feofanov, T. J. Kippenberg
"A dissipative quantum reservoir for microwave light using a mechanical oscillator"
Nature Physics (2017)

127. M. H. P. Pfeiffer, C. Herkommer, J. Liu, H. Guo, M. Karpov, E. Lucas, M. Zervas, T. J. Kippenberg
"Octave-spanning dissipative Kerr soliton frequency combs in Si_3N_4 microresonators"
Optica (2017)

128. 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"
Nature (2017) & Nature News and Views

129. A. H. Ghadimi, D. J. Wilson, T. J. Kippenberg
"Radiation and Internal Loss Engineering of High-Stress Silicon Nitride Nanobeams"
Nano Letters (2017)

130. 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)

131. M. H. P. Pfeiffer, J. Liu, M. Geiselmann, T. J. Kippenberg
"Coupling Ideality of Integrated Planar High-Q Microresonators"
Physical Review Applied (2017)

132. 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"
Physical Review X (2017)

133. H. Guo, M. Karpov, E. Lucas, A. Kordts, M. H. P. Pfeiffer, V. Brasch, G. Lichachev, V. E. Lobanov, M. L. Gorodetsky, T. J. Kippenberg
*"Universal dynamics and deterministic switching of dissipative Kerr solitons in optical microresonator*s"

Nature Physics (2017)

134. V. Brasch, E. Lucas, J. D. Jost, M. Geiselmann, T. J. Kippenberg
"Self-referenced photonic chip soliton Kerr frequency comb"
Light: Science & Applications (2017)

135. 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)

136. 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)

137. C. Javerzac-Galy, K. Plekhanov, N. R. Bernier, L. D. Toth, A. K. Feofanov, and T. J. Kippenberg
"On-chip microwave-to-optical quantum coherent converter based on a superconducting resonator coupled to an electro-optic microresonator"
Physical Review A (2016)

138. 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)

139. H. Okamoto, R. Schilling, H. Schütz, V. Sudhir, D. J. Wilson, H. Yamaguchi and T. J. Kippenberg
"A strongly coupled Lambda-type micromechanical system"
Applied Physics Letters (2016)

140. 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_2 microcavity for Heisenberg-limited displacement sensing"
Physical Review Applied (2016)

141. 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"
Optica (2016)

142. 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)

143. 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)

144. P. Roelli, C. Galland, N. Piro and T. J. Kippenberg
"Molecular cavity optomechanics as a theory of plasmon-enhanced Raman scattering"
Nature Nanotechnology (2016)

145. V. Brasch, M. Geiselmann, T. Herr, G. Lihachev, M. H. P. Pfeiffer, M. L. Gorodetsky, T. J. Kippenberg
"Photonic chip-based optical frequency comb using soliton Cherenkov radiation"
Science (2016)

146. J. D. Jost, E. Lucas, T. Herr, C. Lecaplain, V. Brasch, M. H. P. Pfeiffer, T. J. Kippenberg
"All-optical stabilization of a soliton frequency comb in a crystalline microresonator"
Optics Letters (2015)

147. D. J. Wilson, V. Sudhir, N. Piro, R. Schilling, A. H. Ghadimi, T. J. Kippenberg
"Measurement-based control of a mechanical oscillator at its thermal decoherence rate"
Nature (2015)

148. J. D. Jost, T. Herr, C. Lecaplain, V. Brasch, M. H. P. Pfeiffer, T. J. Kippenberg
"Counting the cycles of light using a self-referenced optical microresonator"
Optica (2015)

149. 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)

150. M. Aspelmeyer, T. J. Kippenberg, F. Marquardt
"Cavity optomechanics"
Reviews of Modern Physics (2014)

151. 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)

152. 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"
Physical Review Letters (2014)

153. C. Galland, N. Sangouard, N. Piro, N. Gisin, T. J. Kippenberg
"Heralded Single-Phonon Preparation, Storage, and Readout in Cavity Optomechanics"
Physical Review Letters (2014)

154. J. Pfeifle, V. Brasch, M. Lauermann, Y. Yu, D. Wegner, T. Herr, K. Hartinger, P. Schindler, J. Li, D. Hillerkuss, R. Schmogrow, C. Weimann, R. Holzwarth, W. Freude, J. Leuthold, T. J. Kippenberg, C. Koos
"Coherent terabit communications with microresonator Kerr frequency combs"
Nature Photonics (2014)

155. T. Herr, V. Brasch, J.D. Jost, C.Y. Wang, N. M. Kondratiev, M. L. Gorodetsky, T. J. Kippenberg
"Temporal solitons in optical microresonators"
Nature Photonics (2014)

156. E. Gavartin, P. Verlot, T. J. Kippenberg
"Stabilization of a linear nanomechanical oscillator to its ultimate thermodynamic limit"
Nature Communications (2013)

157. R. Thijssen, E. Verhagen, T. J. Kippenberg, A. Polman
"Plasmon nanomechanical coupling for nanoscale transduction"
Nano Letters (2013)

158. T. Ramos, V. Sudhir, K. Stannigel, P. Zoller, T. J. Kippenberg
"Nonlinear Quantum Optomechanics via Individual Intrinsic Two-Level Defects"
Physical Review Letters (2013)

159. 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)

160. 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)

161. 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"
Nature Physics (2013)

162. C. Y. Wang, T. Herr, P. Del'Haye, A. Schliesser, J. Hofer, R. Holzwarth, T. W. Hänsch, N. Picqué, T. J. Kippenberg
"Mid-infrared optical frequency combs at 2.5 mu m based on crystalline microresonators"
Nature Communications (2013)

163. J. Riemensberger, K. Hartinger, T. Herr, V. Brasch, R. Holzwarth, T. J. Kippenberg
"Dispersion engineering of thick high-Q silicon nitride ring-resonators via atomic layer deposition"
Optics Express (2012)

164. E. Gavartin, P. Verlot, T. J. Kippenberg
"A hybrid on-chip optomechanical transducer for ultrasensitive force measurements"
Nature Nanotechnology (2012)

165. 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)

166. E. Verhagen, S. Deléglise, S. Weis, A. Schliesser, T. J. Kippenberg
"Quantum-coherent coupling of a mechanical oscillator to an optical cavity mode"
Nature (2012)

167. G. Anetsberger, E. M. Weig, J. P. Kotthaus, T. J. Kippenberg
"Cavity optomechanics and cooling nanomechanical oscillators using microresonator enhanced evanescent near-field coupling"
Comptes Rendus Physique (2011)

168. P. Del'Haye, T. Herr, E. Gavartin, M. L. Gorodetsky, R. Holzwarth, T. J. Kippenberg
"Octave spanning tunable frequency comb from a microresonator"
Physical Review Letters (2011)

169. T. J. Kippenberg, R. Holzwarth, S. A. Diddams
"Microresonator-based Optical frequency combs"
Science (2011)

170. R. Riviere. S. Deléglise, S. Weis, E. Gavartin, O. Arcizet, A. Schliesser, T. J. Kippenberg
"Optomechanical Sideband cooling of a micromechanical oscillator close to the quantum ground state"
Physical Review A (2011)

171. E. Gavartin, R. Braive, O. Arcizet, E. Sagnes, T. J. Kippenberg, I. Roberts
"Optomechanical coupling in a two-dimensional photonic crystal defect cavity"
Physical Review Letters (2011)

172. 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)

173. S. Weis, R. Riviere, S. Deléglise, E. Gavartin, O. Arcizet, A. Schliesser, T. J. Kippenberg
"Optomechanically Induced Transparency"
Science (2010)

174. 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)

175. J. Hofer, A. Schliesser, T. J. Kippenberg
"Cavity optomechanics with ultrahigh-Q crystalline microresonators"
Physical Review A, Rapid Communication (2010)

176. J. Dobrindt, T. J. Kippenberg
"Theoretical Analysis of Mechanical Displacement Measurement Using a Multiple Cavity Mode Transducer"
Physical Review Letters (2010)

177. G. Anetsberger, O. Arcizet, Q. P. Unterreithmeier, E. M. Weig, J. P. Kotthaus, T. J. Kippenberg
"Near-field cavity optomechanics with nanomechanical oscillators"
Nature Physics (2009)

178. A. Schliesser, O. Arcizet, R. Riviere, T. J. Kippenberg
"Resolved-sideband cooling and position measurement of a micromechanical oscillator close to the Heisenberg uncertainty limit"
Nature Physics (2009)

179. P. Del'Haye, O. Arcizet, M. L. Gorodetsky, R. Holzwarth, T. J. Kippenberg
"Frequency comb assisted diode laser spectroscopy for measurement of microcavity dispersion"
Nature Photonics (2009)

180. T. J. Kippenberg, A. Tchebotareva, J. Kalkman, A. Polman, K. J. Vahala
"Purcell-Factor Enhanced Scattering from Si Nanocrystals in an Optical Microcavity"
Physical Review Letters (2009)

181. O. Arcizet, R. Riviere, A. Schliesser, G. Anetsberger, T. J. Kippenberg
"Cryogenic properties of optomechanical silica microcavities"
Physical Review A (2009)

182. J. Dobrindt, I. Wilson-Rae, T. J. Kippenberg
"Parametric Normal-Mode Splitting in Cavity Optomechanics"

Physical Review Letters (2008)

183. T. J. Kippenberg
"Photonics: Nanomechanics gets the shakes"
News and Views Commentary, Nature (2008)

184. G. Anetsberger, R. Riviere, A. Schließer, O. Arcizet, T. J. Kippenberg
"Ultralow-Dissipation Optomechanical Resonators on a Chip"
Nature Photonics (2008)

185. 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)

186. I. Wilson-Rae, N. Nooshi, J. Dobrindt, T. J. Kippenberg, W. Zwerger
"Cavity-assisted backaction cooling of mechanical resonators"
New Journal of Physics (2008)

187. P. Del'Haye, O. Arcizet, A. Schliesser, R. Holzwarth, T. J. Kippenberg
"Full stabilization of a microresonator-based optical frequency comb"
Physical Review Letters (2008)

188. T. J. Kippenberg, K. J. Vahala
"Cavity Optomechanics: Back-Action at the Mesoscale"
Science (2008)

189. A. Schliesser, R. Riviere, G. Anetsberger, O. Arcizet, T. J. Kippenberg
"Resolved-sideband Cooling of a Mechanical Oscillator"
Nature Physics (2008)

190. 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

191. T. J. Kippenberg, K. J. Vahala
"Cavity Opto-mechanics"
Review Article, Optics Express (2007)

192. 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)

193. R. Ma. A. Schliesser, P. Del'Haye, A. Dabirian, T. J. Kippenberg
"Radiation-pressure-driven vibrational modes in ultrahigh-Q silica microspheres"
Optics Letters (2007)

194. A. Schliesser, P. Del'Haye, N. Nooshi, K. J. Vahala and T. J. Kippenberg
"Radiation pressure cooling of a micromechanical oscillator using dynamical backaction"
Physical Review Letters (2006)

PEER REVIEWED PUBLICATIONS FROM COLLABORATIONS (AS NON-CORRESPONDING AUTHOR)

195. A. Motavassel, A. Youssefi, S. Kono, S. A. Jafari, T. J. Kippenberg
"Realization of tilted Dirac-like microwave cone in superconducting circuit lattices"
Physical Review A (2026)

196. H. Weng, X. Ji, M. Ali, E. H. Krock, L. Wang, V. Kumar, W. Guo, Q. Wan, T. J. Kippenberg, J. F. Donegan, D. V. Skryabin
"Hyperparametric solitons in nondegenerate optical parametric oscillators"
Nature Communications **(2026)**

197. G. Wang, O. Yakar, X. Ji, M. Clementi, J. Zhou, C. Lafforgue, J. Wu, J. Hu, T. J. Kippenberg, C.-S. Brès
"Integrated tunable green light source on silicon nitride"
Light-Science & Applications (2026)

198. M. A. Pereira, M. Wu, A. S. Raja, R. N. Wang, T. J. Kippenberg, H. Zbinden, T. Brydges, R. Thew
"Integrated telecom wavelength heralded single-photon source based on GHz gated detectors"
Applied Physics Letters (2026)

199. M. Clementi, E. Nitiss, J. Liu, E. Durán-Valdeiglesias, S. Belahsene, H. Debrégeas, T. J. Kippenberg, C.-S. Brès
"Correction: A chip-scale second-harmonic source via injection-locked all-optical poling"
Light-Science & Applications (2025)

200. D. Drayss, D. Fang, A. Sherifaj, H. Peng, C. Füllner, T. Henauer, G. Lihachev, L. Schmitz, T. Harter, W. Freude, S. Randel, T. J. Kippenberg, T. Zwick, C. Koos
"Optical arbitrary waveform generation (OAWG) using actively phase-stabilized spectral stitching"
Light: Science & Applications (2025)

201. D. Fang, D. Drayss, H. Peng, G. Lihachev, C. Füllner, A. Kuzmin, P. Marin-Palomo, P. Matalla, P. Kharel, R. N. Wang, J. Riemensberger, M. Zhang, J. Witzens, J. C. Scheytt, W. Freude, S. Randel, T. J. Kippenberg, T. Zwick, C. Koos
"320 GHz photonic-electronic analogue-to-digital converter (ADC) exploiting Kerr soliton microcombs"
Light: Science & Applications (2025)

202. H. Tian, J. Liu, A. Attanasio, A. Siddharth, T. Blésin, R. N. Wang, A. Voloshin, G. Lihachev, J. Riemensberger, S. E. Kenning, Y. Tian, T. H. Chang, A. Bancora, V. Snigirev, V. Shadymov, T. J. Kippenberg, Sunil Bhave
"Piezoelectric actuation for integrated photonics"
Advances in Optics and Photonics (2024)

203. A. Nardi, A. Davydova, N. Kuznetsov, M. H. Anderson, C. Möhl, J. Riemensberger, P. Seidler, T. J. Kippenberg
"Integrated chirped photonic-crystal cavities in gallium phosphide for broadband soliton generation"
Optica (2024)

204. 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)

205. 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)

206. A. Ayan, J. Liu, T. J. Kippenberg, C. S. Brès
"Towards efficient broadband parametric conversion in ultra-long Si3N4 waveguides*"*
Optics Express (2023)

207. 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)

208. 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)

209. T. Wunderer, A. Siddharth, N. M. Johnson, C. L. Chua, M. Teepe, Z. Yang, M. Batres, P. Maeda, G. Lihachev, T. J. Kippenberg
"Single-frequency violet and blue laser emission from AlGaInN photonic integrated circuit chips"
Optics Letters (2023)

210. 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)

211. 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)

212. 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_3N_4 resonator used as a tunable pump for a Kerr frequency comb"
Journal of Lightwave Technology (2023)

213. 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)

214. 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)

215. 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)

216. 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
"Tunability of space-time wave packet carrying tunable and dynamically changing OAM value"
Optics Letters (2022)

217. 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)

218. 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)

219. 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)

220. 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)

221. 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)

222. 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
"Roadmap on multimode light shaping"
Journal of Optics (2022)

223. W. Chen, P. Roelli, H. Hu, S. Verlekar, S. P. Amirtharaj, A. I. Barreda, T. J. Kippenberg, M. Kovylina, E. Verhagen, A. Martinez, C. Galland
"Continuous-wave frequency upconversion with a molecular optomechanical nanocavity"
Science (2021)

224. F. Samara, N. Maring, A. Martin, A. S. Raja, T. J. Kippenberg, H. Zbinden, R. Thew
"Entanglement swapping between independent and asynchronous integrated photon-pair sources"

Quantum Science and Technology (2021)

225. W. Chen, P. Roelli, A. Ahmed, S. Verlekar, H. Hu, T. J. Kippenberg, G. Tagliabue, C. Galland
"Intrinsic luminescence blinking from plasmonic nanojunctions"
Nature Communications (2021)

226. E. Sahin, B. Zabelich, O. Yakar, E. Nitiss, J. Liu, R. N. Wang, T. J. Kippenberg, C.-S. Brès
"Difference-frequency generation in optically poled silicon nitride waveguides"
Nanophotonics (2021)

227. Y. J. Joshi, N. Sauerwein, A. Youssefi, P. Uhrich, T. J. Kippenberg
"Automated wide-ranged finely tunable microwave cavity for narrowband phase noise filtering"
Review of Scientific Instruments (2021)

228. E. Nitiss, B. Zabelich, O. Yakar, J. Liu, R. N. Wang, T. J. Kippenberg, C.-S. Brès
"Broadband quasi-phase-matching in dispersion-engineered all-optically poled silicon nitride waveguides"
Photonics Research (2020)

229. O. Kfir, H. Lourenço-Martins, G. Storeck, M. Sivis, T.R. Harvey, T. J. Kippenberg, A. Feist, C. Ropers
"Controlling free electrons with optical whispering-gallery modes"
Nature (2020)

230. P. Marin-Palomo, J. N. Kemal, T. J. Kippenberg, W. Freude, S. Randal, C. Koos
"Performance of chip-scale optical frequency comb generators in coherent WDM communications"
Optics Express (2020)

231. E. Tagkoudi, D. Grassini, F. Yang, C. Herkommer, T. J. Kippenberg, C.-S. Brès
"Parallel gas spectroscopy using mid-infrared supercontinuum from a single Si3N4 waveguide"
Optics Letter (2020)

232. K. Zhou, P. C. Liao, Y.W. Cao, A. Kordts, A. Almaiman, M. Karpov, M. H. P. Pfeiffer, F. Alishahi, A. Fallahpour, M. Tur, T. J. Kippenberg, A. E. Willner
"Kramers Kronig detection of four 20 Gbaud 16-QAM channels using Kerr combs for a shared phase estimation"
Optics Letters (2020)

233. A. Fallahpour, H. Zhou, P. C. Liao, C. Liu, M. Tur, T. J. Kippenberg, A. E. Willner, F. Alishahi, K. H. Zou, Y. W. Cao, A. Almaiman, A. Kordts, M. Karpov, M. H. P. Pfeiffer, K. Manukyan
"Demonstration of Tunable Optical Aggregation of QPSK to 16-QAM Over Optically Generated Nyquist Pulse Trains Using Nonlinear Wave Mixing and a Kerr Frequency Comb"
Journal of Lightwave Technology (2020)

234. F. Gyger, J. Liu, F. Yang, J. J. He, A. S. Raja, R. N. Wang, S. A. Bhave, T. J. Kippenberg, L. Thevenaz
"Observation of Stimulated Brillouin Scattering in Silicon Nitride Integrated Waveguides"
Physical Review Letters (2020)

235. E. Nitiss, T. Liu, D. Grassani, M. H. P. Pfeiffer, T. J. Kippenberg, C.-S. Brès
"Formation Rules and Dynamics of Photoinduced $x^{(2)}$ Gratings in Silicon Nitride Waveguides"
ACS Photonics (2020)

236. T. Wildi, V. Brasch, J. Liu, T. J. Kippenberg, T. Herr
"Thermally stable access to microresonator solitons via slow pump modulation"
Optics Letters (2019)

237. A. L. Gaeta, M. Lipson, T. J. Kippenberg
"Photonic-chip-based frequency combs"
Nature Photonics (2019)

238. F. Samara, A. Martin, C. Autebert, M. Karpov, T. J. Kippenberg, H. Zbinden, R. Thew
"High-Rate Photon Pairs and Sequential Time-Bin Entanglement with Si_3N_4 Ring Microresonators"
Optics Express (2019)

239. D. Martyshkin, V. Fedorov, T. Kesterson, S. Vasilyev, H. Guo, J. Liu, W. Weng, K. Vodopyanov, T. J. Kippenberg, S. Mirov
"Visible-near-middle infrared spanning supercontinuum generation in a silicon nitride (Si_3N_4) waveguide"
Optical Materials Express (2019)

240. D. Grassani, E. Tagkoudi1, H. Guo, C. Herkommer, F. Yang, T. J. Kippenberg, C.-S. Brès
"Mid infrared gas spectroscopy using efficient fiber laser driven photonic chip-based supercontinuum"
Nature Communications (2019)

241. A. Fatemeh, A. Fallahpour, A. Fallahpour, A. Mohajerin-Ariaei, Y. Cao, A. Kordts, Pfeiffer, M. H. P. Pfeiffer, M. Karpov, A. Almaiman, P. Liao, Z. H. Zou, C. Liu, A. N. Willner, M. Tur, T. J. Kippenberg, A. E. Willner
"Reconfigurable optical generation of nine Nyquist WDM channels with sinc-shaped temporal pulse trains using a single microresonator-based Kerr frequency comb"
Optics Letters (2019)

242. C. Bao, L. Peicheng Liao, A. Kordts, L. Zhang, A. Matsko, M. Karpov, M. H. P. Pfeiffer, G. Xie, Y. Cao, A. Almaiman, M. Tur, T. J. Kippenberg, A. E. Willner
"Orthogonally polarized frequency comb generation from a Kerr comb via cross-phase modulation"
Optics Letters (2019)

243. P. Liao, C. Bao, A. Almaiman, A. Kordts, M. Karpov, M. H. P. Pfeiffer, L. Z. Fatemeh A. Y. Cao, K. Zou, A. Fallahpour, A. N. Willner, M. Tur, T. J. Kippenberg, A. E. Willner
"Demonstration of Multiple Kerr-Frequency-Comb Generation Using Different Lines From Another Kerr Comb Located Up To 50 km Away"
Journal of Lightwave Technology (2019)

244. D. Grassani, M. H. P. Pfeiffer, T. J. Kippenberg, C.-S. Brès
"Second- and third-order nonlinear wavelength conversion in an all-optically poled Si_3N_4 waveguide"
Optics Letters (2019)

245. A. N. Willner, P. Liao, K. Zou, Y. Cao, A. Kordts, M. Karpov, M. H. P. Pfeiffer, A. Almaiman, A.Fallahpour, F. Alishahi, K. Manukyan, M. Tur, T. J. Kippenberg, A. E. Willner
"Scalable and reconfigurable optical tapped-delay-line for multichannel equalization and correlation using nonlinear wave mixing and a Kerr frequency comb"
Optics Letters (2019)

246. L. A. Lugiato, F. Prati, M. L. Gorodetsky, T. J. Kippenberg
"From the Lugiato-Lefever equation to microresonator-based soliton Kerr frequency combs"
Philosophical Transactions of the Royal Society A (2018)

247. E. Obrzud, M. Rainer, A. Harutyunyan, M. Anderson, M. Geiselmann, B. Chazelas, S. Kundermann, S. Lecomte, M. Cecconi, A. Ghedina, E. Molinari, F. Pepe, F. Wildi, F. Bouchy, T. J. Kippenberg, T. Herr
"A Microphotonic Astrocomb"
Nature Photonics (2018)

248. P. Liao, C. Bao, A. Kordts, M. Karpov, M. H. P. Pfeiffer, L. Zhang, Y. Cao, A. Almaiman, A. Mohajerin Ariaei, F. Alishahi, A. Fallahpour, K. Zou, M. Tur, T. J. Kippenberg, A. E. Willner
"Effects of erbium-doped fiber amplifier induced pump noise on soliton Kerr frequency combs for 64-quadrature amplitude modulation transmission"
Optics Letters (2018)

249. D. T. Spencer, T. Drake, T. C. Briles1, J. Stone, L. C. Sinclair, C. Fredrick, Q.Li, D. Westly, B. Robert Ilic, A. Bluestone, N. Volet, T. Komljenovic, L. Chang, S. Hoon Lee, D. Yoon Oh, M.-G. Suh, K. Youl Yang, M. H. P. Pfeiffer, T. J. Kippenberg, E. Norberg, L. Theogarajan, K. Vahala, N. R. Newbury, K. Srinivasan, J. E. Bowers, S. A. Diddams, S. B. Papp
"An Optical Frequency Synthesizer using Integrated Photonics"
Nature (2018)

250. A. Billat, D. Grassani, M. H. P. Pfeiffer, S. Kharitonov, T. J. Kippenberg, C.-S. Brès
"Large second harmonic generation enhancement in Si_3N_4 waveguides by all-optically induced quasi-phase-matching"
Nature Communications (2017)

251. C. Bao, P. Liao, A. Kordts, M. Karpov, M. H. P. Pfeiffer, L. Zhang, Y. Cao, G. Xie, C. Liu, Y. Yan, A. Almaiman, A. Mohajerin-Ariaei, A. Fallahpour, M. Tur, T. J. Kippenberg, A. E. Willner
"Tunable insertion of multiple lines into a Kerr frequency comb using electro-optical modulators"
Optics Letters (2017)

252. P. Liao, C. Bao, A. Kordts, M. Karpov, M. H. P. Pfeiffer, L. Zhang, Y. Cao, A. Almaiman, A. Mohajerin- Ariaei, M. Tur, M. M. Fejer, T. J. Kippenberg, A. E. Willner.

"Pump-linewidth-tolerant wavelength multicasting using soliton Kerr frequency combs"
Optics Letters (2017)

253. P. Liao, C. Bao, A. Kordts, M. Karpov, M. H. P. Pfeiffer, L. Zhang, A. Mohajerin-Ariaei, Y. Cao, A. Almaiman, M. Ziyadi, S. R. Wilkinson, M. Tur, T. J. Kippenberg, A. E. Willner
"Dependence of a microresonator Kerr frequency comb on the pump linewidth"
Optics Letters (2017)

254. L. Chang, M. H. P. Pfeiffer, N. Volet, M. Zervas, J. D. Peters, C. L. Manganelli, E. J. Stanton, Y. Li, T. J. Kippenberg, J. E. Bowers
"Heterogeneous integration of lithium niobate and silicon nitride waveguides for wafer-scale photonic integrated circuits on silicon"
Optics Letters (2017)

255. N. G. Pavlov, G. Lihachev, S. Koptyaev, E. Lucas, M. Karpov, N. M. Kondratiev, I. A. Bilenko, T. J. Kippenberg, M. L. Gorodetsky
"Soliton dual frequency combs in crystalline microresonators"
Optics Letters (2017)

256. C. Bao, P. Liao, A. Kordts, L. Zhang, M. Karpov, M. H. Pfeiffer, Y. Cao, Y. Yan, A. Almaiman, G. Xie, A. Mohajerin-Ariaei, L. Li, M. Ziyadi, S, T. Wilkinson, M. Tur, T. J. Kippenberg, A. E. Willner
"Dual-pump generation of high-coherence primary Kerr combs with multiple sub-lines"
Optics Letters (2017)

257. V. E. Lobanov, G. Lihachev, N. G. Pavlov, A. V. Cherenkov, T. J. Kippenberg, M. L. Gorodetsky
"Harmonization of chaos into a soliton kerr frequency combs"
Optics Express (2016)

258. L. Wang, L. Chang, N. Volet, M. H. P. Pfeiffer, M. Zervas, H. Guo, T. J. Kippenberg, J. E. Bowers
"Frequency comb generation in the green using silicon nitride microresonators"
Laser & Photonics Reviews (2016)

259. C. Bao, P. Liao, A. Kordts, M. Karpov, M. H. P. Pfeiffer, L. Zhang, Y. Yan, G. Xie, Y. Cao, A. Almaiman, M. Ziyadi, L. Li, Z. Zhao, A. Mohajerin-Ariaei, S. R. Wilkinson, M. Tur, M. M. Fejer, T. J. Kippenberg, A. E. Willner
"Demonstration of optical multicasting using Kerr frequency comb lines"
Optics Letters (2016)

260. R. Thijssen, T. J. Kippenberg, A. Polman, E. Verhagen
"Plasmomechanical Resonators Based on Dimer Nanoantennas"
Nanno Letters (2015)

261. V. E. Lobanov, G. Lihachev, T. J. Kippenberg, M. L. Gorodetsky
"Frequency combs and platicons in optical microresonators with normal GVD"
Optics Express (2015)

262. R. Thijssen, T. J. Kippenberg, A. Polman, E. Verhagen
"Parallel Transduction of Nanomechanical Motion Using Plasmonic Resonators"
ACS Photonics (2014)

263. F. Hocke, M. Pernpeintner, X. Q. Zhou, A. Schliesser, T. J. Kippenberg, H. Huebl, R. Gross
"Determination of effective mechanical properties of a double-layer beam by means of a nano-electromechanical transducer"
Applied Physics Letters (2014)

264. F. Hocke, X. Q. Zhou, A. Schliesser, T. J. Kippenberg, H. Huebl, R. Gross
"Electromechanically induced absorption in a circuit nano-electromechanical system"
New Journal of Physics (2012)

265. I. Fescenko, J. Alnis, A. Schliesser, C. Y. Wang, T. J. Kippenberg, T. W. Hänsch
"Dual-mode temperature compensation technique for laser stabilization to a crystalline whispering gallery mode resonator"
Optics Express (2012)

266. J. Alnis, A. Schliesser, C. Y. Wang, J. Hofer, T. J. Kippenberg, T. W. Hänsch
"Thermal-noise-limited crystalline whispering-gallery-mode resonator for laser stabilization"
Physical Review A (2011)

267. T. J. Kippenberg, J. Kalkman, A. Polman, K. J. Vahala
"Demonstration of an Erbium-doped microdisk laser on a silicon chip"
Physical Review A, Rapid Communication (2006)

268. T. Aoki, B. Dayan, E. Wilcut, W. P. Bowen, A. S. Parkins, T. J. Kippenberg, K. J. Vahala, H. J. Kimble
"Observation of strong coupling between one atom and a monolithic microresonator"
Nature (2006)

269. J. Kalkman, A. Tchebotareva, A. Polman, T. J. Kippenberg, B. Min, K. J. Vahala
"Fabrication and characterization of erbium-doped toroidal microcavity lasers"
Journal of Applied Physics (2006)

270. H. Rokhsari, T. J. Kippenberg, T. Carmon, K. J. Vahala
"Theoretical and experimental study of radiation pressure-induced mechanical oscillations (parametric instability) in optical microcavities"
IEEE Journal of Selected Toptics in Quantum Electronics (2006)

271. J. Kalkman, A. Polman, T. J. Kippenberg, K. J. Vahala
"Erbium-implanted silica microsphere laser"
Nuclear methods in research Research Section B, Interaction with Atoms and Materials (2006)

272. T. J. Kippenberg, H. Rokhsari, T. Carmon, K. J. Vahala
"Analysis of radiation-pressure induced mechanical oscillation of an optical microcavity"
Physical Review Letters (2006)

273. H. Rokhsari, T. J. Kippenberg, T. Carmon, K. J. Vahala
"Radiation-pressure-driven micro-mechanical oscillator"
Optics Express (2005)

274. T. Carmon, L. Yang, H. Rokhsari, T. J. Kippenberg, K. J. Vahala
"Temporal behaviour of Radiation-pressure-induced vibrations of an optical microcavity phonon mode"
Physical Review Letters (2005)

275. T. Carmon, T. J. Kippenberg, L. Yang, H. Rokhsari, S. M. Spillane, K. J. Vahala
"Feedback control of ultra-high-Q microcavities: applications to micro-Raman lasers and micro-parametric oscillators"
Optics Express (2005)

276. S. M. Spillane, T. J. Kippenberg, K. Goh, L. Wilcut, K. J. Vahala, H. J. Kimble
"Ultrahigh-Q toroidal microresonators for cavity quantum electrodynamics"
Physical Review A (2005)

277. T. J. Kippenberg, S. M. *Spillane*, K. J. Vahala
"Demonstration of ultra-high Q small mode volume toroid microcavities on a chip"
Applied Physics Letters (2004)

278. T. J. Kippenberg, S.M. Spillane, K. J. Vahala
"Theoretical and experimental study of stimulated and cascaded Raman scattering in ultrahigh-Q optical microcavities"
IEEE Journal of Selected Topics in Quantum Electronics, Special issue Nonlinear Optics (2004)

279. B. K. Min, T. J. Kippenberg, J. Kalkman, Y. Lan, A. Polman, K.J. Vahala
"Erbium-implanted high-Q silica toroidal microcavity laser on a silicon chip"
Physical Review A (2004)

280. T. J. Kippenberg, S. M. Spillane, K. J. Vahala
"Kerr-nonlinearity optical parametric oscillation in an ultrahigh-Q toroid microcavity"
Physical Review Letters (2004)

281. T. J. Kippenberg, S.M. Spillane, D. K. Armani, K. J. Vahala
"Ultra-low threshold microcavity Raman laser on a microelectronic chip"
Optics Letters (2004)

282. A. Polman, B. K. Min, J. Kalkman, T. J. Kippenberg, K. J. Vahala
"Ultra-low-threshold erbium-implanted toroidal microlaser on silicon"
Applied Physics Letters (2004)

283. B. K. Min, T. J. Kippenberg, K. J. Vahala
"Compact, fiber-compatible cascaded Raman laser"

Optics Letters (2003)

284. T. J. Kippenberg, S. M. Spillane, D. K. Armani, K. J. Vahala
"Fabrication and coupling to planar high-Q silica disk microcavities"
Applied Physics Letters (2003)

285. S. M. Spillane, T. J. Kippenberg, O. J. Painter, K. J. Vahala
"Ideality in a fiber-taper-coupled microresonator system for application to cavity quantum electrodynamics"
Physical Review Letters (2003)

286. D. K. Armani, T. J. Kippenberg, S. M. Spillane, K. J. Vahala
"Ultra-high-Q toroid microcavity on a chip"
Nature (2003)

287. T. J. Kippenberg, S. M. Spillane, K. J. Vahala
"Modal coupling in traveling-wave resonators"
Optics Letters (2002)

288. S. M. Spillane, T. J. Kippenberg, K. J. Vahala
"Ultralow-threshold Raman laser using a spherical dielectric microcavity"
Nature (2002)

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289. N. Kuznetsov, Z. Li, T. J. Kippenberg
"All-band photonic integrated optical parametric amplification" (2026)

290. F. Wei, X. Ji, T. J. Kippenberg, D-Y. Choi, C. Ronning
"Strong enhancement of Er3+ emission at room temperature in Si3N4 metasurfaces" (2026)

291. Z. Li, A. Kotz, A. Schwarzenberger, C. Koos, T. J. Kippenberg
"Low voltage and high-bandwidth thin-film lithium tantalate modulator on a silicon dioxide substrate" (2026)

292. T. Herr, A. Tikan, T. J. Kippenberg
"Frequency combs and coherent dissipative structures in nonlinear optical microresonators" (2026)

293. S. Sbarra, J. Zhou, B. Zabelich, M. Clementi, C. Lafforgue, O. Yakar, J. Liu, T. J. Kippenberg, C.-S. Brès
"Reconfigurable Resonant Multimode Nonlinear Coupling for UV-to-infrared Frequency Generation" (2026)

294. H. Li, M. Scigliuzzo, E. Guzovskii, S.-T. Han, K. Han, T. J. Kippenberg
"Quantum-limited traveling-wave parametric amplifier based on DUV lithography-defined planar structures" (2026)

295. A. Youssefi, M. Chegnizadeh, F. Bettsworth, R. Pedurand, E. Collin, T. J. Kippenberg, A. Fefferman
"Thermalization of neighboring nanomechanical resonators below 1 Mk" (2026)

296. N. Kuznetsov, Z. Li, T. J. Kippenberg
"Watt-level second harmonic generation in periodically poled thin-film lithium tantalate" (2025)

297. X. Wang, J. Pan, T. J. Kippenberg, S. Kono
"Strongly driven cavity quantum electrodynamical-optomechanical hybrid system" (2025)

298. F. Brückerhoff-Plückelmann, H. Borras, S. U. Hulyal, L. Meyer, X. Ji, J. Hu, J. Sun, B. Klein, F. Ebert, J. Dijkstra, L. McRae, P. Schmidt, T. J. Kippenberg, H. Fröning, W. Pernice
"Uncertainty Reasoning with Photonic Bayesian Machines" (2025)

299. J. Zhang, S. Zheng, J. Cai, C. Denney, Z. Li, Y. Zhang, X. Ou, G. Santamaria-Botello, T. J. Kippenberg
"An integrated photonic millimeter-wave receiver with sub-ambient noise" (2025)

300. A. Gelash, S. Deshmukh, A. Shusharin, T. M. Schneider, T. J. Kippenberg
"Periodic orbits underlying spatiotemporal chaos in the Lugiato-Lefever model" (2025)

301. A. Arabmoheghi, A. Zicoschi, G. Arregui, M. J. Bereyhi, Y. Xia, N. J. Engelsen, T. J. Kippenberg
"Noncontact friction in ultracoherent nanomechanical resonators near dielectric materials" (2025)

302. Z. Qiu, J. Hu, X. Yang, Z. Liu, Y. Zhang, X. Ji, J. Sun, G. Likhachev, X. Li, Z. Li, U. Kentsch, T. J.

Kippenberg
"High-pulse-energy integrated mode-locked lasers based on a Mamyshev oscillator" (2025)

303. S. Deshmukh, A. Tusnin, A. Tikan, T. J. Kippenberg, T. M. Schneider
"Nonlinear periodic orbit solutions and their bifurcation structure at the origin of soliton hopping in coupled microresonators" (2025)

304. A. Siddharth, A. B. Gardner, X. Ji, S. U. Hulyal, M. S. Reichler, A. Attanasio, J. Riemensberger, S. A. Bhave, N. Volet, S. Bianconi, T. J. Kippenberg
"Narrow-linewidth, piezoelectrically tunable photonic integrated blue laser" (2025)

305. X. Ji, X. Yang, Y. Liu, Z. Qiu, G. Lihachev, S. Bianconi, J. Sun, A. Voloshin, T. Kim, J. C. Olson, T. J. Kippenberg
"Full C- and L-band tunable erbium-doped integrated lasers via scalable manufacturing" (2025)

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308. Z. Qiu, Z. Li, R. N. Wang, X. Ji, M. Divall, A. Siddharth, T. J. Kippenberg
"Hydrogen-free low-temperature silica for next generation integrated photonics" (2024)

BOOK CHAPTER

- T. J. Kippenberg, T. Herr, M. L. Gorodetsky. ***"Temporal Solitons in Optical Microresonators" "Nonlinear Cavity Physics"*** editor P. Grelu, Wiley Science (2015)
- M. Aspelmeyer, T. J. Kippenberg, F. Marquardt (Eds.). ***"Cavity Optomechanics - Nano- and Micromechanical Resonators Interacting with Light"***, Springer (2014)
- O. Arcizet, P. Del'Haye, A. Schliesser, R. Holzwarth, T. J. Kippenberg. ***"Monolithic Frequency Comb Generation using Microresonators"*** in "*Practical applications of Microresonators in Optics and Photonics Applications"* editors A. Matsko, L. Maleki (2009)
- T. J. Kippenberg, K. J. Vahala. ***"Cavity Optomechanics"*** in "*Practical applications of Microresonators in Optics and Photonics Applications"* editors A. Matsko, L. Maleki (2009)
- T. J. Kippenberg, K. J. Vahala. ***"Fabrication, Coupling and Nonlinear Optics in Ultra-high-Q microsphere and chip-based toroid microcavities"*** in "*Optical Microcavities*" editor K. J. Vahala, World Scientific (2005)