

CHEE WEI WONG

Fang Lu Mesoscopic Optics and Quantum Electronics Laboratory,
Electrical and Computer Engineering, The Henry Samueli School of Engineering and Applied Science,
University of California, Los Angeles
Room 56-147D Eng. IV, 420 Westwood Plaza, Los Angeles, CA 90095
Phone: 310.825.6115; Fax: 310.206.8495 ; Email: cheewei.wong@ucla.edu
URL: <http://oqe.ee.ucla.edu>

SCIENTIFIC APPOINTMENTS

- July 2018 – current **Tannas Professor of Engineering**, Fang Lu Mesoscopic Optics and Quantum Electronics Laboratory, Department of Electrical & Computer Engineering
University of California Los Angeles, CA
- July 2016 – June 2018 **Professor**, Fang Lu Mesoscopic Optics and Quantum Electronics Laboratory
Department of Electrical & Computer Engineering
University of California Los Angeles, CA
- July 2014 – June 2016 **Associate Professor** (tenured)
Department of Electrical Engineering
University of California Los Angeles, CA
- Jan. 2009 – June 2014 **Associate Professor** (tenured; July'11)
Center for Integrated Science and Engineering, Solid-State Science and
Engineering, Department of Mechanical Engineering
Columbia University, New York, NY
- Jan. 2004 – Dec. 2008 **Assistant Professor** (tenure-track)
Center for Integrated Science and Engineering, Solid-State Science and
Engineering, Department of Mechanical Engineering
Columbia University, New York, NY
- Aug. 2003 – Dec. 2003 **Postdoctoral Research Associate**
MIT Microphotonics Center
Massachusetts Institute of Technology, Cambridge, MA

EDUCATION

- Jan. 2001 – Aug. 2003 **Massachusetts Institute of Technology, Cambridge, MA**
Doctor of Science with specialization in Optical Nanotechnology
- Aug. 1999 – Jan. 2001 **Massachusetts Institute of Technology, Cambridge, MA**
Masters of Science (general)
- Aug. 1996 – Aug. 1999 **University of California, Berkeley, CA**
Bachelor of Science: *Highest Distinction; summa cum laude*
Bachelor of Arts: *Highest Distinction; summa cum laude*

AWARDS AND HONORS

- 2020 National Academy of Inventors
2020 Fellow of the American Physical Society
2019 Global Foundries Visiting Professorship, National University of Singapore
2019 UCLA Innovation Fund Award
2018 National Institutes of Health Early Scientist Trailblazer Award

- 2018 Fellow of SPIE, the International Society for Optics and Photonics
- 2018 Fellow of Institute of Electrical and Electronics Engineers
- 2017 Visiting Professorship, Chinese Academy of Sciences
- 2016 Google Faculty Research Award
- 2016 Qualcomm Innovation Award finalist
- 2016 CLEO Maiman Award finalist
- 2016 Visiting Professorship, Nanyang Technological University
- 2015 Qualcomm Innovation Award finalist
- 2014 Fellow of American Society of Mechanical Engineers
- 2013 Fellow of Optical Society of America
- 2009 3M Faculty Award
- 2008 NSF CAREER Award
- 2007 DARPA Young Faculty Award
- 2002 National Science International Fellowship Award (Singapore)

RESEARCH INTERESTS

Recent important advances in subwavelength nanostructures offer extraordinary control over the properties of light. We can now manipulate the propagation, storage, and generation of light, as well as practically prescribe its matter interaction properties based on first-principles. These unprecedented innovations at the nanoscale offer opportunities in theoretical and numerical simulations, device nanofabrication, and quantum physical measurements, focused towards fundamental studies of optics at the nanoscale and photonic applications in the industry.

Our efforts focus on controlling photons in mesoscopic systems in four main themes: **ultrafast**, **nonlinear**, **quantum** and **precision** measurements. Example current topics include photon disorder localization and diffusive transport, graphene optoelectronics and ultrafast spectroscopy, ultrafast exciton dynamics for next-generation photovoltaics, chip-scale laser cooling and cavity optomechanics, ultrafast optical solitons for femtosecond compression on-chip; entanglement and large Hilbert spaces on-chip for quantum information processing, compact ultrastable lasers and frequency combs for quantum and precision measurements. These efforts are supported by device nanofabrication and materials device physics, along with numerical modeling and theoretical efforts.

RECENT SELECTED PUBLICATIONS

1. X. Cheng*, K.-C. Chang*, M. C. Sarihan, F. N. C. Wong, J. H. Shapiro, A. Faraon, and C. W. Wong, Time-frequency entanglement in singly-resonant biphoton frequency combs towards network-multiplexed entanglement distribution, manuscript under review (2023). * equal contribution.
2. W. Wang, H. Liu, J. Yang, A. K. Vinod, J. Lim, Y.-S. Jang, H. Zhou, M. Yu, P. G.-Q. Lo, D.-L. Kwong, P. De Vore, J. Chou, and C. W. Wong, Mapping femtosecond timing jitter in mode-locked laser frequency microcombs, manuscript under review (2023).
3. H. Liu, W. Wang, J. Yang, M. Yu, D.-L. Kwong, and C. W. Wong, Observation of deterministic double dissipative-Kerr-soliton generation with avoided mode crossing, *Phys. Rev. Res.* **4**, accepted for publication – preprint to appear (January 2023).
4. X. Cheng*, Z. Xie*, K.-C. Chang*, M. C. Sarihan, Y. S. Lee, Y. Li, X. Xu, A. K. Vinod, S. Kocaman, M. Yu, P. G.-Q. Lo, D.-L. Kwong, J. H. Shapiro, F. N. C. Wong, and C. W. Wong, A chip-scale polarization-spatial-momentum quantum SWAP gate in silicon nanophotonics, manuscript under review (2023).
5. W. Liu, J. Huang, M. C. Sarihan, A. Miranda, B. Dwir, A. Rudra, E. Kapon, and C. W. Wong, Exciton-photon complexes and dynamics in the concurrent strong-weak coupling regime of singular site-controlled cavity quantum electrodynamics, manuscript under review (2023).

6. M. C. Sarihan, A. Govdeli, Y. B. Yilmaz, M. Erdil, M. S. Aras, M. Rechtsman, C. Yanik, C. W. Wong, and S. Kocaman, Observations of infrared gaps and localized waveguiding in mesoscale Yukawa-potential amorphous structures, manuscript under review – preprint to appear (2022).
7. K.-C. Chang, X. Cheng, M. C. Sarihan, and C. W. Wong, Time-reversible ultranarrow photon-pair generation via singly-filtered biphoton frequency combs, manuscript under review (2022).
8. W. Wang, P.-K. Lu, A. K. Vinod, D. Turan, J. F. McMillan, H. Liu, M. Yu, D.-L. Kwong, M. Jarrahi, and C. W. Wong, Coherent terahertz radiation with 2.8-octave tunability through chip-scale photomixed microresonator optical parametric oscillation, *Nature Comms.* **13**, 5123 (2022).
9. Y. S. Jang, J. Lim, W. Wang, S. W. Kim, A. Savchenkov, A. B. Matsko, and C. W. Wong, Measurement of sub-fm/Hz^{1/2} displacement spectral densities in ultrahigh-*Q* single-crystal microcavities with hertz-level lasers, *Photon. Res.* **10**, 1202 (2022).
10. Y. Cho, J. H. Kang, L. Liang, M. Taylor, X. Kong, S. Ghosh, F. Kargar, C. Hu, A. A. Balandin, A. A. Puretzky, N. Ni, and C. W. Wong, Phonon modes and Raman signatures of MnBi_{2n}Te_{3n+1} (*n* = 1,2,3,4) magnetic topological heterostructures, *Phys. Rev. Res.* **4**, 013108 (2022).
11. H. Boo, Y. S. Lee, H. Yang, B. Matthews, T. G. Lee, and C. W. Wong, Metasurface wavefront control for high-performance user-natural augmented reality waveguide glasses, *Scientific Reports* **12**, 5832 (2022).
12. L.-Y. Chen, A. K. Vinod, J. F. McMillan, H. Yang, C. W. Wong, and C.-K. K. Yang, A pulsed-coherent lidar with sub-10 μm precision, *IEEE J. Solid-State Circuits* **57**, 2486 (2022).
13. K.-C. Chang, X. Cheng, M. C. Sarihan, A. Kumar, Y. S. Lee, T. Zhong, Y.-X. Gong, Z. Xie, J. H. Shapiro, F. N. C. Wong, and C. W. Wong, 648 Hilbert-space dimensionality in a biphoton frequency comb: entanglement of formation and Schmidt mode decomposition, *npj Quantum Information* **7**, 48 (2021).
14. Y. S. Jang, H. Liu, J. Yang, M. Yu, D.-L. Kwong, and C. W. Wong, Nanometric precision distance metrology via hybrid spectrally-resolved and homodyne interferometry in a single soliton frequency microcomb, *Phys. Rev. Lett.* **126**, 023903 (2021).
15. A. K. Vinod, S.-W. Huang, J. Yang, M. Yu, D.-L. Kwong, and C. W. Wong, Frequency microcomb stabilization via dual-microwave control, *Nature Comm. Phys.* **4**, 81 (2021).
16. O. Spitz, A. Herdt, J. Wu, G. Maisons, M. Carras, C. W. Wong, W. Elsaber, and F. Grillot, Private communications with quantum cascade laser photonic chaos, *Nature Comms.* **12**, 3327 (2021).
17. K. Cai, P. Prarajuli, G. Long, C. W. Wong, and L. Tian, Robust preparation of many-body ground states in Jaynes-Cummings lattices, *npj Quantum Information* **7**, 96 (2021).
18. J. Huang, W. Liu, and C. W. Wong, Hydrodynamical self-interference of a scattered polariton quanta, *Nature - Light: Science & Applications* **9**, 154 (2020; News & Views).
19. J. Yang, S.-W. Huang, Z. Xie, M. Yu, D.-L. Kwong, and C. W. Wong, Coherent satellites in multi-spectral regenerative frequency microcombs, *Nature Communications Physics* **3**, 27 (2020).
20. Y. Li, S.-W. Huang, B. Li, H. Liu, J. Yang, A. K. Vinod, K. Wang, M. Yu, D.-L. Kwong, H. Wang, K. K.-Y. Wong, and C. W. Wong, Real-time transition dynamics and stability of chip-scale dispersion-managed frequency microcombs, *Nature - Light: Science & Applications* **9**, 52 (2020).
21. Y. Huang, J. G. Flor Flores, Y. Li, W. Wang, D. Wang, N. Goldberg, J. Zheng, M. Yu, M. Lu, M. Kutzer, D. Rogers, D.-L. Kwong, L. Churchill, and C. W. Wong, A chip-scale oscillation-mode optomechanical inertial sensor near the thermodynamical limits, *Laser & Photonics Reviews* **14**, 1800329 (2020).
22. H. Zhou, Y. Geng, W. Cui, S.-W. Huang, Q. Zhou, K. Qiu, and C. W. Wong, Soliton bursts and deterministic dissipative Kerr soliton generation in auxiliary-assisted microcavities, *Nature - Light: Science & Applications* **8**, 50 (2019).
23. J. Lim, W. Liang, A. B. Matsko, L. Maleki, and C. W. Wong, Probing 10 microKelvin stability and residual drifts in cross-polarized dual-mode stabilization of single-crystal ultrahigh-*Q* optical cavities, *Nature - Light: Science & Applications* **8**, 1 (2019).

24. B. C. Yao, S. W. Huang, Y. Liu, A. K. Vinod, C. Choi, M. Hoff, Y. N. Li, M. Yu, D. L. Kwong, Y. Huang, Y. J. Rao, X. F. Duan, and C. W. Wong, Gate-tunable frequency combs in graphene-nitride microresonators, *Nature* **558**, 410 (2018).
25. B. C. Yao, Y. Liu, S.-W. Huang, C. Choi, Z. Xie, J. Flor Flores, Y. Wu, M. Yu, D.-L. Kwong, Y. Huang, Y. J. Rao, X. F. Duan, and C. W. Wong, Broadband gate-tunable THz plasmons in graphene heterostructures, *Nature Photonics* **12**, 22 (2018).
26. C. Choi, H.-C. Cheng, H. Kim, A. K. Vinod, S. Bae, J. Chae, Y. Kim, S.-W. Huang, X. Duan, T. Low, and C. W. Wong, Enhanced interlayer neutral excitons and trions in trilayer van der Waals heterostructures, *Nature: 2D Materials and Applications* **2**, 30 (2018).
27. T. Li, D. Mao, N. W. Petrone, R. Grassi, H. Hu, Y. Ding, Z. Huang, G.-Q. Lo, J. Hone, T. Low, C. W. Wong, and T. Gu, Spatially controlled electrostatic doping in graphene *p-i-n* junction for hybrid silicon photodiode, *Nature: 2D Materials and Applications* **2**, 36 (2018).
28. J. Lim, A. A. Savchenkov, E. Dale, W. Liang, D. Eliyahu, V. Ilchenko, A. B. Matsko, L. Maleki, and C. W. Wong, Chasing the thermodynamical noise limit in microresonators for ultrastable laser frequency stabilization, *Nature Communications* **8**, 8 (2017).
29. H. Zhou, S.-W. Huang, X. Li, J. F. McMillan, C. Zhang, K. K. Y. Wong, M. Yu, G.-Q. Lo, D.-L. Kwong, K. Qiu, and C. W. Wong, Real-time dynamics and cross-correlation gating spectroscopy of free-carrier Drude solitons, *Nature - Light: Science & Applications* **6**, e17008 (2017).
30. J. Wu, S.-W. Huang, Y. Huang, H. Zhou, J. Yang, J.-M. Liu, M. Yu, G. Lo, D.-L. Kwong, S. Duan, and C. W. Wong, Mesoscopic chaos mediated by Drude electron-hole plasma in silicon optomechanical oscillators, *Nature Communications* **8**, 15570 (2017).
31. B. Li, S.-W. Huang, Y. Li, C. W. Wong and K. Y. Wong, Panoramic reconstruction temporal imaging for seamless measurements of slowly-evolved femtosecond pulse dynamics, *Nature Communications* **8**, 61 (2017).
32. S.-W. Huang, J. Yang, S.-H. Yang, M. Yu, D.-L. Kwong, T. Zelevinsky, M. Jarrahi, and C. W. Wong, Globally stable microresonator Turing pattern formation for coherent high-power THz radiation on-chip, *Physical Review X* **7**, 041002 (2017).
33. S.-W. Huang, J. Yang, M. Yu, B. H. McGuyer, D.-L. Kwong, T. Zelevinsky, and C. W. Wong, *A broadband chip-scale optical frequency synthesizer at 2.7×10^{-16} relative inaccuracy*, *Science Advances* **2**, e1501489 (2016).
34. Z. Xie, T. Zhong, X. Xu, J. Liang, Y.-X. Gong, J. H. Shapiro, F. N. C. Wong, and C. W. Wong, Harnessing high-dimensional hyperentanglement through a biphoton frequency comb, *Nature Photonics* **9**, 536 (2015).
35. P. Hsieh, C. Chung, J. F. McMillan, M. Tsai, M. Lu, N. C. Panoiu, and C. W. Wong, Photon transport and localization in optical superlattices, *Nature Physics* **11**, 268 (2015).
36. S.-W. Huang, J. F. McMillan, J. Yang, A. Matsko, H. Zhou, M. Yu, D.-L. Kwong, L. Maleki, C. W. Wong, Mode-locking ultrashort pulse generation from on-chip normal dispersion microresonators, *Phys. Rev. Lett.* **114**, 053901 (2015).
37. Y.-C. Liu, X. Luan, H.-K. Li, Q. Gong, C. W. Wong, and Y.-F. Xiao, Coherent polariton dynamics in coupled highly-dissipative cavity quantum electrodynamics, *Phys. Rev. Lett.* **112**, 213602 (2014).
38. I. Sarpkaya, Z. Zhang, W. Walden-Newman, X. Wang, J. Hone, C. W. Wong, and S. Strauf, Prolonged spontaneous emission and dephasing of localized excitons in air-bridged carbon nanotubes, *Nature Communications* **4**, 2152 (2013).
39. Y.-C. Liu, X. Luan, Y.-F. Xiao, and C. W. Wong, Dynamic dissipative cooling of a mechanical oscillator in strong-coupling quantum optomechanics, *Phys. Rev. Lett.* **110**, 153606 (2013).
40. T. Gu, N. Petrone, J. F. McMillan, A. van der Zande, M. Yu, G. Q. Lo, D. L. Kwong, J. Hone, and C. W. Wong, Regenerative oscillation and four-wave mixing in graphene optoelectronics, *Nature Photonics* **6**, 554 (2012).
41. F. Gesuele, M. Y. Sfeir, W.-K. Koh, C. B. Murray, T. F. Heinz, and C. W. Wong, Ultrafast supercontinuum spectroscopy of carrier multiplication and biexcitonic effects in excited state PbS quantum dots, *Nano Letters* **12**, 2658 (2012).

42. S. Kocaman, M.S. Aras, P. Hsieh, J. F. McMillan, C. G. Biris, N. C. Panoiu, M. B. Yu, D. L. Kwong, A. Stein, and C. W. Wong, Zero phase delay in negative-index photonic crystal superlattices, *Nature Photonics* **5**, 499 (2011).
43. P. Colman, C. A. Husko, S. Combrié, I. Sagnes, C. W. Wong*, and A. De Rossi*, Temporal solitons and pulse compression in photonic crystal waveguides, *Nature Photonics* **4**, 862 (2010).
44. J. Y. Lee, B. H. Hong, W. Y. Kim, S. K. Min, Y. Kim, M. V. Jouravlev, R. Bose, L. J. Kaufman, C. W. Wong, P. Kim, and K. S. Kim, Near-field focusing and magnification through self-assembled nanoscale spherical lenses, *Nature* **460**, 498 (2009).
45. X. Yang, M. Yu, D.-L. Kwong, and C. W. Wong, All-optical analogue to electromagnetically induced transparency in multiple coupled photonic crystal cavities, *Phys. Rev. Lett.* **102**, 173902 (2009).
46. S. Kocaman, R. Chatterjee, N.-C. Panoiu, R. M. Osgood, M. Yu, D.-L. Kwong, and C. W. Wong, Observation of zero- n band gaps in photonic crystal superlattices, *Phys. Rev. Lett.* **102**, 203905 (2009).
47. R. Chatterjee, N.-C. Panoiu, K. Liu, Z. Dios, M. B. Yu, M. T. Doan, L. Kaufman, R. M. Osgood, and C. W. Wong, Achieving sub-diffraction imaging through bound surface states in negative refraction photonic crystals in the near-infrared range, *Phys. Rev. Lett.* **100**, 187401 (2008).

PROFESSIONAL ACTIVITIES

1. Organizing committees of various leading international optics and optoelectronics conferences (2004 – current): SPIE Optics and Photonics; Conference on Lasers and Optoelectronics and International Quantum Electronics Conference (CLEO/QELS); International Union of Radio Science (URSI) Commission D on Electronics and Photonics; 2D Materials and Optoelectronics; IEEE Photonics Conference; Energy Materials and Nanotechnology Meetings on Ultrafast, Quantum Information, and Nanomaterials; Integrated Photonics and Nanophotonics Research and Applications (IPNRA), Asia-Pacific Optical Communications; International Conference on Materials for Advanced Technologies (ICMAT), various other optoelectronics and communications conferences.
2. Led NSF workshop on quantum communications (ACQUIRE program; 2019). Co-led NSF workshop on wireless communications (SpecEES program; 2020).
3. Topical editor and editorial board for various journals and books: Nature Scientific Reports, Optics and Photonics Letters; Advances in Optics, Nanoscience and Nanotechnology Letters. Books: Electromagnetism and metamaterials; Nonlinear fiber optics and communications, amongst others.
4. Reviewer for lead journals (2004 – current): Nature series such as Nature, Nature Physics, Nature Photonics, Nature Materials, Nature Communications, Nature Light: Science & Applications, Scientific Reports etc; Science series including Science Advances; Physical Review Letters and Phys. Rev. series, Applied Physics series, Nanoscience and Nanotechnology series, and others including physical chemistry, microelectromechanical systems, and applied mathematics.
5. Reviewer in various international and domestic research funding panels (2004 – current).
6. Global Foundries Visiting Professor, National University of Singapore, (2018 – present).

UCLA Academic Senate - Legislative Assembly (2021 – present).

Faculty Executive Committee, UCLA Henry Samueli School of Engineering (2015 – 2018).

Co-Chair, UCLA Electrical Engineering, Annual Research Review (2016 – 2017).

UCLA Electrical Engineering, Faculty Search Committee (2016 - present).
UCLA Electrical Engineering, New Curriculum Committee jointly with Materials Science (2018 – 2019).
UCLA Electrical Engineering, Undergraduate Fast Track Committee (2016 - present).
Columbia Fu Foundation School of Engineering, Dean’s Faculty Advisory Committee (2009 – 2012).

POST-DOCTORAL, GRADUATE AND UNDERGRADUATE STUDENT ADVISING

Research scientists and post-doctoral research associates (current):

1. Dr. Hangbo Yang (Ph.D. Optics 2017)
2. Dr. Xiang Cheng (Ph.D. Physics 2019)
3. Dr. Jaime Gonzalo Flor Flores (Ph.D. Optics 2022)
4. Dr. Kai-Chi Chang (Ph.D. Optics 2022)
5. Dr. Aweek Chandra (Ph.D. Physics 2017; visiting scientist)

Ph.D students (current):

1. Alwaleed Aldhafeeri (Ph.D. candidate Kuwaiti Fellowship)
2. Jin Ho Kang (Ph.D. candidate)
3. Madeline Taylor (Ph.D. candidate; NDSEG, NSF NRT and Cota Robles Fellowships)
4. Tristan Melton (Ph.D. candidate; SMART Fellowship)
5. Jiahui Huang (Ph.D. candidate)
6. Talha Yerebakan (Ph.D. candidate)
7. Murat Can Sarihan (Ph.D. candidate; Fulbright and Dean’s Fellowship)
8. Allen Kuan-Chen Chu (Ph.D. candidate)
9. Cody S. Fan (Ph.D. candidate; NSF NRT fellowship)
10. Hyunpil Boo (Ph.D. candidate)
11. Kangdi Kerry Yu (Ph.D. candidate; NSF GRFP and NRT Fellowships)
12. Connor Nasseraddin (Ph.D. candidate; NSF NRT data science and quantum Fellowships)

M.S. students (current):

1. Wenxu Alex Gu (Ph.D. candidate)
2. Ananyo Banerjee (M.S. candidate; B.T. EE. Vellore Institute of Tech.)
3. Hsiao-Hsuan Chin (M.S. quantum science and technology; B.S. Phys. UT Austin)
4. Nicolas Dirnegger (M.S. quantum science and technology; B.S. EE. EPFL)
5. Yi Wang (M.S. candidate; B.S. ECE. UCSB)

Post-doctoral research associates (alumni):

1. Dr. Wenting Wang (Ph.D. Ultrafast Optics 2017). Position: Associate group leader, Optoelectronics, Chinese Academy of Sciences, Beijing, China, August 2022.
2. Dr. James F. McMillan (Ph.D Optics 2019). Position: Chief Architect Office, Rockley Photonics, August 2021.
3. Dr. Yujin Cho (Ph.D. Physics 2019). Position: Research Scientist, Lawrence Livermore National Laboratory, 2021.
4. Dr. Wei Liu (Ph.D. Physics 2019). Position: Research Scientist, Lawrence Berkeley National Laboratory, 2021.
5. Dr. Yoo Seung Lee (Ph.D. Electrical Engineering 2011). Position: Senior Engineer, Samsung Electronics, Korea.
6. Dr. Jinghui Yang (Ph.D. E.E. & Optics 2017). Position: photonics startup company in Bay Area, CA. Prior: Research Scientist, National Institute of Science and Technology, Gaithersburg, MD.
7. Dr. Yoon-Soo Jang (Ph.D. Optics 2017). Position: Senior Research Scientist, Korea Institute of Science and Technology.
8. Dr. Jinkang Lim (Ph.D. Optics 2011). Position: Senior Research Scientist, LGS Innovations.

9. Prof. Shu-Wei Huang (Ph.D. Optics 2012), Air Force Young Investigator Award (2015). Position: **Assistant Professor**, Electrical, Computer and Energy Engineering, University of Colorado at Boulder.
10. Prof. Yongnan Li (Ph.D. Physics 2007). Position: **Professor of Optics**, School of Physics, Nankai University.
11. Prof. Zhenda Xie (Ph.D. Physics 2011). Position: **Professor**, Schools of Electrical Engineering and Physics, Nanjing University.
12. Prof. Jiagui Wu (Ph.D. Optics 2013). Position: **Professor**, School of Physics, Southwest University.
13. Prof. Junbo Yang (Ph.D. Optics 2008). Position: **Professor**, National University of Defense Technology and Peking University.
14. Prof. Felice Gesuele (Ph.D. Applied Physics 2009). Position: **Associate Professor**, Physics, University of Naples Federico II.
15. Dr. Jiangjun Zheng (Ph.D. Optics 2009). Position: Amazon. Prior: Senior Scientist, Brion Technologies.
16. Dr. Junlin Liang (Ph.D. Physics 2012).
17. Prof. Xiujuan Li (Ph.D Optics Engineering 2007), Position: **Professor**, Applied Physics, Institute of Tech-Physics, National University of Defense Technology, China.
18. Dr. Andrzej Veitia (Ph.D. Physics 2010), Position: Psi Quantum. Prior: Post-doctoral Research Scientist: UC Riverside, California and University of Oregon.
19. Prof. Fangwen Sun (Ph.D. Physics 2007), Position: **Professor**, Physics, University of Science and Technology, China.
20. Prof. Yunfeng Xiao (Ph.D. Physics 2007), Position: **Professor**, Physics, Peking University, China.
21. Prof. Jing Shu (Ph.D. Physics 2007), Position: **Associate Professor**, Optoelectronic Materials and Devices, Nanjing University of Science and Technology, China.
22. Dr. Kai Liu (Ph.D. Physics 2005). Optical – terahertz spectroscopy.

Visiting faculty and scientists (alumni):

1. Prof. Serge Massar (Ph.D. Physics 1995), currently: Professor, Université libre de Bruxelles, Belgium, visiting period: October 2022.
2. Prof. Guangjun Wen (Ph.D. Electrical Engineering 1998), currently: Professor, University of Electronic Science and Technology of China, visiting period: April - May 2015.

Ph.D. students (alumni):

1. Dr. Jaime Gonzalo Flor Flores (Ph.D. candidate; Fulbright Fellowship), Resolving atto-Newton forces and femtometer motional displacement in chip-scale cavity optomechanics. Position: postdoctoral research scientist, UCLA Mesoscopic Optics and Quantum Electronics Laboratory.
2. Dr. Kai-Chi Chang (Ph.D. E.C.E. 2022; Taiwan Ministry of Education Fellowship), High-dimensional quantum information processing with time-frequency qudits. Position: postdoctoral research scientist, UCLA Mesoscopic Optics and Quantum Electronics Laboratory.
3. Dr. Hao Liu (Ph.D. E.E. 2022; CSC Fellowship), Frequency comb generation in dispersion engineered Si₃N₄ microresonators and their applications. Position: research scientist, Huawei Research, Dongguan, China.
4. Dr. Abhinav Kumar Vinod (Ph.D. E.E. 2022; Guru Krupa Fellowship), Stabilization, control and ultrafast dynamics of microresonator optical frequency combs. Position: research scientist, Intel Chief Technology Office, Santa Clara, CA.
5. Dr. James F. McMillan (Ph.D. E.E. 2019; Columbia University), Investigations of nonlinear optical phenomenon and dispersion in integrated photonic devices. Previously: postdoctoral research scientist, UCLA Mesoscopic Optics and Quantum Electronics Laboratory.
6. Dr. Jinghui Yang (Ph.D. E.E. 2017; Distinguished PhD Dissertation Award, UCLA; SPIE Scholarship; Samueli Foundation Fellowship; CESASC Scholarship), Chip-scale architectures for precise optical frequency synthesis. Previously: research scientist, National Institute of Science

- and Technology, Gaithersburg, MD. Lab Manager, UCLA Mesoscopic Optics and Quantum Electronics Laboratory.
7. Dr. Obafunso Demi Ajayi (Ph.D. M.E. 2016; NSF and IGERT Fellowship; co-advised), Optical studies of excitonic effects at two-dimensional nanostructure interfaces. Currently: Columbia Technology Ventures.
 8. Dr. Ying Li (Ph.D. M.E. 2016; co-advised), Silicon photonic devices and their applications. Currently: Google Inc. Formerly: Bloomberg LP.
 9. Prof. Tingyi Gu (Ph.D. E.E. 2014; IEEE and SPIE Fellowships), Chip-scale low-dimensional materials: optoelectronics and nonlinear optics. Currently: **Assistant Professor**, Electrical & Computer Engineering, University of Delaware, Previously: Postdoctoral research scientist, Princeton University and HP Labs.
 10. Dr. Pin-Chun Hsieh (Ph.D. M.E. 2014), Photon transport in disordered photonic crystals. Currently: Quantumstone Research, Taiwan.
 11. Prof. Serdar Kocaman (Ph.D. E.E. 2011), On-chip group and phase velocity control for classical and quantum optical devices. Currently: **Assistant Professor**, Electrical and Electronics Engineering, Middle East Technical University, Turkey. Previously: Adjunct Professor, Columbia University.
 12. Prof. Jie Gao (Ph.D. Appl. Phys. and Appl. Math. 2011), Chip-scale photonic devices for light-matter interactions and quantum information processing. Currently: **Associate Professor**, Mechanical and Aerospace Engineering, Missouri University of Science and Technology, USA.
 13. Dr. Charlton J. Chen (Ph.D. Appl. Phys. and Appl. Math. 2011), Precision Tuning of Silicon Nanophotonic Devices through Post-Fabrication Processes.
 14. Dr. Chad A. Husko (Ph.D. Appl. Phys. and Appl. Math. 2010), Ultrafast nonlinear optics in III-V photonic crystals. Currently: Staff Scientist and Abrikosov Fellow, Argonne National Laboratory. Previously: Postdoctoral Fellow, University of Sydney, Physics and Centre for Ultrahigh bandwidth Devices for Optical Systems.
 15. Dr. Ranojoy Bose (Ph.D. M.E. 2009; IEEE Fellowship), Solution-process colloidal lead sulfide quantum dots for near-infrared quantum information processing applications. Currently: Staff Scientist, Hewlett-Packard Laboratories, Palo Alto, CA. Previously: Assistant Research Scientist, Joint Quantum Institute / Electrical Engineering, University of Maryland at College Park.
 16. Dr. Rohit Chatterjee (Ph.D. M.E. 2008; with distinction), Micro- and nano-scale optical devices for high density photonic integrated circuits at near-infrared wavelengths. Currently: Associate, McKinsey & Company.
 17. Prof. Xiaodong Yang (Ph.D. M.E. 2008; with distinction; Intel Fellowship), Controlling light with high- Q silicon photonic crystal nanocavities: photon confinement, nonlinearity and coherence. Currently: **Associate Professor**, Mechanical and Aerospace Engineering, Missouri University of Science and Technology, USA.

Ph.D. students (alumni; exchange program):

1. Dr. Futai Hu (Ph.D. Ultrafast Optics; Tsinghua University, Beijing, China)
2. Dr. Qingsong Bai (Ph.D. Optics, University of Electronic Science and Technology of China).
3. Dr. Xuan Cui (Ph.D. Physics, Harbin Institute of Technology).
4. Dr. Olivier Spitz (Ph.D. Optics, Télécom Paris Tech).
5. Dr. Martin Romme Henriksen (Ph.D. Quantum Optics, Niels Bohr Institute).
6. Dr. Baicheng Yao (Ph.D. E.E., University of Electronic Science and Technology of China). Currently: **Professor**, Electrical Engineering, University of Electronic Science and Technology of China & Research Associate, Cambridge Graphene Center.
7. Bowen Li (Ph.D. E.E., University of Hong Kong).
8. Dr. Yongjun Huang (Ph.D. E.E., University of Electronic Science and Technology of China). Currently: **Assistant Professor**, Electrical Engineering, University of Electronic Science and Technology of China.
9. Prof. Hao Zhou (Ph.D. E.E. 2015; Sichuan University). Currently: **Assistant Professor**, Electrical Engineering, Sichuan University.

10. Prof. Heng Zhou (Ph.D. E.E 2013, University of Electronic Science and Technology of China). Currently: **Assistant Professor**, Electrical Engineering, University of Electronic Science and Technology of China.
11. Yong-Chun Liu (Ph.D. Physics, Peking University). Currently: **Assistant Professor**, Electrical Engineering, Tsinghua University.

SELECTED JOURNAL PUBLICATIONS AND BOOK CHAPTERS

1. X. Cheng*, K.-C. Chang*, M. C. Sarihan, F. N. C. Wong, J. H. Shapiro, A. Faraon, and C. W. Wong, Time-frequency entanglement in singly-resonant biphoton frequency combs towards network-multiplexed entanglement distribution, manuscript under review (2023). * equal contribution.
2. W. Wang, H. Liu, J. Yang, A. K. Vinod, J. Lim, Y.-S. Jang, H. Zhou, M. Yu, P. G.-Q. Lo, D.-L. Kwong, P. De Vore, J. Chou, and C. W. Wong, Mapping femtosecond timing jitter in mode-locked laser frequency microcombs, manuscript under review (2023).
3. H. Liu, W. Wang, J. Yang, M. Yu, D.-L. Kwong, and C. W. Wong, Observation of deterministic double dissipative-Kerr-soliton generation with avoided mode crossing, *Phys. Rev. Res.* **4**, accepted for publication – preprint to appear (January 2023).
4. X. Cheng*, Z. Xie*, K.-C. Chang*, M. C. Sarihan, Y. S. Lee, Y. Li, X. Xu, A. K. Vinod, S. Kocaman, M. Yu, P. G.-Q. Lo, D.-L. Kwong, J. H. Shapiro, F. N. C. Wong, and C. W. Wong, A chip-scale polarization-spatial-momentum quantum SWAP gate in silicon nanophotonics, manuscript under review (2023).
5. W. Liu, J. Huang, M. C. Sarihan, A. Miranda, B. Dwir, A. Rudra, E. Kapon, and C. W. Wong, Exciton-photon complexes and dynamics in the concurrent strong-weak coupling regime of singular site-controlled cavity quantum electrodynamics, manuscript under review (2023).
6. M. C. Sarihan, A. Govdeli, Y. B. Yilmaz, M. Erdil, M. S. Aras, M. Rechtsman, C. Yanik, C. W. Wong, and S. Kocaman, Observations of infrared gaps and localized waveguiding in mesoscale Yukawa-potential amorphous structures, manuscript under review – preprint to appear (2022).
7. H. Liu, W. Wang, J. Yang, S.-W. Huang, M. Yu, P. G.-Q. Lo, D.-L. Kwong, P. Colman, and C. W. Wong, Stimulated generation of deterministic platycon frequency microcombs, manuscript under review (2022).
8. K.-C. Chang, X. Cheng, M. C. Sarihan, and C. W. Wong, Time-reversible ultranarrow photon-pair generation via singly-filtered biphoton frequency combs, manuscript under review (2022).
9. W. Wang, P.-K. Lu, A. K. Vinod, D. Turan, J. F. McMillan, H. Liu, M. Yu, D.-L. Kwong, M. Jarrahi, and C. W. Wong, Coherent terahertz radiation with 2.8-octave tunability through chip-scale photomixed microresonator optical parametric oscillation, *Nature Comms.* **13**, 5123 (2022).
10. Y. S. Jang, J. Lim, W. Wang, S. W. Kim, A. Savchenkov, A. B. Matsko, and C. W. Wong, Measurement of sub-fm/Hz^{1/2} displacement spectral densities in ultrahigh-*Q* single-crystal microcavities with hertz-level lasers, *Photon. Res.* **10**, 1202 (2022).
11. Y. Cho, J. H. Kang, L. Liang, M. Taylor, X. Kong, S. Ghosh, F. Kargar, C. Hu, A. A. Balandin, A. A. Puzrikov, N. Ni, and C. W. Wong, Phonon modes and Raman signatures of MnBi_{2n}Te_{3n+1} (*n* = 1,2,3,4) magnetic topological heterostructures, *Phys. Rev. Res.* **4**, 013108 (2022).
12. H. Boo, Y. S. Lee, H. Yang, B. Matthews, T. G. Lee, and C. W. Wong, Metasurface wavefront control for high-performance user-natural augmented reality waveguide glasses, *Scientific Reports* **12**, 5832 (2022).
13. L.-Y. Chen, A. K. Vinod, J. F. McMillan, H. Yang, C. W. Wong, and C.-K. K. Yang, A pulsed-coherent lidar with sub-10 μm precision, *IEEE J. Solid-State Circuits* **57**, 2486 (2022).
14. K.-C. Chang, X. Cheng, M. C. Sarihan, A. Kumar, Y. S. Lee, T. Zhong, Y.-X. Gong, Z. Xie, J. H. Shapiro, F. N. C. Wong, and C. W. Wong, 648 Hilbert-space dimensionality in a biphoton frequency comb: entanglement of formation and Schmidt mode decomposition, *npj Quantum Information* **7**, 48 (2021).

15. Y. S. Jang, H. Liu, J. Yang, M. Yu, D.-L. Kwong, and C. W. Wong, Nanometric precision distance metrology via hybrid spectrally-resolved and homodyne interferometry in a single soliton frequency microcomb, *Phys. Rev. Lett.* **126**, 023903 (2021).
16. A. K. Vinod, S.-W. Huang, J. Yang, M. Yu, D.-L. Kwong, and C. W. Wong, Frequency microcomb stabilization via dual-microwave control, *Nature Comm. Phys.* **4**, 81 (2021).
17. O. Spitz, A. Herdt, J. Wu, G. Maisons, M. Carras, C. W. Wong, W. Elsaber, and F. Grillot, Private communications with quantum cascade laser photonic chaos, *Nature Comms.* **12**, 3327 (2021).
18. K. Cai, P. Prarajuli, G. Long, C. W. Wong, and L. Tian, Robust preparation of many-body ground states in Jaynes-Cummings lattices, *npj Quantum Information* **7**, 96 (2021).
19. H. Chen, J. Zhou, D. Li, D. Chen, A. K. Vinod, H. Fu, X. Huang, T.-H. Yang, J. A. Montes, K. Fu, C. Yang, C.-Z. Ning, C. W. Wong, A. M. Armani, and Y. Zhao, Supercontinuum generation in high order waveguide mode with near-visible pumping using aluminum nitride waveguides, *ACS Photonics* **8**, 1344 (2021).
20. X. Chen, H. Zhou, Y. Ma, J. Wu, J. Yang, M. Yu, D.-L. Kwong, S. Zhou, and C. W. Wong, Wideband switch enhanced by photonic crystal waveguide with graphene nanosheet heater, *Results in Phys.* **26**, 104434 (2021).
21. B. Shi, C. Luo, J. F. Flor Flores, G. Lo, D.-L. Kwong, J. Wu, and C. W. Wong, Gb/s physical random bit generation based on mesoscopic chaos in silicon photonic crystal microcavities, *Optics Express* **28**, 36685 (2020).
22. J. Huang, W. Liu, and C. W. Wong, Hydrodynamical self-interference of a scattered polariton quanta, *Nature - Light: Science & Applications* **9**, 154 (2020; News & Views).
23. O. Spitz, J. Wu, A. Herdt, G. Maisons, M. Carras, W. Elsaber, C. W. Wong, and F. Grillot, Extreme events in quantum cascade lasers, *Advanced Photonics* **2**, 066001 (2020).
24. L.-Y. Chen, A. K. Vinod, J. F. McMillan, C. W. Wong, and C.-K. K. Yang, A 9 μ m-precision 5MSa/s pulsed-coherent Lidar system with sub-sampling receiver, *IEEE Solid-State Circuits Letters* **3**, 262 (2020).
25. J. Yang, S.-W. Huang, Z. Xie, M. Yu, D.-L. Kwong, and C. W. Wong, Coherent satellites in multi-spectral regenerative frequency microcombs, *Nature Communications Physics* **3**, 27 (2020).
26. Y. Li, S.-W. Huang, B. Li, H. Liu, J. Yang, A. K. Vinod, K. Wang, M. Yu, D.-L. Kwong, H. Wang, K. K.-Y. Wong, and C. W. Wong, Real-time transition dynamics and stability of chip-scale dispersion-managed frequency microcombs, *Nature - Light: Science & Applications* **9**, 52 (2020).
27. Y. Huang, J. G. Flor Flores, Y. Li, W. Wang, D. Wang, N. Goldberg, J. Zheng, M. Yu, M. Lu, M. Kutzer, D. Rogers, D.-L. Kwong, L. Churchill, and C. W. Wong, A chip-scale oscillation-mode optomechanical inertial sensor near the thermodynamical limits, *Laser & Photonics Reviews* **14**, 1800329 (2020).
28. Y. Cho, J. Huang, and C. W. Wong, Collective excitations in 2D atomic layers: recent perspectives, *Applied Physics Letters Perspectives* **116**, 020501 (2020).
29. Hao Zhou, X. Zhu, T. Gu, J. Wu, G. Deng, S.-W. Huang, N. Ophir, M. Yu, D.-L. Kwong, S. Zhou, K. Bergman, and C. W. Wong, Error-free data transmission through fast broadband all-optical modulation in graphene-silicon optoelectronics, *Applied Physics Letters* **116**, 221106 (2020).
30. K. Jia, X. Wang, X. Lü, P. Xu, Z. Wang, C. W. Wong, G. Zhao, Y.-X. Gong, Z. Xie, and S. Zhu, Robust second-order correlation of twin parametric beams generated by amplified spontaneous parametric down-conversion, *Chinese Optics Letters* **18**, 121902 (2020).
31. Z. Cao, B. Yao, C. Qin, R. Yang, Y. Zhang, Y. Wu, L. Bi, Y. Chen, Z. Xie, G. Peng, S.-W. Huang, C. W. Wong, and Y. Rao, Biochemical sensing in graphene-enhanced microfiber resonators with individual molecule sensitivity and selectivity, *Nature - Light: Science & Applications* **8**, 107 (2019).
32. H. Zhou, Y. Geng, W. Cui, S.-W. Huang, Q. Zhou, K. Qiu, and C. W. Wong, Soliton bursts and deterministic dissipative Kerr soliton generation in auxiliary-assisted microcavities, *Nature - Light: Science & Applications* **8**, 50 (2019).

33. J. Lim, W. Liang, A. B. Matsko, L. Maleki, and C. W. Wong, Probing 10 microKelvin stability and residual drifts in cross-polarized dual-mode stabilization of single-crystal ultrahigh- Q optical cavities, *Nature - Light: Science & Applications* **8**, 1 (2019).
34. O. Spitz, J. Wu, M. Carras, C. W. Wong, and F. Grillot, Chaotic optical power dropouts driven by low frequency bias forcing in a mid-infrared quantum cascade laser, *Nature: Scientific Reports* **9**, 4451 (2019).
35. B. C. Yao, S. W. Huang, Y. Liu, A. K. Vinod, C. Choi, M. Hoff, Y. N. Li, M. Yu, D. L. Kwong, Y. Huang, Y. J. Rao, X. F. Duan, and C. W. Wong, Gate-tunable frequency combs in graphene-nitride microresonators, *Nature* **558**, 410 (2018).
36. B. C. Yao, Y. Liu, S.-W. Huang, C. Choi, Z. Xie, J. Flor Flores, Y. Wu, M. Yu, D.-L. Kwong, Y. Huang, Y. J. Rao, X. F. Duan, and C. W. Wong, Broadband gate-tunable THz plasmons in graphene heterostructures, *Nature Photonics* **12**, 22 (2018).
37. C. Choi, H.-C. Cheng, H. Kim, A. K. Vinod, S. Bae, J. Chae, Y. Kim, S.-W. Huang, X. Duan, T. Low, and C. W. Wong, Enhanced interlayer neutral excitons and trions in trilayer van der Waals heterostructures, *Nature: 2D Materials and Applications* **2**, 30 (2018).
38. T. Li, D. Mao, N. Petrone, R. Grassi, H. Hu, Y. Ding, Z. Huang, G. Lo, J. Hone, T. Low, C. W. Wong, and T. Gu, Spatially controlled electrostatic doping in graphene p - i - n junction for hybrid silicon photodiode, *Nature: 2D Materials and Applications* **2**, 36 (2018).
39. Y. Geng, X. Huang, W. Cui, Y. Ling, B. Xu, J. Zhang, X. Yi, B. Wu, S.-W. Huang, K. Qiu, C. W. Wong, and H. Zhou, Terabit optical OFDM superchannel transmission via coherent carriers of a hybrid chip-scale soliton frequency comb, *Optics Letters* **43**, 2406 (2018).
40. O. Spitz, J. Wu, S. Khanal, M. Carras, B. S. Williams, C. W. Wong, and F. Grillot, Low-frequency fluctuations of a mid-infrared quantum cascade laser operating at cryogenic temperatures, *Laser Physics Letters* **15**, 116201 (2018).
41. S.-W. Huang, J. Yang, S.-H. Yang, M. Yu, D.-L. Kwong, T. Zelevinsky, M. Jarrahi, and C. W. Wong, Globally stable microresonator Turing pattern formation for coherent high-power THz radiation on-chip, *Phys. Rev. X* **7**, 041002 (2017).
42. J. Lim, A. A. Savchenkov, E. Dale, W. Liang, D. Eliyahu, V. Ilchenko, A. B. Matsko, L. Maleki, and C. W. Wong, Chasing the thermodynamical noise limit in microresonators for ultrastable laser frequency stabilization, *Nature Communications* **8**, 8 (2017).
43. H. Zhou, S.-W. Huang, X. Li, J. F. McMillan, C. Zhang, K. K. Y. Wong, M. Yu, G.-Q. Lo, D.-L. Wong, K. Qiu, and C. W. Wong, Real-time dynamics and cross-correlation gating spectroscopy of free-carrier Drude solitons, *Nature - Light: Science & Applications* **6**, e17008 (2017).
44. J. Wu, S.-W. Huang, Y. Huang, H. Zhou, J. Yang, J.-M. Liu, M. Yu, G. Lo, D.-L. Kwong, S. Duan, and C. W. Wong, Mesoscopic chaos mediated by Drude electron-hole plasma in silicon optomechanical oscillators, *Nature Communications* **8**, 15570 (2017).
45. B. Li, S.-W. Huang, Y. Li, C. W. Wong and K. Y. Wong, Panoramic reconstruction temporal imaging for seamless measurements of slowly-evolved femtosecond pulse dynamics, *Nature Communications* **8**, 61 (2017).
46. J. Lim, A. A. Savchenkov, A. B. Matsko, S.-W. Huang, L. Maleki, and C. W. Wong, Microresonator-stabilized extended cavity diode laser for supercavity frequency stabilization, *Optics Letters* **42**, 1249 (2017).
47. S.-W. Huang, A. K. Vinod, J. Yang, M. Yu, D.-L. Kwong, and C. W. Wong Quasi-phase-matched multispectral Kerr frequency comb, *Optics Letters* **42**, 2110 (2017).
48. Y. Huang, J. G. Flor Flores, Z. Cai, M. Yu, D.-L. Kwong, G. Wen, L. Churchill, and C. W. Wong, A low-frequency chip-scale optomechanical oscillator with 58 kHz mechanical stiffening and more than 100th-order stable harmonics, *Nature: Scientific Reports* **7**, 4383 (2017).
49. Y. Huang, J. Wu, J. G. Flor Flores, M. Yu, D.-L. Kwong, G. Wen, and C. W. Wong, Synchronization in air-slot photonic crystal optomechanical oscillators, *Applied Physics Letters* **110**, 111107 (2017).
50. Y. Huang, J. G. Flor Flores, Z. Cai, J. Wu, M. Yu, D.-L. Kwong, G. Wen, L. Churchill, and C. W. Wong, Controllable optomechanical coupling and Drude self-pulsation plasma locking in chip-scale optomechanical cavities, *Optics Express* **25**, 6851 (2017).

51. B. C. Yao, S.-W. Huang, Z. Y. Feng, Y. Wu, C. Choi, H. Liu, H. F. Qi, G. D. Peng, Y. J. Rao, and C. W. Wong, Graphene Q-switched distributed feedback fiber lasers with narrow linewidth approaching the transform limit, *Optics Express* **25**, 8202 (2017).
52. H. Zhou, M. Liao, S.-W. Huang, L. Zhou, K. Qiu, and C. W. Wong, Six-wave mixing induced by Drude free-carrier plasma in silicon nanowire waveguides, *Laser & Photonics Reviews* **10**, 1054 (2016).
53. S.-W. Huang, J. Yang, M. Yu, B. H. McGuyer, D.-L. Kwong, T. Zelevinsky, and C. W. Wong, *A broadband chip-scale optical frequency synthesizer at 2.7×10^{-16} relative inaccuracy*, *Science Advances* **2**, e1501489 (2016).
54. J. Lim, S.-W. Huang, A. K. Vinod, P. Mortazavian, M. Yu, D.-L. Kwong, A. A. Savchenkov, A. B. Matsko, L. Maleki, and C. W. Wong, A stabilized chip-scale Kerr frequency comb via a high- Q reference photonic microresonator, *Optics Letters* **41**, 3706 (2016).
55. S.-W. Huang, H. Liu, J. Yang, M. Yu, D.-L. Kwong, and C. W. Wong, Smooth and flat phase-locked Kerr frequency comb generation by higher order mode suppression, *Scientific Reports* **6**, 26255 (2016).
56. J. P. Lee-Thorp, I. Vukicevic, X. Xu, J. Yang, C. L. Fefferman, C. W. Wong, and M. I. Weinstein, Photonic realization of topologically protected bound states in domain-wall waveguide arrays, *Phys. Rev. A* **93**, 033822 (2016).
57. Hao Zhou, T. Gu, J. F. McMillan, M. Yu, G. Lo, D.-L. Kwong, G. Feng, S. Zhou, and C. W. Wong, Enhanced photoresponsivity in graphene-silicon slow-light photonic crystal waveguides, *Appl. Phys. Lett.* **108**, 111106 (2016).
58. P. Hsieh, C. Chung, J. F. McMillan, M. Tsai, M. Lu, N. C. Panoiu, and C. W. Wong, Photon transport and localization in optical superlattices, *Nature Physics* **11**, 268 (2015).
59. Z. Xie, T. Zhong, X. Xu, J. Liang, Y.-X. Gong, J. H. Shapiro, F. N. C. Wong, and C. W. Wong, Harnessing high-dimensional hyperentanglement through a biphoton frequency comb, *Nature Photonics* **9**, 536 (2015).
60. S.-W. Huang, J. F. McMillan, J. Yang, A. Matsko, H. Zhou, M. Yu, D.-L. Kwong, L. Maleki, C. W. Wong, Mode-locked ultrashort pulse generation from on-chip normal dispersion microresonators, *Physical Review Letters* **114**, 053901 (2015).
61. S.-W. Huang, J. Yang, Heng Zhou, M. Yu, D.-L. Kwong, and C. W. Wong, A low-phase noise 18 GHz Kerr frequency microcomb phase-locked over 65 THz, *Nature Scientific Reports* **5**, 13355 (2015).
62. B. Yao, Y. Rao, Z. Wang, Y. Wu, J. Zhou, H. Wu, M. Fan, X. Cao, W. Zhang, Y.-F. Chen, Y.-R. Li, D. Churkin, S. Turitsyn, and C. W. Wong, Graphene based widely-tunable and singly-polarized pulse generation with random fiber lasers, *Scientific Reports* **5**, 18526 (2015).
63. T. Gu, A. Andryieuski, Y. Hao, Y. Li, J. Hone, C. W. Wong, A. Lavrinenko, T. Low, and T. F. Heinz, Photonic and plasmonic guiding modes in graphene-silicon photonic crystals, *ACS Photonics* **2**, 1552 (2015); also selected for ACS Editors' Choice.
64. Z. Xie, W. Liang, A. A. Savchenkov, J. Lim, J. Burhart, M. D. McDonald, T. Zelevinsky, V. S. Ilchenko, A. B. Matsko, L. Maleki, and C. W. Wong, Extended ultrahigh- Q -cavity diode laser, *Optics Letters* **40**, 2596 (2015).
65. Heng Zhou, S.-W. Huang, Y. Dong, M. Liao, K. Qiu, and C. W. Wong, Stability and intrinsic fluctuations of dissipative cavity solitons in Kerr frequency microcombs, *IEEE Photonics Journal* **7**, 3200113 (2015).
66. O. Ajayi, D. Guitierrez, D. Peaslee, A. Cheng, T. Gao, C. W. Wong, and B. Chen, Electrophoretically deposited graphene oxide and carbon nanotube composite for electrochemical capacitors, *IoP Nanotechnology* **26**, 415203 (2015).
67. Y.-C. Liu, Y. Xiao, X. Luan, and C. W. Wong, Coupled cavities for motional ground state cooling and strong optomechanical coupling, *Physical Review A* **91**, 033818 (2015).
68. Y.-C. Liu, Y. Xiao, X. Luan, Q. Gong, and C. W. Wong, Optomechanically-induced-transparency cooling of massive mechanical resonators to the quantum ground state, *Science China* **58**, 050305 (2015).

69. X. Hu, T. Zhong, F. N. C. Wong, X. Mao, P. Kharel, Z. Xie, X. Xu, C. W. Wong, and D. R. Englund, Nonlocal cancellation of multi-frequency-channel dispersion, *Physical Review A* **91**, 013809 (2015).
70. W. Liang, A. A. Savchenkov, J. F. McMillan, Z. Xie, J. Burkhardt, V. S. Ilchenko, C. W. Wong, A. B. Matsko, and L. Maleki, Miniature multioctave light source based on a monolithic microcavity, *Optica* **2**, 40 (2015).
71. T. Gu and C. W. Wong, Four-wave mixing and carrier nonlinearities in graphene-silicon photonic crystal cavities, **Chapter 8** in *Nanomaterials, Polymers and Devices: Materials Functionalization and Device Fabrication*, Wiley, Hoboken, NJ (April 2015).
72. X. Li, J. Liao, Y. Nie, M. Marko, H. Jia, J. Liu, X. Wang, and C. W. Wong, Unambiguous demonstration of soliton evolution in slow-light silicon photonic crystal waveguides with SFG-XFROG, *Optics Express* **23**, 10282 (2015).
73. Y.-C. Liu, X. Luan, H.-K. Li, Q. Gong, C. W. Wong, and Y.-F. Xiao, Coherent polariton dynamics in coupled highly-dissipative cavity quantum electrodynamics, *Physical Review Letters* **112**, 213602 (2014).
74. X. Luan, Y. Huang, Y. Li, J. F. McMillan, J. Zheng, S.-W. Huang, P.-C. Hsieh, T. Gu, D. Wang, A. Hati, D. A. Howe, G. Wen, M. Yu, G. Lo, D.-L. Kwong, and C. W. Wong, An integrated low phase noise radiation-pressure-driven optomechanical oscillator chipset, *Nature Scientific Reports* **4**, 6842 (2014).
75. Hao Zhou, T. Gu, J. F. McMillan, N. Petrone, A. van der Zande, J. C. Hone, M. Yu, G. Lo, D.-L. Kwong, G. Feng, S. Zhou, and C. W. Wong, Enhanced four-wave mixing in graphene-silicon slow-light photonic crystal waveguides, *Applied Physics Letters* **105**, 091111 (2014).
76. B. Chen, C. Meng, Z. Yang, W. Li, S. Lin, T. Gu, X. Guo, D. Wang, S. Yu, C. W. Wong, and L. Tong, Graphene coated ZnO nanowire optical waveguides, *Optics Express* **22**, 24276 (2014).
77. T. Gu, M. Yu, D.-L. Kwong, and C. W. Wong, Molecular-absorption-induced thermal bistability in PECVD silicon nitride microring resonators, *Optics Express* **22**, 18412 (2014).
78. T. Gu, Y.-K. Chen, C. W. Wong, and P. Dong, Cascaded uncoupled dual-ring modulator, *Optics Letters* **39**, 4974 (2014).
79. O. A. Ajayi, N. C. Anderson, M. Cotlet, N. Petrone, T. Gu, F. Gesuele, J. Hone, J. S. Owen, and C. W. Wong, Time-resolved energy transfer and blinking statistics of single chloride-terminated nanocrystals on graphene, *Applied Physics Letters* **104**, 171101 (2014).
80. J. Yang, T. Gu, J. Zheng, M. Yu, G. Lo, D.-L. Kwong, and C. W. Wong, Radio-frequency regenerative oscillations in monolithic high- Q/V heterostructured photonic crystal cavities, *Applied Physics Letters* **104**, 061104 (2014).
81. T. Gu, Hao Zhou, J. F. McMillan, N. Petrone, A. van der Zande, J. Hone, M. Yu, G.-Q. Lo, D.-L. Kwong, and C. W. Wong, Coherent four-wave mixing in hybrid graphene-silicon photonic crystals, *Journal of Selected Topics in Quantum Electronics* **20**, 7500106 (2014). Special issue on graphene optoelectronics (invited).
82. T. Gu, J. F. McMillan, N. Petrone, A. van der Zande, J. Hone, M. Yu, G.-Q. Lo, D.-L. Kwong, and C. W. Wong, Optical bistability and regenerative oscillations in graphene optoelectronics, *Optics Communications*, **314**, 23 (2014). Special issue on energy efficient nanophotonics (invited).
83. J. Liao, M. Marko, X. Li, H. Jia, J. Liu, Y. Tan, J. Yang, Y. Zhang, W. Tang, M. Yu, G.-Q. Lo, D.-L. Kwong, and C. W. Wong, Cross-correlation frequency-resolved optical gating and dynamics of temporal solitons in silicon nanowire waveguides, *Optics Letters* **38**, 4401 (2013).
84. Y.-C. Liu, Y.-W. Hu, C. W. Wong, and Y.-F. Xiao, Review of cavity optomechanical cooling, *Chinese Physics B* **22**, 114213 (2013; invited).
85. I. Sarpkaya, Z. Zhang, W. Walden-Newman, X. Wang, J. Hone, C. W. Wong, and S. Strauf, Prolonged spontaneous emission and dephasing of localized excitons in air-bridged carbon nanotubes, *Nature Communications* **4**, 2152 (2013).
86. J. Gao, S. Combrie, B. Liang, P. Schmitteckert, G. Lehoucq, S. Xavier, X. Xu, K. Busch, D. L. Huffaker, A. de Rossi, and C. W. Wong, Strongly coupled slow-light polaritons in one-dimensional disordered localized states, *Nature Scientific Reports* **3**, 1994 (2013).

87. Y.-C. Liu, X. Luan, Y.-F. Xiao, and C. W. Wong, Dynamic dissipative cooling of a mechanical oscillator in strong-coupling quantum optomechanics, *Phys. Rev. Lett.* **110**, 153606 (2013).
88. C. A. Husko, S. Combrie, P. Colman, J. Zheng, A. De Rossi, and C. W. Wong, Soliton dynamics in the multiphoton plasma regime, *Nature Scientific Reports* **3**, 1100 (2013).
89. X. Xu, Z. Xie, J. Zheng, J. Liang, T. Zhong, M. Yu, S. Kocaman, G.-Q. Lo, D.-L. Kwong, D. R. Englund, F. N. C. Wong, and C. W. Wong, Near-infrared Hong-Ou-Mandel interference on a silicon quantum photonic circuit, *Optics Express* **21**, 5014 (2013).
90. M. D. Marko, X. Li, J. Zheng, J. Liao, M. Yu, D.-L. Kwong, C. A. Husko, and C. W. Wong, Phase-resolved observations of optical pulse propagation in chip-scale silicon nanowires, *Applied Physics Letters* **103**, 021103 (2013).
91. J. Zheng, Y. Li, N. Goldberg, M. McDonald, A. Hati, M. Lu, S. Strauf, T. Zelevinsky, D. A. Howe, and C. W. Wong, Feedback and harmonic locking of slot-type optomechanical oscillators to external low-noise reference clocks, *Applied Physics Letters* **102**, 141117 (2013).
92. T. Gu, N. Petrone, J. F. McMillan, A. van der Zande, M. Yu, G. Q. Lo, D. L. Kwong, J. Hone, and C. W. Wong, Regenerative oscillation and four-wave mixing in graphene optoelectronics, *Nature Photonics* **6**, 554 (2012); also at: arxiv.org/abs/1205.4333 . Cover Article.
93. X. Xu and C. W. Wong, Cavity QED: Quantum correlations on a chip, *Nature Photonics News & Views* **6**, 75 (2012).
94. J. Gao, J. F. McMillan, and C. W. Wong, Nanophotonics: Remote on-chip coupling, *Nature Photonics News & Views* **6**, 7 (2012).
95. J. Zheng, X. Sun, Y. Li, M. Poot, M. A. Dadgar, N. Shi, H. X. Tang, and C. W. Wong, Femtogram dispersive L3-nanobeam optomechanical cavities: design and experimental comparison, *Optics Express* **20**, 26484 (2012).
96. J. Zheng, Y. Li, M. S. Aras, A. Stein, K. L. Shepard, and C. W. Wong, Parametric optomechanical oscillations in two-dimensional slot-type high- Q photonic crystal cavities, *Applied Physics Letters* **100**, 211908 (2012); also at: arxiv.org/abs/1205.1165 .
97. X. Sun, J. Zheng, M. Poot, C. W. Wong, and H. X. Tang, Femtogram doubly clamped nanomechanical resonators embedded in a high- Q two-dimensional photonic crystal nanocavity, *Nano Letters* **12**, 2299 (2012); also at: arxiv.org/abs/1204.1520 .
98. A. Veitia, J. Jing, T. Yu, C. W. Wong, Mutual preservation of entanglement, *Physics Letters A* **376**, 2755 (2012); also at: arxiv.org/abs/1205.2728 .
99. F. Gesuele, M. Y. Sfeir, W.-K. Koh, C. B. Murray, T. F. Heinz, and C. W. Wong, Ultrafast supercontinuum spectroscopy of carrier multiplication and biexcitonic effects in excited state PbS quantum dots, *Nano Letters* **12**, 2658 (2012); also at: arxiv.org/abs/1112.2132 .
100. C. W. Wong, S. Kocaman, M.S. Aras, P. Hsieh, J. F. McMillan, C. G. Biris, N. C. Panoiu, M. B. Yu, D. L. Kwong, and A. Stein, Negative index photonic crystals superlattices and zero phase delay lines, book **Chapter 16** in *Photonic Crystals – Innovative Systems, Lasers, and Waveguides*, In-Tech, Rijeka, Croatia, April 2012: ISBN 978-953-51-0416-2.
101. C. Bui*, J. Zheng*, S. W. Hoch, L. Y. T. Lee, J. G. E. Harris, and C. W. Wong, High-reflectivity, high- Q nanomembrane resonators via guided photonic crystal resonances for enhanced radiation pressure, *Applied Physics Letters* **100**, 021110 (2012); also at: arxiv.org/abs/1110.3625 . * equal contribution.
102. S. Kocaman, M. S. Aras, N. C. Panoiu, M. Lu, and C. W. Wong, On-chip optical filters with designable characteristics based on an interferometer with embedded silicon photonic structures, *Optics Letters* **37**, 665 (2012).
103. S. Kocaman, M.S. Aras, P. Hsieh, J. F. McMillan, C. G. Biris, N. C. Panoiu, M. B. Yu, D. L. Kwong, A. Stein, and C. W. Wong, Zero phase delay in negative-index photonic crystal superlattices, *Nature Photonics* **5**, 499 (2011).
104. C. J. Chen*, J. Zheng*, T. Gu, J. F. McMillan, M. Yu, G.-Q. Lo, D.-L. Kwong, and C. W. Wong, Selective tuning of silicon photonic crystal nanocavities via laser-assisted local oxidation, *Optics Express* **19**, 12480 (2011). * equal contribution
105. C. A. Husko, A. De Rossi, and C. W. Wong, Effect of multi-photon absorption and free carriers on self-phase modulation in slow-light photonic crystals, *Optics Letters* **36**, 2239 (2011).

106. T. Gu, S. Kocaman, X. Yang, J. F. McMillan, M. B. Yu, G. Q. Lo, D. L. Kwong, and C. W. Wong, Deterministic integrated tuning of multi-cavity resonances and phase for slow-light in coupled photonic crystal cavities, *Applied Physics Letters* **98**, 121103 (2011); also at: arxiv.org/abs/1012.5805 ; also selected for *Virt. J. of Nanoscale Sci. and Tech.* (April 4th 2011 issue).
107. M. T. Rakher, R. Bose, C. W. Wong, and K. Srinivasan, Fiber-based cryogenic and time-resolved spectroscopy of PbS quantum dots, *Optics Express* **19**, 1786 (2011); also at: arxiv.org/abs/1012.0225 .
108. P. Colman, C. A. Husko, S. Combrié, I. Sagnes, C. W. Wong*, and A. De Rossi*, Temporal solitons and pulse compression in photonic crystal waveguides, *Nature Photonics* **4**, 862 (2010). *corresponding authors. Also at: arxiv.org/abs/1004.2638 . News & Views: D. V. Skryabin and J. C. Knight, Compressing slow solitons, *Nature Photonics* **4**, 806 (2010).
109. N. C. Panoiu, J. F. McMillan, and C. W. Wong, Influence of the group-velocity on the pulse propagation in 1D silicon photonic crystal waveguides, *Appl. Phys. A* **103**, 835 (2011).
110. C. W. Wong, X. Yang, J. F. McMillan, R. Chatterjee, and S. Kocaman, Controlling dispersion and nonlinearities in mesoscopic silicon photonic crystals, book **Chapter 6** in *VLSI Micro/Nanophotonics: Science, Technology, Applications* (Editors: E.-H. Lee, L. A. Eldada, M. Razeghi, and C. Jagadish), CRC Press, New York, New York, September 2010: ISBN 978-1-57444-729-3.
111. J. F. McMillan, M. Yu, D.-L. Kwong, and C. W. Wong, Observations of four-wave mixing in slow-light silicon photonic crystal waveguides, *Optics Express* **18**, 15484 (2010); also at: arxiv.org/abs/1004.1642 .
112. Y. Li, J. Zheng, J. Gao, J. Shu, M. S. Aras, and C. W. Wong, Design of dispersive optomechanical coupling and cooling in ultrahigh-Q/V slot-type photonic crystal cavities, *Optics Express* **18**, 23844 (2010).
113. M. Grad, C. C. Tsai, M. Yu, D.-L. Kwong, C. W. Wong and D. Attinger, Transient sensing of liquid films in microfluidic channels with optofluidic microresonators, *Institute of Physics Measurement Science and Technology* **21**, 075204 (2010).
114. S. Kocaman, X. Yang, J. F. McMillan, M. B. Yu, D.-L. Kwong, C. W. Wong, Observations of temporal group delays in slow-light multiple coupled photonic crystal cavities, *Applied Physics Letters* **96**, 221111 (2010); also at: arxiv.org/abs/1004.3477.
115. M. T. Rakher, R. Bose, C. W. Wong, K. Srinivasan, Spectroscopy of 1.55 μm PbS quantum dots on silicon photonic crystal cavities with a fiber taper waveguide, *Applied Physics Letters* **96**, 161108 (2010); also listed at: <http://arxiv.org/abs/0912.1365> .
116. C. J. Chen, C. A. Husko, I. Meric, K. L. Shepard, C. W. Wong, W. M. J. Green, Y. A. Vlasov, S. Assefa, Deterministic tuning of slow-light in photonic-crystal waveguides through the C and L bands by atomic layer deposition, *Applied Physics Letters* **96**, 081107 (2010); also listed at: <http://arxiv.org/abs/0912.0788> .
117. J. Gao, J. F. McMillan, M.-C. Wu, S. Assefa, and C. W. Wong, Demonstration of an air-slot mode-gap confined photonic crystal slab nanocavity with ultrasmall mode volumes, *Applied Physics Letters* **96**, 051123 (2010); also listed at: <http://arxiv.org/abs/0910.4111> .
118. X. Yang, M. Yu, D.-L. Kwong, and C. W. Wong, Coherent interferences in coupled photonic crystal cavities for all-optical solid-state analog to electromagnetically-induced transparency, *Journal of Selected Topics in Quantum Electronics* **16** (focus issue on Silicon Photonics), 288 (2010) (invited).
119. N. C. Panoiu, J. F. McMillan, and C. W. Wong, Theoretical Analysis of Pulse Dynamics in Silicon Photonic Crystal Wire Waveguides, *Journal of Selected Topics in Quantum Electronics* **16** (focus issue on Silicon Photonics), 257 (2010).
120. R. Chatterjee, M. Yu, A. Stein, D.-L. Kwong, L. C. Kimerling, and C. W. Wong, Optical Hitless Switches based on NEMS dielectric perturbation for reconfigurable optical interconnects and networks, *Optics Express* **18**, 3045 (2010).
121. J. F. McMillan, M. Yu, D.-L. Kwong, and C. W. Wong, Enhanced Raman scattering in slow-light photonic crystals for chip-scale frequency conversion and optical amplification, *Journal of*

- Nanoscience and Nanotechnology (focus issue on Nanophotonics and Nanooptics)* **10**, 2243 (2010).
122. R. Chatterjee and C. W. Wong, Nanomechanical proximity perturbation for switching in silicon-based directional couplers for high density photonic integrated circuits, *Journal of Microelectromechanical Systems* **19**, 657 (2010).
 123. Y.-F. Xiao, X.-B. Zou, Q. Gong, G.-C. Guo, and C. W. Wong, Quantum electrodynamics in photonic crystal nanocavities towards quantum information processing, book **Chapter 5** in *Recent Optical and Photonic Technologies* (Editor: K. Y. Kim), InTech, Vienna, Austria, January 2010: ISBN 978-953-7619-71-8.
 124. C. A. Husko, S. Combriè, Q. Tranh, F. Raineri, C. W. Wong, and A. de Rossi, Non-trivial scaling of self-phase modulation and three-photon absorption in III-V photonic crystal waveguides, *Optics Express* **17**, 22442 (2009); also listed at: arxiv.org/abs/0911.4538.
 125. R. Bose, J. Gao, F. W. Sun, J. F. McMillan, A. D. Williams, and C. W. Wong, Cryogenic spectroscopy of ultra-low density colloidal lead chalcogenide quantum dots on chip-scale optical cavities towards single quantum dot near-infrared cavity QED, *Optics Express* **17**, 22474 (2009); also at: arxiv.org/abs/0812.0222.
 126. R. Bose, J. F. McMillan, J. Gao, and C. W. Wong, Solution-processed cavity and slow-light quantum electrodynamics in near-infrared silicon photonic crystals, *Applied Physics Letters* **95**, 131112 (2009); also selected for *Virt. J. of Nanoscale Sci. and Tech.* (October 12th 2009 issue).
 127. J. Y. Lee, B. H. Hong, W. Y. Kim, S. K. Min, Y. Kim, M. V. Jouravlev, R. Bose, L. J. Kaufman, C. W. Wong, P. Kim, and K. S. Kim, Near-field focusing and magnification through self-assembled nanoscale spherical lenses, *Nature* **460**, 498 (2009); also selected for *Virt. J. of Nanoscale Sci. and Tech.* (August 3rd 2009 issue).
 128. X. Yang, M. Yu, D.-L. Kwong, and C. W. Wong, All-optical analogue to electromagnetically induced transparency in multiple coupled photonic crystal cavities, *Physical Review Letters* **102**, 173902 (2009); also listed at: <http://arxiv.org/abs/0804.2845>.
 129. S. Kocaman, R. Chatterjee, N.-C. Panoiu, R. M. Osgood, M. Yu, D.-L. Kwong, and C. W. Wong, Observation of zero- n band gaps in photonic crystal superlattices, *Physical Review Letters* **102**, 203905 (2009); also listed at: arxiv.org/abs/0904.2352; also selected for *Virt. J. of Nanoscale Sci. and Tech.* (June 8th 2009).
 130. F. W. Sun and C. W. Wong, Indistinguishability of independent single photons, *Physical Review A* **79**, 013824 (2009); also at: <http://arxiv.org/abs/0811.2739v1>.
 131. C. A. Husko, A. de Rossi, S. Combrie, Q. V. Tran, F. Raineri, C. W. Wong, Ultrafast all-optical modulation in GaAs photonic crystal cavities, *Applied Physics Letters* **94**, 021111 (2009).
 132. J. F. McMillan, M. Yu, D.-L. Kwong, and C. W. Wong, Observations of spontaneous Raman scattering in silicon slow-light photonic crystal waveguides, *Applied Physics Letters* **93**, 251105 (2008); also at: <http://arxiv.org/abs/0807.3388>.
 133. Y.-F. Xiao, J. Gao, J. F. McMillan, X. Yang, Y.-L. Chen, Z.-F. Han, G.-C. Guo, and C. W. Wong, Coupled electrodynamics in photonic crystal cavities towards controlled phase gate operations, *New Journal of Physics* **10**, 123013 (2008); also at: <http://arxiv.org/abs/0707.2632>.
 134. C. W. Wong, J. Gao, J. F. McMillan, F. W. Sun, and R. Bose, Quantum information processing through quantum dots in slow-light photonic crystal waveguides, *Photonics and Nanostructures: Fundamentals and Applications* **7**, 47 (2009) (invited), *Special issue: Light-Matter interactions*; also at: <http://dx.doi.org/10.1016/j.photonics.2008.11.007>.
 135. J. Gao, F. W. Sun, and C. W. Wong, Implementation scheme for quantum controlled phase-flip gates through single quantum dots in slow-light silicon photonic crystal waveguides, *Applied Physics Letters* **93**, 151108 (2008); also at: <http://arxiv.org/abs/0803.1017>; also selected for *Virt. J. of Quant. Info.* (October 2008 issue); also selected for *Virt. J. of Nanoscale Sci. and Tech.* (October 27th 2008 issue).
 136. R. Bose, J. F. McMillan, J. Gao, C. J. Chen, D. V. Talapin, C. B. Murray, K. M. Rickey, and C. W. Wong, Temperature-tuning of 1.5- μm monodisperse quantum dot solids toward controllable Förster energy transfer, *Nano Letters* **8**, 2006 (2008); also at: <http://arxiv.org/abs/0804.3331>.

137. F. W. Sun, B. H. Liu, C. W. Wong, and G. C. Guo, Permutation asymmetry inducing entanglement between degrees of freedom in multi-photon states, *Physical Review A* **78**, 015804 (2008); also at: <http://arxiv.org/abs/0802.0689> .
138. R. Chatterjee, N.-C. Panoiu, K. Liu, Z. Dios, M. B. Yu, M. T. Doan, L. Kaufman, R. M. Osgood, and C. W. Wong, Achieving sub-diffraction imaging through bound surface states in negative-refracting photonic crystals at the near-infrared, *Physical Review Letters* **100**, 187401 (2008); also at: <http://arxiv.org/abs/0803.0986> ; also selected for *Virt. J. of Nanoscale Sci. and Tech.* (May 19th 2008).
139. Y.-F. Xiao, J. Gao, X. Yang, R. Bose, G.-C. Guo, and C. W. Wong, Nanocrystals in silicon photonic crystal standing-wave cavities as spin-photon phase gates for quantum information processing, *Applied Physics Letters* **91**, 151105 (2007); also at: <http://arxiv.org/ftp/arxiv/papers/0706/0706.0064.pdf> ; also selected for *Virt. J. of Quant. Info.* (October 2007); also selected for *Virt. J. of Nanoscale Sci. and Tech.* (October 22nd 2007).
140. X. Yang, C. A. Husko, M. Yu, D.-L. Kwong, and C. W. Wong, Observation of femto-joule optical bistability involving Fano resonances in high- Q/V_m silicon photonic crystal nanocavities, *Applied Physics Letters* **91**, 051113 (2007); also at: <http://arxiv.org/abs/physics/0703132> ; also selected for *Virt. J. of Nanoscale Sci. and Tech.* (August 13th 2007 issue).
141. J. Gao, P. Heider, C. J. Chen, X. Yang, C. A. Husko, and C. W. Wong, Observations of whispering gallery modes in asymmetric optical resonators with rational caustics, *Applied Physics Letters* **91**, 181101 (2007); also at: <http://arxiv.org/ftp/arxiv/papers/0707/0707.2552.pdf> ; also selected for *Virt. J. of Nanoscale Sci. and Tech.* (November 12th 2007 issue).
142. R. Bose, X. Yang, R. Chatterjee, J. Gao, and C. W. Wong, Weak coupling interactions of colloidal lead sulphide nanocrystals with silicon photonic crystal nanocavities near 1.55 μm at room temperature, *Applied Physics Letters* **90**, 111117 (2007); also at: <http://arxiv.org/abs/physics/0609174> ; also selected for *Virt. J. of Nanoscale Sci. and Tech.* (April 2nd 2007 issue).
143. X. Yang, C. J. Chen, and C. W. Wong, Digital control of resonances in optical microcavities through single atomic layer deposition, *Applied Physics Letters* **91**, 161114 (2007); also at: <http://arxiv.org/abs/physics/0707.2412> ; also selected for *Virt. J. of Nanoscale Sci. and Tech.* (October 29th 2007 issue).
144. X. Yang and C. W. Wong, Coupled-mode theory of stimulated Raman scattering in photonic crystal defect cavity lasers, *Optics Express* **15**, 4763 (2007); also at: <http://arxiv.org/abs/physics/0607052> .
145. J. F. McMillan, X. Yang, N. C. Panoiu, R. M. Osgood Jr. and C. W. Wong, Enhanced stimulated Raman scattering in slow-light photonic crystal waveguides, *Optics Letters* **31**, 1235 (2006); also at: <http://arxiv.org/abs/physics/0511040> .
146. X. Yang and C. W. Wong, Nanocavity enhancement of stimulated Raman amplification in silicon photonic band gap materials, *Sensors and Actuators A: Physical* **133**, 278 (2007).
147. P. T. Rakich, J. T. Gopinath, H. Sotobayashi, C. W. Wong, S. G. Johnson, J. D. Joannopoulos, S.-G. Kim, and E. P. Ippen, Nano-scale photonic crystal microcavity characterization with an all-fiber based 1.2 – 2.0 μm supercontinuum, *Optics Express* **13**, 821 (2005); also selected for *Virt. J. of Nanoscale Sci. and Tech.* (May 9th 2005 issue).
148. X. Yang and C. W. Wong, Design of photonic band gap nanocavities for stimulated Raman amplification in monolithic silicon, *Optics Express* **13**, 4723 (2005); also selected for *Virt. J. of Nanoscale Sci. and Tech.* (October 10th 2005 issue).

SELECTED INVITED TALKS AND PAPERS

1. C. W. Wong, *Fundamentals and applications in laser frequency microcombs*, Photonics West Conference, San Francisco, CA, January 2023 (invited).
2. A. B. Matsko, J. Flor Flores, T. Yerabakan, and C. W. Wong, *Nanophotonic accelerometer for a compact PNT module*, JPL CubeSat Forum, Pasadena, CA, December 2022 (invited).

3. C. W. Wong, *Ultrafast precision measurements in laser frequency microcombs: romance in the precision of time*, IEEE Photonics Conference, Vancouver, Canada, November 2022 (invited).
4. Jin Ho Kang, Madeline Taylor, Yujin Cho, Abhinav Vinod, Futai Hu, and Chee Wei Wong, *Heterogeneous layered atomic materials for nonlinear nanophotonics*, 2nd global summit and expo on graphene and 2D materials (2D Mat 2022), Edinburgh, Scotland, August 2022 (invited).
5. Chee Wei Wong, Kai-Chi Chang, Xiang Cheng, Murat C. Sarihan, *648-Hilbert space dimensionality in biphoton frequency combs for quantum-secure communications and networks*, SPIE Photonics West, San Francisco, CA, January 2022 (invited).
6. C. W. Wong, *Ultrafast nonlinearities and dispersion control for signal processing*, Lawrence Livermore National Laboratory, Livermore, CA, October 2021 (invited).
7. C. W. Wong, *Microcavity frequency combs: precision ultrafast measurements and stabilization*, Asia Communications and Photonics Conference, Shanghai, China (online), October 2021.
8. C. W. Wong, J. Flor Flores, T. Yerebakan, J. F. McMillan, and A. Matsko, *Chip-scale optomechanics for precision navigation*, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA (online), May 2021.
9. W. Wang, J. F. McMillan, H. Liu, J. Yang, A. K. Vinod, F. Hu, J. Lim, Y.-S. Jang, and C. W. Wong, *Ultrafast precision measurements in chip-scale laser frequency microcombs*, *SPIE Photonics West*, paper 11684-20, San Francisco, CA, March 2021 (invited).
10. A. K. Vinod, F. Hu, W. Wang, H. Liu, J. Wu, J. F. McMillan, J. Yang, and C. W. Wong, *Nonlinear dispersive dynamics in dissipative laser frequency microcombs*, *SPIE Photonics West*, paper 11671-9, San Francisco, CA, March 2021 (invited).
11. H. Liu, A. K. Vinod, F. Hu, W. Wang, J. F. McMillan, and C. W. Wong, *Real-time transition dynamics of laser frequency microcombs*, *SPIE Photonics West*, paper 11684-44, San Francisco, CA, March 2021 (invited).
12. H. Boo, H. Yang, Y. S. Lee, and C. W. Wong, *Spatial parallel image processing with metasurfaces*, *SPIE Photonics West*, paper 11703-6, San Francisco, CA, March 2021 (invited).
13. Y. S. Jang, H. Liu, J. Yang, and C. W. Wong, *Soliton microcomb distance measurement toward nanometric precision*, *International Symposium on Precision Engineering and Sustainable Manufacturing*, Seoul, Korea, November 2020 (invited).
14. C. W. Wong, *Ultrafast and quantum frequency combs at the precision limits*, *IEEE Photonics Conference*, Vancouver, Canada, October 2020 (invited).
15. F. Hu, H. Liu, J. Wu, A. K. Vinod, J. F. McMillan, W. Wang, and C. W. Wong, *Ultrafast dynamics and precision measurements in chip-scale frequency microcombs*, *11th Joint Symposium on Opto- and Microelectronic Devices and Circuits*, Chengdu, China, September 2020 (invited).
16. C. W. Wong, *High-dimensional frequency combs and stabilization*, *California Institute for Quantum Entanglement annual meeting*, Berkeley, CA, March 2020 (invited).
17. O. Spitz, A. Herdt, J. Wu, G. Maisons, M. Carras, C.-W. Wong, W. E. Elsässer, and F. Grillot, *Peculiarities and predictions of rogue waves in mid-infrared quantum cascade lasers under conventional optical feedback*, *Photonics West (Quantum Cascade Lasers I)*, San Francisco, CA, February 2020 (invited).
18. J. G. Flor Flores, T. Yerebakan, Y. Huang, J. Wu, J. F. McMillan, W. Wang, and C. W. Wong, *Inertial sensing and phase noise of phonon-engineered optomechanical crystal oscillators near the thermodynamic limits*, *Photonics West (Photonic and Phononic Properties of Engineered Nanostructures)*, San Francisco, CA, February 2020 (invited).
19. C. W. Wong, W. Wang, J. Yang, Y.-S. Jang, and H. Liu, *Ultrafast mode-locked frequency microcombs: fundamentals and precision metrology*, *Photonics West (Ultrafast phenomena and nanophotonics)*, San Francisco, CA, February 2020 (invited).
20. Jiagui Wu and C. W. Wong, *Dynamical chaos in silicon micro-cavity optomechanics for physically-enhanced information processing*, *Photonics West (Ultrafast phenomena and nanophotonics)*, San Francisco, CA, February 2020 (invited).

21. V. Sorger, C. W. Wong, P. Gupta, and A. Babakhani, Photonic convolutional processor for network edge computing, *Photonics West (AI and Optical Data Sciences)*, San Francisco, CA, February 2020 (invited).
22. S. Yang, M. C. Sarihan, K.-C. Chang, C. W. Wong, and L. Dolecek, Efficient information reconciliation for energy-time entangled quantum key distribution, *Asilomar Conference on Signals, Systems, and Computers*, Pacific Grove, CA, November 2019 (invited).
23. C. W. Wong, Precision chip-scale frequency combs and clocks, *Northrop Grumman Technology Expo and University Research Symposium*, Anaheim, California, October 2019.
24. C. W. Wong, Ultrafast solitons and frequency combs in graphene-nitride heterostructures, *2D Materials*, Sochi, Russia, September 2019 (keynote speaker).
25. C. W. Wong, Ultrafast mode-locking and high-dimensional entanglement in mesoscale frequency combs, *National University of Singapore*, Singapore, Singapore, August 2019.
26. C. W. Wong, Quantum Science and Engineering: Measurements at the Precision Frontiers, *Singapore Global Submit*, Singapore, Singapore, August 2019.
27. C. W. Wong, J. Yang, and H. Liu, Chip-scale generation of coherent THz frequency combs and radiation, *IEEE Research and Applications of Photonics in Defense*, Florida, USA, August 2019 (invited).
28. C. W. Wong, Ultrafast dynamics in chip-scale laser frequency combs, *IEEE Summer Topical Meeting*, Florida, USA, July 2019 (keynote speaker).
29. C. W. Wong, Mesoscopic frequency combs: ultrafast precision clocks and quantum communications, *Nanyang Technological University*, Singapore, Singapore, June 2019.
30. C. W. Wong, A. K. Vinod, J. Yang, Y. Li, S.-W. Huang, H. Liu, W. Wang, B. Li, and K. K. Y. Wong, Dynamical evolution in Kerr frequency combs, International Union of Radio Science - Asia Pacific Radio Science Meeting, New Delhi, India, March 2019 (invited).
31. C. W. Wong, Stepping up to the surface: graphene gate-tunable frequency combs and THz generation, *Photonics West (2D Photonic Materials and Devices II)*, San Francisco, CA, January 2019 (invited).
32. C. W. Wong, Ultrafast solitons and soliton crystals in 2D hybrids, *Nanophotonics of 2D materials*, Shanghai, China, January 2019 (invited).
33. C. W. Wong, Understanding pattern formation and ultrafast dynamics in chip-scale nonlinear oscillators, *International Conference on Applications in Nonlinear Dynamics*, Maui, HI, August 2018 (invited).
34. J. Lim, A. A. Savchenkov, W. Liang, A. Matsko, L. Maleki, and C. W. Wong, Measurements of thermodynamical noise and drift in mesoscale cavities with quality factors in excess of 1 billion, *Proc. of Conf. on Lasers and Electro-Optics*, San Jose, CA, May 2018 (invited).
35. J. Yang, A. K. Vinod, H. Liu, W. Wang, J. Lim, S.-W. Huang, and C. W. Wong, New modalities in microcavity frequency combs, *EMN Meeting*, Las Vegas, NV 2018 (invited).
36. C. W. Wong, J. Flor Flores, W. Wang, Y. Huang, J. Wu, J. Yang, J. Lim, and B. R. Busbee, Precision measurements in cavity optomechanics, *Photonics West (Photonic and Phononic Properties of Engineered Nanostructures VIII)*, San Francisco, CA, January 2018 (invited).
37. C. W. Wong, J. Yang, A. Kumar Vinod, H. Liu, W. Wang, J. Lim, S.-W. Huang, Dynamical modalities in Kerr frequency combs, *Photonics West (Physics and Simulations of Optoelectronics Devices XXVI)*, San Francisco, CA, January 2018 (invited).
38. C. W. Wong, Z. Xie, X. Cheng, K.-C. Chang, Y. S. Lee, X. Cui, and P. A. Li, High-dimensional entanglement in quantum frequency combs, *Photonics West (Advances in Photonics of Quantum Computing, Memory and Communications XI)*, San Francisco, CA, January 2018 (invited).
39. O. Spitz, J. Wu, C. W. Wong, F. Grillot, Temperature dependence of a mid-infrared quantum cascade laser with external optical feedback, *Photonics West*, San Francisco, CA, January 2018 (invited).
40. S. W. Huang, J. Yang, S.-H. Yang, H. Liu, M. Jarrahi, and C. W. Wong, Chip-scale microresonator Turing pattern formation for coherent high-power THz radiation, *Photonics West (Terahertz, RF, Millimeter, and Submillimeter-Wave Technology and Applications XI)*, San Francisco, CA, January 2018 (invited).

41. C. W. Wong, Ultrafast and nonlinear dynamics in mesoscopic nonlinear oscillators, *International Symposium on Physics and Applications of Laser Dynamics*, Paris, France, November 2017 (keynote plenary; invited).
42. C. W. Wong, Optoelectronics and excitons in two-dimensional heterostructures, *Nanophotonics of 2D materials*, San Sebastián, Spain, August 2017 (invited).
43. A. K. Vinod, S.-W. Huang, J. Yang, J. Lim, and C. W. Wong, Precision measurements and ultrafast optics in microcavity frequency combs, *XXXII URSI General Assembly and Scientific Symposium*, Montreal, Canada, August 2017 (invited).
44. C. W. Wong, S.-W. Huang, J. Lim, J. Yang, H. Zhou, Y. Li, A. K. Vinod, H. Liu, P. Mortazavian, and Y. Luo, Chip-scale optical frequency combs for communications and precision metrology, *Proc. Conference on Lasers and Electro-Optics, Pacific Rim*, Singapore, August 2017 (invited).
45. H. Liu, S.-W. Huang, J. Yang, M. Yu, D.-L. Kwong, and C. W. Wong, Square bright pulse generation in normal dispersion regime using single free-spectral-range intensity-modulated pump, *Proc. of Conference on Lasers and Electro-Optics*, San Jose, CA, June 2017 (invited).
46. C. W. Wong, Mode-locking and ultrafast dynamics in chip-scale laser oscillators: from 1 Hz to 200 THz, *Nanyang Technological University*, Singapore, Singapore, March 2017 (invited).
47. C. W. Wong, Ultrafast mode-locking and dynamics in chip-scale laser frequency combs, *Lawrence Livermore National Laboratory*, Livermore, CA, February 2017 (invited).
48. C. W. Wong, B. Yao, S.-W. Huang, A. K. Vinod, and Y. Luo, Two-dimensional heterostructures for optoelectronics and THz, *EMN West Conf.*, Orlando, FL, February 2017 (invited).
49. C. W. Wong, S.-W. Huang, B. Yao, Y.-P. Lai, C. Choi, and E. Kinigstein, Ultrafast nonlinear processes in 2D optoelectronics, *IEEE Photonics Conf.*, Waikoloa, HI, October 2016 (invited).
50. J. Lim, A. A. Savchenkov, E. Dale, W. Liang, D. Eliyahu, V. Ilchenko, A. B. Matsko, L. Maleki, and C. W. Wong, Impact of ambient perturbations on photonic microresonator stability, *IEEE Photonics Conf.*, Waikoloa, HI, October 2016 (invited).
51. C. W. Wong, S.-W. Huang, J. Wu, Ultrafast nonlinear dynamics in mesoscopic oscillators, *International Conf. on Applications in Nonlinear Dynamics*, Denver, CO, August 2016 (invited) and *Conf. Proc.* in Springer publishers.
52. C. A. Husko, A. Blanco-Redondo, S. Lefrancois, B. Eggleton, T. Krauss, M. Wulf, L. Kuipers, C. W. Wong, S. Combrie, A. de Rossi, and P. Colman, Soliton dynamics in semiconductor photonic crystals, *SPIE Photonics Europe: Photonic Crystal Materials and Devices*, paper 9885-17, Brussels, Belgium, April 2016 (invited).
53. C. W. Wong, Y. Huang, J. G. Flor Flores, J. Lim, and S.-W. Huang, Precision measurements in optomechanical photonic crystal cavities, *SPIE Proceedings of Photonics West*, San Francisco, CA, February 2016 (invited).
54. C. W. Wong, S. W. Huang, J. Lim, A. K. Vinod, J. Yang, and H. Zhou, Dynamics and generation of microresonator frequency combs, *SPIE Proceedings of Photonics West*, San Francisco, CA, February 2016 (invited).
55. S. W. Huang, J. Lim, A. K. Vinod, J. Yang, H. Zhou, P. Mortazavian, and C. W. Wong, Ultrafast dynamics and stabilization in frequency combs, *EMN Ultrafast Conference*, Las Vegas, NV, November 2015 (invited).
56. C. W. Wong, Ultrafast mode-locking, dynamics, and stabilization in microresonators, *IEEE Photonics Conference*, Reston, VA, October 2015 (invited).
57. C. W. Wong, S. W. Huang, Yongnan Li, J. Lim, A. K. Vinod, Z. Xie, and J. Yang, Quantum and ultrafast precision measurements in mesoscopic mode-locked architectures, *SPIE Proceedings of Photonics North*, Ottawa, Canada, June 2015 (invited).
58. S. W. Huang, J. Yang, H. Zhou, A. Matsko, M. Yu, D.-L. Kwong, L. Maleki, and C. W. Wong, Generation and stabilization of on-chip optical frequency combs, *International Optoelectronic Devices and Integration*, Wuhan, China, June 2015 (invited).
59. C. W. Wong, Real-time soliton and pulse dynamics in silicon photonics, *2015 Danish – Silicon Valley Photonics Workshop / Big Data and Real Time Analytics in Photonics*, Los Angeles, California, March 2015.

60. C. W. Wong, Z. Xie, S. Shrestha, S.-W. Huang, J. Yang, and H. Zhou, Quantum and ultrafast precision measurements in mesoscopic mode-locked architectures, *SPIE Proceedings of Photonics West*, San Francisco, California, February 2015 (invited).
61. C. W. Wong, Y. Huang, Y. Li, X. Luan, J. F. McMillan, and J. Wu, Nanoscale cavity optomechanics at the fundamental limits, *International Conference on Small Science*, Hong Kong, China, December 2014 (invited).
62. Z. Xie, S.-W. Huang, J. F. McMillan, S. Shrestha, J. Yang, and C. W. Wong, Nonlinear quantum optics and precision measurements in mesoscopic high- Q optical cavities, *Frontiers in Optics / Laser Science*, Tucson, Arizona, October 2014 (invited).
63. S.-W. Huang, J. Yang, J. F. McMillan, and C. W. Wong, Mode-locked optical frequency Kerr combs, *31st General assembly of the international union of radio science*, Beijing, China, August 2014 (invited).
64. C. W. Wong, Controlling photons in mesoscopic architectures: nonlinear, ultrafast, and quantum precision measurements, *Stanford University*, Stanford, CA, May 2014.
65. C. W. Wong, S.-W. Huang, S. Combrie, P. Colman, A. de Rossi, C. A. Husko, L. Maleki, A. B. Matsko, J. F. McMillan, J. Yang, and H. Zhou, Chip-scale ultrafast solitons and frequency comb mode-locking, *SPIE Proceedings of Photonics West*, San Francisco, California, February 2014 (invited).
66. C. W. Wong, High-dimensional hyperentanglement in integrated photonics, *Scalable information processing with quantum nanophotonics*, Raytheon BBN Technologies workshop, Cambridge, MA, January 2014 (invited).
67. C. W. Wong, S.-W. Huang, T. Gu, X. Luan, J. F. McMillan, D. Wang, J. Yang, and Heng Zhou, Microwave oscillators in chip-scale photonics, *2013 IEEE International Topical Meeting on Microwave Photonics*, Alexandria, VA, October 2013 (invited).
68. C. W. Wong, T. Gu, F. Gesuele, Hao Zhou, J. F. McMillan, N. Shi, and P. A. Sanchez, Graphene nonlinear and ultrafast optoelectronics: stepping up to the surface, *Frontiers in Optics 2013 and Laser Science XXIX*, Orlando, FL, October 2013 (invited).
69. S.-W. Huang, J. F. McMillan, Heng Zhou, J. Yang, and C. W. Wong, Ultrafast soliton and frequency comb dynamics in mesoscopic CMOS photonic circuits, *International Conference on Nanoscience and Technology (ChinaNano 2013)*, Beijing, China, September 2013 (invited).
70. C. W. Wong, Controlling photons in mesoscopic systems: precision measurements in frequency combs and optomechanics, *IEEE 2013 International Conf. on Optical MEMS and Nanophotonics*, Kanazawa, Japan, August 2013 (invited; plenary talk).
71. C. W. Wong, T. Gu, N. Shi, S.-W. Huang, Hao Zhou, F. Gesuele, J. F. McMillan and O. Ajayi, Graphene optoelectronics and photonics, *SPIE Optics and Photonics Congress*, San Diego, CA, August 2013 (invited).
72. C. W. Wong, F. Gesuele, T. Gu, and N. Shi, Carrier dynamics and four-wave mixing in graphene optoelectronics, *International Conference on Materials for Advanced Technologies*, Singapore, Singapore, June 2013 (invited).
73. C. W. Wong, Controlling photons in mesoscopic systems: precision oscillators, quantum entanglement, and strongly-coupled polaritons, *PRISM-MITRE Princeton seminar series on Quantum Engineering and Sensing*, Princeton, NJ, May 2013 (invited).
74. C. W. Wong, Chip-scale precision measurements: cavity optomechanics, frequency combs, and quantum entanglement, *John Hopkins University Applied Physics Laboratory*, Laurel, MD, May 2013 (invited).
75. C. W. Wong, J. Gao, and O. A. Ajayi, Individual quantum dot spectroscopy: slow-light polaritons and energy transfer dynamics, *Single Molecule Microscopy Tools for Materials Science and Life Sciences*, 2013 Brookhaven NSLS/CFN workshop, Stony Brook, NY, May 2013 (invited).
76. C. W. Wong, Controlling light in mesoscopic systems: new frontiers in ultrafast, nonlinear, quantum and precision measurements, *University of Texas at Austin, Department of Physics / Center for Complex Quantum Systems*, Austin, TX, April 2013 (invited).
77. T. Gu, F. Gesuele, J. F. McMillan, P. A. Sanchez, N. Shi, and C. W. Wong, Ultrafast optical processes in chip-scale graphene optoelectronics, *Optics Communications*, Special issue on

- Energy efficient nanophotonics: engineered light-matter interaction in sub-wavelength structures, March 2013 (invited).
78. C. W. Wong, J. F. McMillan, T. Gu, J. Zheng, P.-C. Hsieh, S. Kocaman, X. Li, Y. Li, J. Liang, M. D. Marko, N. Shi, A. Veitia, X. Xu, Z. Xie, and J. Yang, Nonlinear, ultrafast and quantum optics in photonic integrated circuits, *SPIE Proceedings of Photonics West*, San Francisco, California, February 2013 (invited).
 79. C. W. Wong, Controlling light in mesoscopic materials: ultrafast, nonlinear, quantum and precision measurements, *Workshop on photonics technologies and applications*, Stanford University, Stanford, CA, February 2013 (invited).
 80. C. W. Wong, Ultrafast dynamics of graphene and nanomaterials, Joint workshop on nanoscience and nanotechnology opportunities for academia and high tech industry, *Brookhaven National Laboratory*, Upton, NY, January 2013 (invited).
 81. C. W. Wong, Controlling photons on-chip: ultrafast, nonlinear, quantum and precision measurements, *Texas Tech University, Electrical and Computer Engineering*, Lubbock, TX, November 2012 (invited).
 82. C. W. Wong, Nonlinear and cavity quantum electrodynamics in mesoscopic photonic crystals, *International Conference of Young Researchers on Advanced Materials, Materials Research Society*, Singapore, July 2012 (invited; keynote talk).
 83. C. W. Wong, J. F. McMillan, T. Gu, M. Marko, X. Li, P. Hsieh, and S. Kocaman, Ultrafast nonlinearities and dispersion in slow-light photonic crystal lattices, *Integrated Photonics Research, Silicon and Nano Photonics*, Colorado Springs, CO, June 2012 (invited).
 84. C. W. Wong, J. F. McMillan, J. Gao, J. Zheng, T. Gu, P. Hsieh, Y. Li, X. Li, and M. Marko, Nonlinear and quantum optics in mesoscopic photonic lattices, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, May 2012 (invited).
 85. C. W. Wong, Nonlinear and quantum optics in mesoscopic structures, *National University of Defense Technology*, Changsha, China, May 2012 (invited).
 86. C. W. Wong, Controlling photons in mesoscopic nanostructures, *University of Science and Technology of China, Department of Physics*, Hefei, China, May 2012 (invited).
 87. C. W. Wong, T. Gu, P. Hsieh, J. F. McMillan, A. Dadgar, Y. Li, X. Li, M. Marko, N. Shi, A. Veitia, Z. Xie, X. Xu, J. Yang, and J. Zheng, Nonlinear and quantum optics in mesoscopic photonic nanostructures, *The 6th International Conference on Nanophotonics*, Beijing, China, May 2012 (invited).
 88. C. W. Wong, Nonlinear and quantum optics in mesoscopic photonic crystals, *Laboratory for Physical Sciences*, Maryland, MD, February 2012 (invited).
 89. C. W. Wong, Nonlinear and quantum optics in mesoscopic nanostructures, *GE Global Research Center*, Niskayuna, NY, September 2011 (invited).
 90. A. De Rossi, S. Combrié, P. Colman, C. Husko, C. W. Wong, I. Sagnes, I. Cestier, V. Echouse and G. Eisenstein, All-optical processing in photonic crystals, *Slow and Fast Light conference (OSA)*, Toronto, Canada, June 2011 (invited).
 91. C. W. Wong, J. Zheng, J. Shu, Y. Li, and J. Gao, Cavity optomechanics in photonic crystals, *Phononics 2011: The First International Conference on Phononic Crystals, Metamaterials and Optomechanics*, Santa Fe, New Mexico, May 2011 (invited).
 92. C. W. Wong, Controlling photons in nanostructures: nonlinear, quantum and thin-film photovoltaics, *3M Corporate Research Laboratory*, St. Paul, MN, March 2011 (invited).
 93. C. W. Wong, J. F. McMillan, C. A. Husko, J. Zheng, Y. Li, J. Gao, J. Shu, S. Kocaman, T. Gu, and M. S. Aras, Nonlinear parametric processes in photonic crystal nanostructures, *SPIE Proceedings of Photonics West*, San Francisco, California, January 2011 (invited).
 94. C. W. Wong, Controlling light in photonic crystal nanostructures, *Department of Electrical and Computer Engineering, University of Washington in St. Louis*, November 2010 (invited).
 95. C. W. Wong, Controlling light in photonic crystal nanostructures, *Department of Physics and Engineering Physics, Stevens Institute of Technology*, Hoboken, NJ, November 2010 (invited).

96. C. W. Wong, Controlling light in photonic crystals, *Bell Labs, Alcatel – Lucent*, Crawford Hill, NJ, May 2010 (invited).
97. C. W. Wong, Nonlinear and quantum optics in photonic nanostructures, *Massachusetts Institute of Technology / Research Laboratory of Electronics, Optics and Quantum Electronics seminar series*, Cambridge, MA, April 2010 (invited).
98. C. W. Wong, Nonlinear and quantum optics in photonic crystal nanostructures, *Harvard University, School of Engineering and Applied Sciences*, Cambridge, MA, April 2010 (invited).
99. C. W. Wong, Controlling photons in nanostructures: nonlinear, quantum and thin-film photovoltaics, *3M Corporate Research Laboratory*, St. Paul, MN, March 2010 (invited).
100. C. W. Wong, Controlling photons in nanostructures, *University of California at Los Angeles, California NanoSystems Institute*, Los Angeles, California, February 2010 (invited).
101. C. W. Wong, J. F. McMillan, R. Bose, R. Chatterjee, C. Chen, J. Gao, T. Gu, C. Husko, S. Kocaman, F. Sun, Y. Xiao, and X. Yang, Nonlinear and quantum optics in photonic nanostructures, *SPIE Proceedings of Photonics West*, San Francisco, California, January 2010 (invited).
102. C. W. Wong, Engineering photons in nanostructures: energy conversion and nonlinear dynamics, *Progress In Electromagnetics Research Symposium*, Moscow, Russia, August 2009 (invited).
103. S. Combrié, C. Husko, Q. Tran, P. Colman, F. Raineri, C. W. Wong and A. de Rossi, Low-power and fast switching in III-V Photonic Crystals, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, Baltimore, MD, May 2009 (invited).
104. C. W. Wong, Nonlinear dynamics of engineered photons in nanostructures for energy and broadband communications, *Wireless and Optical Communications Conference*, Newark, New Jersey, May 2009 (invited).
105. C. W. Wong, Nonlinear dynamics of engineered photons in nanostructures, *University of California at Berkeley, Berkeley Sensors and Actuators Center seminar series*, Berkeley, California, February 2009 (invited).
106. C. W. Wong, Controlling Light with Photonic Crystal Nanostructures: Dispersion, Nonlinear and Nonclassical Optics, *Yale University, Solid-State and Optics seminar series*, New Haven, CT, January 2009 (invited).
107. F. W. Sun, B. H. Liu, Y. F. Huang, Z. Y. Ou, C. W. Wong, G. C. Guo, Experimental demonstration of phase measurement precision beating standard quantum limit by projection measurement, *SPIE Proceedings of Photonics West*, San Jose, California, January 2009, paper 7225-32 (invited).
108. C. W. Wong, Engineering photons for topological cluster computing in nanostructures, *National Institute of Informatics, Workshop on Topological Cluster State Computing in Optics*, Tokyo, Japan, December 2008 (invited).
109. C. W. Wong, Engineering photons for nonlinear dynamics, *Rutgers Distinguished Lecture Series*, Rutgers University, Piscataway, New Jersey, November 2008 (invited).
110. C. W. Wong, Controlling light with silicon nanostructures: dispersion, nonlinear and nonclassical optics, *Quantum Information/Bose-Einstein Condensation seminar series*, Joint Quantum Institute (National Institute of Standards and Technology / Laboratory for Physical Sciences / University of Maryland), Gaithersburg, Maryland, August 2008 (invited).
111. C. W. Wong and J. F. McMillan, Observations of enhanced Raman scattering in silicon slow-light photonic crystal waveguides and nanophotonics, *SPIE Proceedings of Optics and Photonics: NanoScience and Engineering*, San Diego, California, August 2008 (invited).
112. C. W. Wong, Controlling Light with Photonic Crystals: Dispersion, Nonlinear and Nonclassical Optics, *Karlsruhe Department of Physics and School of Optics & Photonics*, Karlsruhe, Germany, May 2008 (invited).
113. C. W. Wong, R. Chatterjee, J. Gao, C. J. Chen, J. F. McMillan, X. Yang, R. Bose, and Y.-F. Xiao, Coherent interactions in photonic crystal nanostructures: controlling dispersion and efforts towards quantum information processing, *European Materials Research Society Spring 2008 meeting*, Strasbourg, France, May 2008 (invited).

114. C. W. Wong, Controlling Light with Photonic Crystal Nanostructures: Dispersion, Nonlinear and Nonclassical Optics, *Columbia Optics seminar series*, New York, NY, December 2007 (invited).
115. R. Bose, J. F. McMillan, C. J. Chen, J. Gao, F. Sun, and C. W. Wong, Nonclassical and nonlinear optics of nanocrystals in photonic crystal nanostructures for information processing, *Quantum Dots*, Fort Lauderdale, FL, December 2007 (invited).
116. C. W. Wong, Controlling Light with Photonic Crystal Nanostructures: Dispersion, Nonlinearities and Nonclassical Optics, *Queen's College Physics Department*, City University of New York, Flushing, New York, September 2007 (invited).
117. C. W. Wong, Controlling Light with Photonic Crystal Nanostructures: Dispersion, Nonlinearities and Quantum, *SPIE Proceedings of Optics and Photonics: Nanophotonics*, San Diego, California, August 2007 (invited).
118. C. W. Wong, Controlling Light with Photonic Crystal Nanostructures: Dispersion, Nonlinearities and Nonclassical Optics, *Institute of Microelectronics*, Singapore, June 2007 (invited).
119. C. W. Wong, R. Bose, J. Gao, J. F. McMillan, and X. Yang, Observations of nonlinearities and non-classical optics in photonic crystals, *Wireless and Optical Communications Conference*, Newark, New Jersey, April 2007 (invited).
120. C. W. Wong, R. Chatterjee, K. Liu, S. Kocaman, X. Yang, Experimental observations of negative refraction superlensing and nonlinearities in photonic crystals, 4th International Symposium on Nanomanufacturing, Cambridge-MIT, MA, 2006 (invited)
121. C. W. Wong, C. A. Husko, J. F. McMillan, X. Yang, C. J. Chen, R. Bose, and J. Gao, Nonlinearities and non-classical emission in photonic band gap nanostructures, in *Proceedings of SIAM Conference on Nonlinear Waves and Coherent Structures*, Seattle, Washington, 2006 (invited).
122. C. W. Wong, R. Chatterjee, K. Liu, C. J. Chen, and C. A. Husko, Negative refraction and nonlinearities in photonic band gap nanostructures, *Proc. SPIE* **6327**, 632704 (2006), Nanoengineering: Fabrication, Properties, Optics and Devices III, E. A. Dobisz, and L. A. Eldada, editors; *SPIE Proceedings of Optics and Photonics: Nanophotonics* (NP208), San Diego, California, 2006, paper 632704 (invited).
123. C. W. Wong, X. Yang, J. McMillan, and C. A. Husko, Photonic crystals and silicon photonics, *Proc. SPIE* **6124**, 248 (2006), Optoelectronic Integrated Circuits VIII, L. A. Eldada and E.-H. Lee, editors; *SPIE Proceedings of Photonics West*, San Jose, California, 2006, paper 6124-30 (invited).
124. L. C. Kimerling, D. Ahn, A. B. Apsel, M. Beals, D. Carothers, Y. Chen, T. Conway, D. Gill, M. Grove, C.-Y. Hong, M. F. Lipson, J. Liu, J. Michel, S. S. Patel, A. T. Pomerene, M. Rasras, D. K. Sparacin, K. Tu, A. E. White, C. W. Wong, Electronic-photonic integrated circuits on the CMOS platform, *Proc. SPIE* **6125**, 6 (2006), Silicon Photonics, J. A. Kubby and G. T. Reed, editors; *SPIE Proceedings of Photonics West*, San Jose, California, 2006, paper 6125-02 (invited).
125. P. T. Rakich, H. Sotobayashi, J. T. Gopinath, J. W. Sickler, C. W. Wong, M. Qi, S. G. Johnson, E. Lidorikis, J. D. Joannopoulos, H. I. Smith and E. P. Ippen, Broadband optical studies of 1D and 3D photonic crystals, in *Proc. SPIE* **6017**, 601702 (Oct 2005), Nanophotonics for Communication: Materials and Devices II, Nibir K. Dhar, Achyut K. Dutta, and Kiyoshi Asakawa, editors; *SPIE Proceedings of Optics East*, Boston, Cambridge, 2005 (invited).
126. P. T. Rakich, H. Sotobayashi, J. T. Gopinath, J. W. Sickler, C. W. Wong, M. Qi, S. G. Johnson, E. Lidorikis, J. D. Joannopoulos, H. I. Smith and E. P. Ippen, Broadband optical studies of 1D and 3D photonic crystals, in *Proceedings of Networks and Optical Communications*, University College London, England, July 2005 (invited).
127. G. Barbastathis, G. Nielson, and C. W. Wong, Three-dimensional Optics, in *Proceedings of International Display Workshops and Asia Display 2005*, Takamatsu, Japan, December 2005 (invited).
128. C. W. Wong, X. Yang, R. Bose, and R. Chatterjee, Silicon Photonics, in *Proceedings of Wireless and Optical Communications Conference*, Elizabeth, New Jersey, April 2005 (invited).

129. C. W. Wong, X. Yang and J. McMillan, Stimulated Raman Amplification and Lasing in Silicon Band Gap Nanostructures, in *Proceedings of Nano-Optics and Microsystems Symposium in International Conference on Materials for Advanced Technologies*, Singapore, Singapore, July 2005 (invited).

SELECTED CONFERENCE PULICATIONS

1. M. Taylor, K. Yu, M. C. Sarihan, J. H. Kang, A. Banerjee, C. S. Fan, D. Lidar, and C. W. Wong, Universally robust control sequences for high-dimensional superconducting qubits, *American Physical Society March meeting*, paper N71.00009, Las Vegas, NV, March 2023.
2. K. Yu, M. C. Sarihan, M. Taylor, J. H. Kang, A. Banerjee, C. S. Fan, J. DuBois, Y. Rosen, and C. W. Wong, Modeling decoherence processes in high-dimensional superconducting circuits using master equations and quantum trajectory approach, *American Physical Society March meeting*, paper T75.00003, Las Vegas, NV, March 2023.
3. M. C. Sarihan, K. Yu, M. Taylor, A. Banerjee, J. H. Kang, C. S. Fan, and C. W. Wong, Planar multi-mode superconducting circuit design for high-dimensional computation, *American Physical Society March meeting*, paper D75.00011, Las Vegas, NV, March 2023.
4. J. H. Kang, M. C. Sarihan, K. Yu, M. Taylor, A. Banerjee, C. S. Fan, and C. W. Wong, Decoherence mitigation via logical qubits encoded over multi-mode superconducting qubits, *American Physical Society March meeting*, paper Q73.00004, Las Vegas, NV, March 2023.
5. A. Banerjee, M. C. Sarihan, J. H. Kang, K. Yu, M. Taylor, C. S. Fan, and C. W. Wong, Microwave multi-planar package design for superconducting qudit chips with integrated support elements, *American Physical Society March meeting*, paper N74.00007, Las Vegas, NV, March 2023.
6. C. S. Fan, A. Cobb, M. C. Sarihan, J. Huang, K. Azizur-Rahman, S. Jha, and C. W. Wong, Characterizing the 1s:E state in the $^{28}\text{Si}:^{77}\text{Se}^+$ spin-photon system by the equation-of-motion variational quantum eigensolver method, *American Physical Society March meeting*, paper W03.00001, Las Vegas, NV, March 2023.
7. A. Chu, W. Wang, and C. W. Wong, Investigation of low-amplitude noise soliton microcomb generation in dual-pump configuration, *Frontiers in Optics and Laser Science*, paper JW4B.24, Rochester, NY, October 2022.
8. N. Peserico, H. Yang, X. Ma, S. Li, M. Hosseini, J. K. George, P. Gupta, C. W. Wong, and V. J. Sorger, Design and testing of integrated 4F system into silicon photonics chip for convolutional neural network, *Integrated Photonics Research, Silicon and Nanophotonics*, Maastricht, Limburg, Netherlands, July 2022.
9. N. Peserico, H. Yang, X. Ma, S. Li, M. Hosseini, J. K. George, P. Gupta, C. W. Wong, and V. J. Sorger, Design and testing of integrated photonic chip for convolutional neural network, *Imaging Systems and Applications*, Washington, D.C., July 2022.
10. K.-C. Chang, X. Cheng, M. C. Sarihan, W. Wang, F. N. C. Wong, J. H. Shapiro, and C. W. Wong, Mode-locked phase coherent singly-resonant biphoton frequency comb, *Proceedings of Conference on Lasers and Electro-optics*, paper 3696529, San Jose, CA, May 2022.
11. X. Cheng, Z. Xie, K.-C. Chang, M. C. Sarihan, Y. S. Lee, Y. Li, M. Yu, D.-L. Kwong, J. H. Shapiro, F. N. C. Wong, and C. W. Wong, A phase-coherent on-chip single-photon SWAP gate, *Proceedings of Conference on Lasers and Electro-optics*, paper 3695654, San Jose, CA, May 2022.
12. M. Sarihan, J. Huang, J. H. Kang, B. Liang, W. Liu, and C. W. Wong, Cryogenic O-band photoluminescence spectroscopy of T-centers in monolithic Si for mesoscopic cavity quantum electrodynamics, *Proceedings of Conference on Lasers and Electro-optics*, paper 3698317, San Jose, CA, May 2022.
13. M. Sarihan, M. Coumans, J. Huang, W. Liu, K. Tang, H.-W. Jiang, J. Pomeroy, L. S. Bouchard, and C. W. Wong, Fine-structure absorption spectroscopy of singly-ionized ^{77}Se deep-donors in silicon for chip-scale spin-photon interfaces, *Proceedings of Conference on Lasers and Electro-optics*, paper 3698404, San Jose, CA, May 2022.

14. W. Wang, H. Liu, T. Melton, J. Yang, A. Kumar, J. Lim, Y. Jang, H. Zhou, M. Yu, D.-L. Kwong, P. DeVore, J. Chou, and C. W. Wong, Sampling timing jitter in dispersion-managed frequency microcombs via a fiber interferometer, *Proceedings of Conference on Lasers and Electro-optics*, paper 3698165, San Jose, CA, May 2022.
15. F. Hu, A. K. Vinod, W. Wang, Z. Zhan, M. Gong, and C. W. Wong, Achieving flat spectral envelopes of soliton crystal frequency microcombs, *Proceedings of Conference on Lasers and Electro-optics*, paper 3698139, San Jose, CA, May 2022.
16. F. Hu, A. K. Vinod, W. Wang, M. Gong, and C. W. Wong, Dynamical structures and collective dynamics of soliton crystals in Kerr microresonator, *Proceedings of Conference on Lasers and Electro-optics*, paper 3698164, San Jose, CA, May 2022.
17. H. Liu, W. Wang, M. Yu, D.-L. Kwong, and C. W. Wong, Deterministic double DKS generation in an 88-GHz single-mode Si₃N₄ microring with controlled spacing, *Proceedings of Conference on Lasers and Electro-optics*, paper 3698750, San Jose, CA, May 2022.
18. J. Huang, W. Liu, A. Miranda, B. Dwir, A. Rudra, E. Kapon, and C. W. Wong, Exciton complexes and quantum electrodynamics of highly-symmetric single-site-controlled InGaAs quantum dot nanocavities, *Proceedings of Conference on Lasers and Electro-optics*, paper 3698162, San Jose, CA, May 2022.
19. T. Yerebakan, J. G. Flor Flores, W. Wang, J. Wu, and C. W. Wong, Nanofabrication and a novel mass design of cavity optomechanical acceleration sensing, *Proceedings of Conference on Lasers and Electro-optics*, paper 3698274, San Jose, CA, May 2022.
20. J. G. Flor Flores, T. Yerebakan, W. Wang, J. Wu, A. Matsko, and C. W. Wong, Power intensity noise in cavity optomechanical accelerometers through RF sensing, *Proceedings of Conference on Lasers and Electro-optics*, paper 3697008, San Jose, CA, May 2022.
21. T. Melton, J. F. McMillan, W. Wang, Y. Lai, M. Gerber, M. Rodriguez, K. Nouri-Mahdavi, J. P. Hubschman, and C. W. Wong, High-resolution millimeter-depth optical coherence tomography with 1- μ m 100-GHz chip-scale laser frequency microcombs, *Proceedings of Conference on Lasers and Electro-optics*, paper 3691246, San Jose, CA, May 2022.
22. H. Yang, S. Li, X. Ma, J. K. George, P. Gupta, V. J. Sorger, and C. W. Wong, Programmable on-chip photonic machine learning system based on joint transform correlator, *Proceedings of Conference on Lasers and Electro-optics*, paper 3697670, San Jose, CA, May 2022.
23. H. Boo, H. Yang, Y. S. Lee, B. Matthews, T. G. Lee, and C. W. Wong, Achieving thin-film optical metasurfaces for high-resolution augmented/mixed-reality smart glasses, *Proceedings of Conference on Lasers and Electro-optics*, paper 3698578, San Jose, CA, May 2022.
24. J. Huang, M. C. Sarihan, J. H. Kang, B. Liang, W. Liu, and C. W. Wong, Cryogenic optical transitions of T centers in bulk silicon and silicon-on-insulator for cavity quantum electrodynamics, *Frontiers in Optics and Laser Science*, paper JTU7A.2, October 2021 (postdeadline).
25. A. K. Vinod, W. Wang, F. Hu, X. Jiang, B. Li, and C. W. Wong, Formation, persistence and statistics of rogue events in microresonators, *Proceedings of Conference on Lasers and Electro-optics*, paper STU2G.6, San Jose, CA, May 2021.
26. W. Wang, X. Jiang, A. K. Vinod, J. Yang, M. Yu, D.-L. Kwong, and C. W. Wong, Sampling sub-THz phase noise in frequency microcombs via fiber interferometry, *Proceedings of Conference on Lasers and Electro-optics*, paper JTU3A.138, San Jose, CA, May 2021.
27. W. Wang, X. Jiang, A. K. Vinod, H. Liu, M. Yu, D.-L. Kwong, and C. W. Wong, Real-time observation of breathing solitons and soliton molecules dynamics in strong coupled microcavity, *Proceedings of Conference on Lasers and Electro-optics*, paper SW4A.7, San Jose, CA, May 2021.
28. W. Wang, P.-K. Lu, A. K. Vinod, J. F. McMillan, M. Yu, D.-L. Kwong, M. Jarrahi, and C. W. Wong, High spectral purity chip-scale tunable THz radiation, *Proceedings of Conference on Lasers and Electro-optics*, paper ATu2T.3, San Jose, CA, May 2021.
29. L.-Y. Chen, A. K. Vinod, J. F. McMillan, H. Liu, H. Yang, C.-K. Ken Yang, and C. W. Wong, A pulsed-coherent Lidar system with a chip based optical frequency comb, *Proceedings of Conference on Lasers and Electro-optics*, paper AW3S.4, San Jose, CA, May 2021.

30. T. Tan, Z. Yuan, H. J. Chen, H. Zhang, C. Qin, C. W. Wong, Y. Rao, Y.-F. Xiao, and B. Yao, Gain-assisted microcomb dual-soliton manipulation, *Proceedings of Conference on Lasers and Electro-optics*, paper STu1D.5, San Jose, CA, May 2021.
31. H. Liu, Y.-S. Jang, J. Yang, M. Yu, D.-L. Kwong, and C. W. Wong, Nanometric precision metrology based on hybrid spectrally resolved and homodyne interferometry via a single soliton microcomb, *Proceedings of Conference on Lasers and Electro-optics*, paper STu2A.6, San Jose, CA, May 2021.
32. J. G. Flor Flores, Y. Huang, T. Yerebakan, W. Wang, J. Wu, and C. W. Wong, Velocity random walk and dynamic range of laser-driven precision optomechanical inertial accelerometer, *Proceedings of Conference on Lasers and Electro-optics*, paper JTU3A.132, San Jose, CA, May 2021.
33. T. Yerebakan, J. F. Flor Flores, Y. Huang, W. Wang, J. Wu, and C. W. Wong, Thermodynamical bounds and noise of cavity optomechanical acceleration sensing, *Proceedings of Conference on Lasers and Electro-optics*, JTU2I.6, San Jose, CA, May 2021.
34. Y. Deng, J. G. Flor Flores, Z. Wang, H. Yuan, J. Zhang, J. Wu, and C. W. Wong, Neuron-like spiking derived from silicon-based photonic crystal microcavity, *Proceedings of Conference on Lasers and Electro-optics*, STu1G.2, San Jose, CA, May 2021.
35. X. Cheng, Z. Xie, K.-C. Chang, M. C. Sarihan, Y. S. Lee, A. K. Vinod, Y. Li, X. Xu, S. Kocaman, M. Yu, D.-L. Kwong, J. H. Shapiro, F. N. C. Wong, and C. W. Wong, Quantum state tomography of an on-chip polarization-spatial qubit SWAP gate, *Proceedings of Conference on Lasers and Electro-optics*, FF2I.2, San Jose, CA, May 2021.
36. K.-C. Chang, X. Cheng, M. C. Sarihan, A. K. Vinod, T. Zhong, Y.-X. Gong, Z. Xie, J. H. Shapiro, F. N. C. Wong, and C. W. Wong, Quantification of high-dimensional energy-time entanglement in a biphoton frequency comb, *Proceedings of Conference on Lasers and Electro-optics*, FF2I.2, San Jose, CA, May 2021.
37. X. Cheng, M. C. Sarihan, K.-C. Chang, C. Chen, F. N. C. Wong, and C. W. Wong, Secure high dimensional quantum key distribution based on wavelength-multiplexed time-bin encoding, *Proceedings of Conference on Lasers and Electro-optics*, paper STh1D.3, San Jose, CA, May 2021.
38. M. C. Sarihan, K.-C. Chang, X. Cheng, H. Tsuda, and C. W. Wong, Proof-of-principle frequency-bin quantum key distribution with biphoton frequency combs, *Proceedings of Conference on Lasers and Electro-optics*, paper ATu1S.6, San Jose, CA, May 2021.
39. M. C. Sarihan, W. Liu, J. Huang, K. Tang, J. F. McMillan, M. S. Goorsky, H.-W. Jiang, J. M. Pomeroy, and C. W. Wong, Cryogenic optical transitions in $^{77}\text{Se}^+$ implanted Si for on-chip spin-photon interfaces, *Proceedings of Conference on Lasers and Electro-optics*, paper JTU3A.170, San Jose, CA, May 2021.
40. W. Liu, J. Huang, A. Miranda, B. Dwir, A. Rudra, E. Kapon, and C. W. Wong, Towards strong-coupling regime in singular site-controlled InGaAs quantum dots-nanocavities, *Proceedings of Conference on Lasers and Electro-optics*, paper FW2O.5, San Jose, CA, May 2021.
41. J. Huang, W. Liu, E. Kapon, and C. W. Wong, Controllable pure dephasing pathways in single site-controlled pyramidal quantum dot – nanocavity system, *Proceedings of Conference on Lasers and Electro-optics*, paper JTU3A.117, San Jose, CA, May 2021.
42. J. H. Kang, Y. Cho, L. Liang, X. Kong, S. Ghosh, F. Kargar, C. Hu, A. A. Balandin, D. Geohegan, A. A. Puretzky, N. Ni, and C. W. Wong, A study of phonon modes of magnetic two-dimensional materials using optical spectroscopy, *Proceedings of Conference on Lasers and Electro-optics*, paper FW4K.7, San Jose, CA, May 2021.
43. O. Spitz, J. Wu, P. Didier, D. A. Díaz-Thomas, L. Cerutti, A. N. Baranov, G. Maisons, M. Carras, C.-W. Wong, and F. Grillot, Chaos bandwidth in mid-infrared quantum cascade photonic devices with interband and intersubband transitions, *Proceedings of Conference on Lasers and Electro-optics*, paper STu1H.4, San Jose, CA, May 2021.
44. H. Boo, Y. S. Lee, H. Yang, B. Matthews, T. G. Lee, and C. W. Wong, Metasurface optical elements for high performing augmented/mixed-reality smart glasses, *Proceedings of Conference on Lasers and Electro-optics*, paper STu4D.5, San Jose, CA, May 2021.

45. H. Boo, H. Yang, Y. S. Lee, H. Yang, and C. W. Wong, Spatial parallel image processing with metasurfaces, *AI and optical data sciences II*, **11703**, paper 1170309, *Proceedings of SPIE Photonics West*, San Francisco, CA, March 2021.
46. W. Liu, J. Huang, X. Cheng, A. Miranda, B. Dwir, A. Rudra, E. Kapon, and C. W. Wong, Towards strong-coupling regime in site-controlled InGaAs quantum dots integrated with nanocavities, *SPIE Photonics West*, paper 11694-77, San Francisco, CA, March 2021 (postdeadline).
47. F. Hu, A. K. Vinod, X. Jiang, J. Flor Flores, M. Gong, and C. W. Wong, Temporal imaging of real-time dynamics in soliton crystals, *Proceedings of American Physical Society*, Nashville, TN, March 2021.
48. W. Wang, X. Jiang, A. K. Vinod, J. Yang, M. Yu, D.-L. Kwong, and C. W. Wong, Sampling sub-THz phase fluctuations in microcavities, *Proceedings of American Physical Society*, Nashville, TN, March 2021.
49. W. Wang, P.-K. Lu, A. K. Vinod, J. F. McMillan, M. Yu, D.-L. Kwong, M. Jarrahi, and C. W. Wong, High spectral purity chip-scale tunable THz generation, *Proceedings of American Physical Society*, Nashville, TN, March 2021.
50. W. Liu, J. Huang, E. Kapon, and C. W. Wong, Strong exciton-photon coupling mediated by dephasing in site-controlled InGaAs quantum dot nanocavities, *Proceedings of American Physical Society*, Nashville, TN, March 2021.
51. Y. Cho, J. H. Kang, L. Liang, A. Puzos, X. Kong, S. Ghosh, F. Kargar, C. Hu, N. Ni, A. Balandin, D. Geohegan, and C. W. Wong, Phonon vibrational modes of layered MnBiTe ($n = 1,2,3,4$) topological heterostructures, *Proceedings of American Physical Society*, Nashville, TN, March 2021.
52. L.-Y. Chen, A. K. Vinod, J. F. McMillan, C. W. Wong, and C.-K. K. Yang, A 1Tx/2Rx pulsed-coherent Lidar system with 40-dB inverter-based phase-invariant PGA, *2021 IEEE Custom Integrated Circuits Conference* (online), April 2021.
53. M. C. Sarihan, W. Liu, J. Huang, K. Tang, J. F. McMillan, M. Goorsky, H. Jiang, J. Pomeroy, and C. W. Wong, Cryogenic optical transitions of $^{77}\text{Se}^+$ deep donors in silicon photonic crystal cavity platforms, *Frontiers in Optics and Laser Science*, Washington DC (online), September 2020.
54. J. Yang, S.-W. Huang, Z. Xie, M. Yu, D.-L. Kwong, and C. W. Wong, Multi-spectral regenerative frequency microcombs with coherent satellite clusters, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper JTU2F.20 (online), May 2020.
55. A. Vinod, J. F. McMillan, W. Wang, M. Yu, D.-L. Kwong, and C. W. Wong, Persistence of extreme events in microresonators, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper FTh3J.1 (online), May 2020.
56. H. Liu, W. Wang, J. F. McMillan, M. Yu, D.-L. Kwong, and C. W. Wong, Extended access to self-disciplined platicon generation in normal dispersion regime via intensity-modulated pump, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper SF2B.2 (online), May 2020.
57. X. Jiang, W. Wang, J. Yang, M. Yu, D.-L. Kwong, and C. W. Wong, Ultrafast real-time dynamics of frequency microcomb transitions, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper STU3H.4 (online), May 2020.
58. F. Hu, W. Wang, J. Yang, M. Yu, D.-L. Kwong, and C. W. Wong, Observations of islands of stability in the chaotic regime of Kerr frequency combs *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper SW4J.6 (online), May 2020.
59. J. Wu, J. G. Flor Flores, D. Shidla, J. Yang, B. Shi, M. Yu, G. Lo, D.-L. Kwong, S. Duan, and C. W. Wong, F. Hu, W. Wang, J. Yang, M. Yu, D.-L. Kwong, and C. W. Wong, Observations of islands of stability in the chaotic regime of Kerr frequency combs, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper SW4J.6 (online), May 2020.
60. Y.-S. Jang, J. Lim, W. Wang, J. G. Flor Flores, S.-W. Kim, A. Savchenkov, A. B. Matsko, and C. W. Wong, Sub-fm/Hz^{1/2} displacement measurement on MgF₂ whispering gallery mode

- microcavity, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper JT2G.5 (online), May 2020.
61. J. G. Flor Flores, W. Wang, Y. Huang, J. Wu, T. Yerebakan, Q. Bai, and C. W. Wong, Low-frequency noise stabilization in optomechanical inertial accelerometers for high-resolution sensing, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper SM4M.2 (online), May 2020.
 62. J. Wu, J. G. Flor Flores, D. Shidla, J. Yang, B. Shi, M. Yu, G. Lo, D.-L. Kwong, S. Duan, and C. W. Wong, Physically secure image transfer using synchronized chaos between silicon optomechanical cavities, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper STh4O.7 (online), May 2020.
 63. O. Spitz, J. Wu, M. Carras, G. Maisons, C. W. Wong, and F. Grillot, Excitability in mid-infrared quantum cascade lasers: from communication jamming to neuromorphic photonics, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper STh1E.4 (online), May 2020.
 64. K.-C. Chang, X. Cheng, M. C. Sarihan, A. Kumar, Y. S. Lee, T. Zhong, Y.-X. Gong, Z. Xie, J. H. Shapiro, F. N. C. Wong, and C. W. Wong, High-dimensional time-frequency entanglement and Schmidt number witnesses using a biphoton frequency comb, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper JTh2A.23 (online), May 2020.
 65. M. C. Sarihan, K.-C. Chang, X. Cheng, Y. S. Lee, C. Chen, T. Zhong, H. Zhou, Z. Zhang, F. N. C. Wong, J. H. Shapiro, and C. W. Wong, Frequency-multiplexed rate-adaptive quantum key distribution with high-dimensional encoding, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper FF3C.3 (online), May 2020.
 66. X. Cheng, K.-C. Chang, Z. Xie, Y. S. Lee, M. C. Sarihan, A. K. Vinod, Y. Li, S. Kocaman, T. Zhong, M. Yu, D.-L. Kwong, J. H. Shapiro, F. N. C. Wong, and C. W. Wong, An efficient on-chip single-photon SWAP gate for entanglement manipulation, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper FM2R.5 (online), May 2020.
 67. H. Boo, Y. S. Lee, H. Yang, K.-C. Chang, and C. W. Wong, Polarization-diverse metasurfaces for high-dimensional spatial-mode entanglement generation, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper FF1B.1 (online), May 2020.
 68. M. C. Sarihan, A. Govdeli, Y. B. Yilmaz, M. Erdil, M. S. Aras, C. Yanik, C. W. Wong, and S. Kocaman, On-chip flexible waveguides with amorphous structures in the near-infrared, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper JW2D.25 (online), May 2020.
 69. M. Miscuglio, Z. Hu, S. Li, J. Gu, A. Babakhani, P. Gupta, C.-W. Wong, D. Pan, S. Bank, H. Dalir, and V. J. Sorger, Million-channel parallelism Fourier-optic convolutional filter and neural network processor, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper JF3A.4 (online), May 2020.
 70. Y. Cho, S. Ghosh, Z. Zhao, C. Hu, J. H. Kang, F. Kargar, N. Ni, A. Balandin, and C. W. Wong, Raman signatures on a van der Waals antiferromagnet, American Physical Society, Denver, Colorado, paper M41.00013, March 2020.
 71. J. Yang, S.-W. Huang, Z. Xie, M. Yu, D.-L. Kwong, and C. W. Wong, Multi-phase-matched satellite frequency combs, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper FF2D.2, May 2019.
 72. W. Wang, J. Yang, A. Vinod, H. Liu, M. Yu, D.-L. Kwong, and C. W. Wong, Competing Faraday and modulational instabilities in dispersion-managed high- Q microcavities, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper STh3J.4, May 2019.
 73. H. Liu, J. Yang, S.-W. Huang, M. Yu, D.-L. Kwong, and C. W. Wong, Lotus-like dual soliton generation and phase shifting in an 88 GHz high-order-mode-suppressed Si_3N_4 microring, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper SW4H.4, May 2019.
 74. A. Vinod, S.-W. Huang, J. Yang, M. Yu, D.-L. Kwong, and C. W. Wong, Optical clocks via breather stabilization in chip-scale frequency combs, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper SM1F.5, May 2019.

75. B. Yao, A. K. Vinod, S.-W. Huang, Y. Liu, J. G. Flor Flores, C. Choi, Y. Huang, X. Duan, and C. W. Wong, Electrically tunable Kerr combs in graphene-nitride microresonators on-chip, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper STh4J.5, May 2019.
76. Q. Bai, J. Yang, H. Liu, M. Yu, D.-L. Kwong, D. Hou, and C. W. Wong, Dual-polarization frequency combs in a single Kerr microcavity via single-pumped mode-crossing, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper STh4J.4, May 2019.
77. Y.-S. Jang, J. Lim, S.-W. Kim, W. Liang, A. B. Matsko, L. Maleki, and C. W. Wong, Achieving sub-femtometer displacement sensitivity in integrated ultrahigh- Q crystalline microcavities via Pound-Drever-Hall, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper STh4G.4, May 2019.
78. J. Lim, A. Savchenkov, Y.-S. Jang, A. B. Matsko, and C. W. Wong, A sub-10 μ K, dual-mode temperature stabilized microresonator, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper SF2H.6, May 2019.
79. M. C. Sarihan, K.-C. Chang, X. Cheng, Y. S. Lee, T. Zhong, H. Zhou, Z. Zhang, F. N. Wong, J. H. Shapiro, and C. W. Wong, High dimensional quantum key distribution with biphoton frequency combs through energy-time entanglement, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper FTh1A.3, May 2019.
80. K.-C. Chang, X. Cheng, M. C. Sarihan, D.-D. Mendinueto, Y. S. Lee, T. Zhong, Y.-X. Gong, Z. Xie, J. H. Shapiro, F. N. C. Wong, and C. W. Wong, High-dimensional energy-time entanglement up to 6 qubits per photon through biphoton frequency comb, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper JTU3A.6, May 2019.
81. X. Cheng, M. C. Sarihan, K.-C. Chang; Y. S. Lee, F. Laudenbach, Z. Yu, and C. W. Wong, Spontaneous parametric down-conversion in integrated hybrid Si_xN_y -PPLN waveguides for high-dimensional qubit entanglement, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper FTh1D.6, May 2019.
82. J. H. Kang, A. K. Vinod, J. Huang, Z. Zhao, P. Chen, L. Bentolila, X. Duan, and C. W. Wong, Deeply-submicron confocal photoluminescence spectroscopy and edge recombination in WS_2 - WSe_2 lateral heterostructure monolayer crystals, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper SM1O.5, May 2019.
83. J. Huang, M. Lorenzon, J. H. Kang, P. Chen, X. Duan, E. Barnard, C. W. Wong, and A. Weber-Bargioni, Exciton diffusion in a monolayer MoS_2 - WS_2 lateral heterostructure, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper JW2A.29, May 2019.
84. Z. Zhao, I. Sarpkaya, X. Xie, K. Banerjee, H. Htoon, and C. W. Wong, Cryogenic micro-photoluminescence of monolayer 1T/2H MoS_2 superlattice, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper STh3O.6, May 2019.
85. C. Luo, J. G. Flor Flores, B. Shi, M. Yu, G. Lo, J.-G. Wu, and C. W. Wong, Gb/s physical random bits through mesoscopic chaos in integrated silicon optomechanical cavities, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper FTU4C.5, May 2019 (invited).
86. O. Spitz, J.-G. Wu, M. Carras, C. W. Wong, and F. Grillot, Controlling the likelihood of extreme pulses in a quantum cascade laser with optical feedback and bias perturbation, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper SW3N.6, May 2019.
87. J.-G. Wu, J. G. Flor Flores, Q. Bai, J. Yang, X. Xiong, M. Yu, G. Lo, S. Duan, and C. W. Wong, Dynamical chaos in silicon cavity optomechanics for physically-encrypted secure communications, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper SF1J.4, May 2019.
88. B. Yao, Z. Cao, Y. Wu, T. Tan, C. Qin, Y. Chen, Y. Gong, Z. Xie, C. W. Wong, and Y. J. Rao, Optoelectronic biosensing in graphene driven fiber resonators with single-molecule sensitivity and selectivity, *Proceedings of Conference of Lasers and Electro-Optics*, San Jose, CA, paper JTh2A.88, May 2019.
89. O. Spitz, J. Wu, M. Carras, C. W. Wong, and F. Grillot, Low frequency fluctuations and optical bursts induced by external optical feedback and low frequency modulation in a quantum cascade

- laser at 9 μm , *International symposium on physics and applications of laser dynamics (IS-PALD)*, Hong Kong, December 2018.
90. O. Spitz, J. Wu, M. Carras, C. W. Wong, and F. Grillot, Entrainment of chaotic optical power dropouts driven by weak modulation in a quantum cascade laser with optical feedback, *14th international conference on Mid-infrared optoelectronics; Materials and Devices (MIOMD)*, Flagstaff, Arizona, October 2018.
 91. M. C. Sarihan, A. Govdeli, M. S. Aras, C. Yanik, C. W. Wong, and S. Kocaman, Asymmetric band gaps in amorphous photonic materials, *IEEE Photonics Conference*, Reston, VA, September 2018.
 92. O. Spitz, J. Wu, M. Carras, C. W. Wong, and F. Grillot, Controlled fluctuations of frequencies in a quantum cascade laser at cryogenic temperatures, *Optique Toulouse*, French Optical Society, Toulouse, France, July 2018.
 93. O. Spitz, K. Schires, M. Carras, C. W. Wong, and F. Grillot, Temperature dependence of the phase-space dynamics of a mid-infrared quantum cascade laser with external optical feedback, *Proc. of SPIE (Quantum sensing, Nanoelectronics and Photonics XV)*, San Francisco, CA, January 2018.
 94. Y. Huang, G. Wen, and C. W. Wong, Photonic crystal cavity optomechanics for the applications of low phase noise frequency source and high-performance sensing, *Proc. Nano-Micro Conference*, Shanghai, China, October 2017.
 95. S.-W. Huang, A. K. Vinod, J. Yang, M. Yu, D.-L. Kwong, and C. W. Wong, Quasi-phase matched multispectral Kerr frequency combs, *Proc. IEEE Photonics*, Orlando, FL, October 2017.
 96. S.-W. Huang, A. Vinod, J. Yang, M. Yu, D.-L. Kwong, and C. W. Wong, Multispectral optical frequency comb based on microresonator Faraday instability, *Proc. of Frontiers in Optics and Laser Science*, Washington D.C., September 2017.
 97. B. Li, S.-W. Huang, C. W. Wong, and K. Y. Wong, Observation of dissipative Kerr soliton evolution with panoramic-reconstruction temporal imaging, *Proc. of CLEO Pacific Rim*, Singapore, Singapore, August 2017 (post-deadline).
 98. J. Yang, S.-W. Huang, S.-H. Yang, M. Yu, D.-L. Kwong, T. Zelevinsky, M. Jarrahi, and C. W. Wong, Chip-scale Turing frequency comb for coherent high-power THz radiation, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, paper SM4J.3, May 2017 (Maiman Student Finalist: 1st runner-up).
 99. S.-W. Huang, J. Yang, S.-H. Yang, M. Yu, D.-L. Kwong, T. Zelevinsky, M. Jarrahi, and C. W. Wong, Globally stable Turing pattern formation in Si_3N_4 microresonator, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, paper SW4N.4, May 2017.
 100. A. Kumar Vinod, S.-W. Huang, J. Yang, M. Yu, D.-L. Kwong, and C. W. Wong, Internally phase stabilized Kerr comb, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, paper AF1B.3, May 2017.
 101. H. Liu, S.-W. Huang, J. Yang, M. Yu, D.-L. Kwong, and C. W. Wong, Bright square pulse generation by pump modulation in a normal GVD microresonator, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, paper FTu3D.3, May 2017.
 102. Y. Huang, J. Wu, J. G. Flor Flores, M. Yu, D.-L. Kwong, G. Wen, and C. W. Wong, Observation of synchronization in air-slot photonic crystal optomechanical oscillators, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, paper SF1H.6, May 2017.
 103. J. Flor Flores, Y. Huang, L. Li, V. Iaiia, and C. W. Wong, Power dependence of high- Q optomechanical oscillators: from pre-oscillation, to oscillation, to Drude plasma, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, paper SF2I.6, May 2017.
 104. J. Wu, S.-W. Huang, Y. Huang, H. Zhou, M. Yu, G. Lo, D.-L. Kwong, S. Duan, and C. W. Wong, Waveform dynamics in air-slot photonic crystal optomechanical oscillators, *Proceedings*

- of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference, San Jose, CA, paper SM2M.2, May 2017.
105. L. Li, J. Flor Flores, and C. W. Wong, Noise analysis under nonlinear optical spring effect in cavity optomechanical sensors, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, paper FM1F.3, May 2017.
 106. J. Lim, A. Savchenkov, A. Matsko, S.-W. Huang, L. Maleki, and C. W. Wong, Microcavity-ECDL for super-cavity frequency stabilization, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, paper ATh3B.8, May 2017.
 107. J. Lim, W. Liang, A. B. Matsko, L. Maleki, and C. W. Wong, Time-dependent correlation of cross-polarization mode for microcavity temperature sensing and stabilization, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, paper JF2D.4, May 2017.
 108. P. A. Li, X. Cui, Y. Li, M. Yu, D.-L. Kwong, and C. W. Wong, An integrated high-extinction-ratio low-loss polarization rotator for silicon photonics across C+L bands, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, paper SF1H.5, May 2017.
 109. Z. Xie, Y. Li, X. A. Xu, A. Kumar, S. Kocaman, T. Zhong, A. Veitia, M. Yu, D.-L. Kwong, F. N. C. Wong, and C. W. Wong, A chip-scale single-photon SWAP gate as integrated interface between polarization and spatial-momentum qubits, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, paper FF2E.8, May 2017.
 110. C. Choi, H.-C. Cheng, H. S. Kim, A. K. Vinod, S.-H. Bae, J. Azadani, J. Chae, S.-W. Huang, X. Duan, T. Low, and C. W. Wong, Optical tuning of interlayer excitonic systems in tri-layer transition metal dichalcogenides heterostructures, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, paper FTh1F.2, May 2017.
 111. H. Zhou, Z. Zhang, J. Zhang, X. Yi, S.-W. Huang, H. Liu, M. Yu, D.-L. Kwong, K. Qiu, and C. W. Wong, Optical OFDM transmission using low-noise Kerr frequency comb generated in on-chip microresonator, *Optical Fiber Communication Conference*, paper Th3I.5, Los Angeles, CA, March 2017.
 112. J. Lim, S.-W. Huang, A. K. Vinod, A. A. Savchenkov, A. B. Matsko, L. Maleki, and C. W. Wong, Broadly tunable sub-kHz laser via a microcavity for laser stabilization to ultrahigh finesse mirror cavities, *Advanced Solid State Lasers Conference*, Boston, MA, October 2016.
 113. S.-W. Huang, H. Liu, J. Yang, A. K. Vinod, M. Yu, D.-L. Kwong, and C. W. Wong, Coherent phase-locked single-mode frequency microcombs in the C and L bands without mode-crossing disruptions, *Proc. of IEEE Photonics Conference*, Waikoloa, HI, October 2016.
 114. S.-W. Huang, J. Yang, S.-H. Yang, M. Yu, D.-L. Kwong, M. Jarrahi, and C. W. Wong, On-chip Turing pattern formation for coherent high-power THz radiation, *Frontier in Optics*, Rochester, NY, October 2016.
 115. B. Yao, Y. Liu, S.-W. Huang, C. Choi, Z. Xie, H. Liu, J. G. Flor Flores, Y.-P. Lai, Y. Wu, Y. Huang, Y. Rao, X. Duan, and C. W. Wong, Gate tunable THz plasmon generation in graphene based semiconductor chip via backward 2nd order nonlinearity, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, June 2016 (post-deadline).
 116. M. L. Liao, Heng Zhou, S. W. Huang, K. Qiu, and C. W. Wong, Free carrier induced nonlinear six-wave mixing in silicon, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, June 2016.
 117. B. C. Yao, S. W. Huang, Y. Wu, Z. Y. Feng, C. Choi, H. Liu, H. F. Qi, G. D. Peng, X. Duan, Y. J. Rao, and C. W. Wong, A graphene-enhanced Q-switched distributed feedback fiber laser, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, June 2016.

118. B. C. Yao, Y. J. Rao, Z. N. Wang, Y. Wu, J. H. Zhou, H. Wu, W. L. Zhang, Y. F. Cheng, Y. R. Li, D. Churkin, S. Turitsyn, and C. W. Wong, Broadly-tunable pulse generation in cavity-free graphene random fiber lasers, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, June 2016.
119. T. Gu, A. Andryieuski, Y. Hao, Y. Li, J. Hone, C. W. Wong, A. Lavrinenko, T. Low, and T. Heinz, Photonics and plasmonic guided modes in graphene-silicon photonic crystals, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, June 2016.
120. J. G. Flor Flores, Y. Huang, Y. Li, Z. Cai, V. Iaiia, M. Yu, D. L. Kwong, L. Churchill, and C. W. Wong, A chip-scale sub- $\mu\text{g}/\text{Hz}^{1/2}$ optomechanical DC accelerometer at the thermodynamical limit, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, June 2016.
121. Y. Huang, J. G. Flor Flores, Z. Cai, M. Yu, D.-L. Kwong, G. Wen, L. Churchill, and C. W. Wong, Wide optical force-induced RF dynamic range and 100+ high-order stable mechanics in chip-scale optomechanical cavities, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, June 2016.
122. Y. Huang, J. G. Flor Flores, Z. Cai, M. Yu, D.-L. Kwong, G. Wen, L. Churchill, and C. W. Wong, Controllable optomechanical coupling and Drude self-pulsation plasma locking in chip-scale optomechanical cavities, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, June 2016.
123. H. Liu, S.-W. Huang, J. Yang, A. K. Vinod, M. Yu, D.-L. Kwong, and C. W. Wong, Generation of single-mode and phase-locked frequency microcombs without mode crossings, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, June 2016.
124. J. Lim, S.-W. Huang, P. Mortazavian, A. B. Matsko, L. Maleki, and C. W. Wong, A chip-scale Kerr frequency comb driven by ultrahigh- Q microresonator stabilized laser, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, June 2016.
125. B. W. Li, S.-W. Huang, Z. Xie, C. W. Wong, and K. K. Y. Wong, Temporal magnification with large observation duty ratio using synchronized optical buffer, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, June 2016.
126. J. Yang, S.-W. Huang, B. H. McGuyer, M. Yu, M. P. McDonald, G. Lo, D.-L. Kwong, T. Zelevinky, and C. W. Wong, Bichromatically-pumped coherent Kerr frequency comb with controllable repetition rates, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, June 2016.
127. J. P. Lee-Thorp, I. Vukicevic, X. Xu, J. Yang, C. L. Fefferman, C. W. Wong, and M. I. Weinstein, Photonic realization of topologically protected bound states in domain-wall waveguide arrays, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, June 2016.
128. J. G. Flor Flores, Y. Huang, Y. Li, D. Wang, N. Goldberg, J. Zheng, M. Yu, M. Lu, M. Kutzer, D. Rogers, D. L. Kwong, L. Churchill, and C. W. Wong, A CMOS-compatible oscillation-mode optomechanical DC accelerometer at $730\text{-ng}/\text{Hz}^{1/2}$ resolution, *Proceedings of 2016 IEEE International Symposium on Inertial Sensors and Systems*, paper 5055, Laguna Beach, CA, February 2016.
129. J. Lim, A. A. Savchenkov, E. Dale, W. Liang, D. Eliyahu, P. Mortazavian, V. Ilchenko, A. B. Matsko, L. Maleki, and C. W. Wong, Chasing the thermodynamic noise limit in microcavity lasers, *Proceedings of Frontiers in Optics*, San Jose, CA, October 2015, paper FM6A.4 (post-deadline).
130. S.-W. Huang, J. Yang, M. Yu, D.-L. Kwong, and C. W. Wong, Stabilized on-chip optical frequency comb, *Proceedings of Frontiers in Optics*, San Jose, CA, October 2015, paper FM1D.2.

131. Z. Xie, K.-H. Luo, H. Herrmann, C. Silberhorn, and C. W. Wong, Low noise single photon frequency upconversion using Ti-indiffused periodically-poled lithium niobate waveguides with efficient narrowband filtering, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, May 2015, paper FM3A.3.
132. S.-W. Huang, J. Yang, H. Zhou, M. Yu, D.-L. Kwong, and C. W. Wong, Broadband low-phase-noise 18 GHz Kerr frequency microcomb, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, May 2015, paper STu1I.5.
133. T. Gu, N. Petrone, A. van der Zande, Y. Li, T. Heinz, P. Kim, J. Hone, C. W. Wong, C. M. Santori, and R. Beausoleil, Photocurrent gain in graphene-silicon p-i-n junction, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, May 2015, paper SW4N.4.
134. T. Gu, C. Lu, C. W. Wong, T. Heinz, A. Rodriguez, and C. Arnold, Solution processed chalcogenide photonic crystals, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, May 2015, paper STh1G.
135. Z. Xie, W. Liang, A. A. Savchenkov, J. F. Mcmillan, J. Burkhardt, V. S. Ilchenko, A. B. Matsko, L. Maleki, and C. W. Wong, Monolithic microresonator for simultaneous lasing feedback and intracavity hyperparametric oscillation, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, May 2015, paper FTh1D.2.
136. J. Wu, Y. Huang, M. Yu, D.-L. Kwong, and C. W. Wong, Subharmonics radio-frequency division in chip-scale optomechanical oscillators, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, May 2015, paper STh3I.5.
137. Y. Huang, J. Wu, X. Luan, S.-W. Huang, M. Yu, G.-Q. Lo, D.-L. Kwong, G. Wen, and C. W. Wong, Frequency instability and phase noise characterization of an integrated chip-scale optomechanical oscillator, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, May 2015, paper STh3I.7.
138. Z. Xie, W. Liang, A. Savchenkov, M. D. McDonald, T. Zelevinsky, V. Ilchenko, A. Matsko, L. Maleki, and C. W. Wong, Stable diode laser with integrated microresonator, *2015 Joint Conference of the IEEE International Frequency Control Symposium & European Frequency & Time Forum*, Denver, Colorado, April 2015.
139. J. Yang, S.-W. Huang, H. Zhou, M. Yu, D.-L. Kwong, and C. W. Wong, A low-phase-noise 18 GHz Kerr frequency comb spanning 65 THz, *Optical Fiber Conference and Exposition*, Los Angeles, CA, March 2015.
140. H. Zhou, S.-W. Huang, K. K. Y. Wong, M. Yu, G.-Q. Lo, D.-L. Kwong, K. Qiu, and C. W. Wong, Real-time spectral dynamics of femtosecond solitons under free-carrier nonlinearity in silicon photonic crystals, *Optical Fiber Conference and Exposition*, Los Angeles, CA, March 2015.
141. T. Gu, M. Yu, D.-L. Kwong, and C. W. Wong, Phonon absorption induced thermal bistability in PECVD grown silicon nitride waveguide, *SPIE Proceedings of Photonics West*, San Francisco, California, February 2015.
142. I. Sarpkaya, Z. Zhang, J. Hone, C. W. Wong, and S. Strauf, Intrinsic regime of exciton photophysics in ultra-clean carbon nanotubes bridging an air gap, Carbon Nanotubes, Graphene, and Associated Devices VII, *SPIE NanoScience and Engineering*, San Diego, CA, August 2014.
143. X. Luan, J. F. McMillan, Y. Huang, T. Gu, M. Yu, D.-L. Kwong, and C. W. Wong, Subharmonics generation based on synchronization of self-pulsation and optomechanical oscillation in a monolithic silicon cavity, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, June 2014 (postdeadline).
144. Z. Xie, T. Zhong, X. Xu, J. Liang, Y.-X. Gong, S. Shrestha, J. H. Shapiro, F. N. C. Wong, and C. W. Wong, Demonstration of high-dimensional frequency-bin entanglement, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, June 2014.

145. S.-W. Huang, J. F. McMillan, J. Yang, A. Matsko, Heng Zhou, M. Yu, D.-L. Kwong, L. Maleki, and C. W. Wong, Ultrashort pulse mode-locking from a normal-dispersion on-chip Kerr frequency comb, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, June 2014.
146. X. Luan, Y. Huang, Y. Li, J. F. McMillan, D. Wang, A. Hati, D. A. Howe, M. Yu, G. Lo, D.-L. Kwong, and C. W. Wong, A fully integrated chip-scale optomechanical oscillator, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, June 2014.
147. T. Gu, C. W. Wong, and P. Dong, Enhanced modulation performance by cascaded uncoupled dual-ring, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, June 2014.
148. E. D. Kinigstein, S.-W. Huang, M. Y. Sfeir, W.-K. Koh, C.B. Murray, T.F. Heinz, and C. W. Wong, Ultrafast optical properties of PbSe nanorods: One dimensional exciton dynamics, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, June 2014.
149. Hao Zhou, T. Gu, J. F. McMillan, N. Petrone, A. van der Zande, J. C. Hone, M. Yu, G. Lo, D.-L. Kwong, G. Feng, S. Zhou, and C. W. Wong, Four-wave mixing in slow-light graphene-silicon photonic crystal waveguides, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, June 2014.
150. P. Hsieh, C. Chung, J. F. McMillan, M. Lu, N. C. Panoiu, and C. W. Wong, Transport in millimeter scale disordered photonic crystals, *Proceedings of Conference of Lasers and Electro-Optics / I Quantum Electronics and Laser Science Conference*, San Jose, CA, June 2014.
151. P. Hsieh, C. Chung, J. F. McMillan, M. Lu, N. C. Panoiu, and C. W. Wong, Photon transport and localization in optical superlattices, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, June 2014.
152. Y.-C. Liu, X. Luan, H.-K. Li, Q. Gong, C. W. Wong, and Y.-F. Xiao, Vacuum Rabi oscillation in coupled highly-dissipative cavity quantum electrodynamics, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, June 2014.
153. S. Kocaman, J. F. McMillan, D. Wang, M. C. Rechtsman, and C. W. Wong, Observations of band gaps in amorphous photonic structures with different thermalization temperatures, *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Science Conference*, San Jose, CA, June 2014.
154. E. D. Kinigstein, S.-W. Huang, M. Y. Sfeir, W.-K. Koh, C.B. Murray, T.F. Heinz, and C. W. Wong, Ultrafast optical properties of PbSe nanorods: One dimensional exciton dynamics, *International Conference on Quantum Dots*, Pisa, Italy, May 2014.
155. I. Sarpkaya, Z. Zhang, W. Walden-Newman, J. Hone, C. W. Wong, and S. Strauf, Prolonged spontaneous emission and dephasing of excitons in air-bridged single-walled carbon nanotubes, *Proc. of 225th Electrochemical Society Meeting*, Orlando, FL, May 2014.
156. P.-C. Hsieh, C.-J. Chung, J. F. McMillan, M.-A. Tsai, M. Lu, N. Panoiu, and C. W. Wong, Photon transport and localization in optical superlattices, *APS March meeting (postdeadline)*, abstract P1.00351, Denver, CO, March 2014.
157. W. Liang, A. A. Savchenkov, J. F. McMillan, Z. Xie, V. S. Ilchenko, D. Seidel, C. W. Wong, A. B. Matsko, and L. Maleki, Strongly nondegenerate resonant optical parametric oscillator, *Nonlinear Optics*, Hawaii, USA, July 2013.
158. I. Sarpkaya, W. Walden-Newman, Z. Zhang, X. Wang, J. Hone, C. W. Wong, and S. Strauf, Excitons in individual air-bridged carbon nanotubes display intrinsic lifetimes and prolonged dephasing, *5th workshop on nanotube optics and nanospectroscopy*, Santa Fe, NM, June 2013.
159. J. F. McMillan, S.-W. Huang, J. Yang, H. Zhou, M. Yu, D.-L. Kwong, and C. W. Wong, Sub-100-fs pulse generation via a Si₃N₄ micro-resonator based frequency comb, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, June 2013.
160. J. Zheng, Y. Li, N. Goldberg, M. P. McDonald, A. Hati, M. Lu, S. Strauf, T. Zelevinsky, D. A. Howe, and C. W. Wong, Feedback locking of slot-type optomechanical oscillators to external

- low-noise reference clocks, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, June 2013.
161. Z. Xie, T. Zhong, X. Xu, D. R. Englund, J. H. Shapiro, F. N. C. Wong, and C. W. Wong, Mode-locked frequency-bin entangled state without post selection, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, June 2013.
162. P. Hsieh, C. Chung, J. F. McMillan, M. Lu, N. C. Panoiu, and C. W. Wong, Observations of collimating bound surface states in slow-light photonic crystal superlattices, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, June 2013.
163. O. A. Ajayi, N. C. Anderson, M. Cotlet, N. Petrone, J. S. Owen, J. Hone, C. W. Wong, Lifetime measurements and blinking statistics of nonradiative energy transfer from single halide-terminated nanocrystals onto graphene, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, June 2013.
164. C. Husko, P. Colman, S. Combrié, J. Zheng, A. De Rossi, C.W. Wong, Soliton dynamics in the multiphoton plasma regime, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, June 2013.
165. H. Zhou, X. Li, S.-W. Huang, J. F. McMillan, M. Yu, D.-L. Kwong, C.W. Wong, Ultrafast phase-resolved self-acceleration and frequency-chirp in silicon chip-scale slow-light solitons, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, June 2013.
166. Y.-C. Liu, Y.-F. Xiao, X. Luan, and C. W. Wong, Ground state cooling of mechanical motion through coupled cavity interactions in the unresolved sideband regime, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, June 2013.
167. Y.-C. Liu, Y.-F. Xiao, X. Luan, and C. W. Wong, Dynamic cooling of a mechanical resonator in the strong coupling regime, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, June 2013.
168. S. Kocaman, J. F. McMillan, P. Hsieh, M. C. Rechtsman, and C. W. Wong, Amorphous photonic structures with observed band gaps in the near infrared, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, June 2013.
169. X. Hu, X. Mao, J. Mower, C. Lee, P. Kharel, Z. Xie, X. Xu, C. W. Wong, and D. Englund, Nonlocal cancellation of multi-frequency-channel dispersion yields double coincidence peaks, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, June 2013.
170. J. Zheng, X. Sun, M. Poot, Y. Li, A. Dadgar, H. X. Tang, and C. W. Wong, Dispersive coupling and optimization of femtogram L3-nanobeam optomechanical cavities, *Proceedings of Frontiers in Optics / Laser Science 28th*, Rochester, NY, October 2012.
171. M. D. Marko, X. Li, A. Veitia, J. Zheng, C. W. Wong, Disturbance of soliton pulse propagation from higher-order dispersive waveguides, *Proceedings of IEEE Photonics Conference*, Burlingame, CA, September 2012.
172. M. D. Marko, X. Li, J. Zheng, C. W. Wong, Monte Carlo simulations of timing jitter attenuation in silicon nanowires, *Proceedings of IEEE Photonics Conference*, Burlingame, CA, September 2012.
173. M. D. Marko, X. Li, J. Zheng, C. W. Wong, Monte Carlo modeling of soliton pulse timing jitter in silicon nanowire waveguides, *Proceedings of Chaos 2012 International Conference*, Athens, Greece, June 2012.
174. T. Gu, N. Petrone, J. F. McMillan, A. van der Zande, M. Yu, G.-Q. Lo, D. L. Kwong, J. Hone, and C. W. Wong, Regenerative oscillations and four-wave mixing in graphene optoelectronics, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, May 2012 (post-deadline).
175. J. Gao, S. Combrie, B. Liang, G. Lehoucq, D. L. Huffaker, A. De Rossi, and C. W. Wong, Strong coupling between single quantum dot and localized mode in photonic crystal waveguide,

- Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, May 2012.
176. J. Zheng, Y Li, M. S. Aras, A. Stein, K. L. Shepard, and C. W. Wong, Parametric oscillations and phase noise of an optomechanical air-slot photonic crystal cavity, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, May 2012.
 177. T. Gu, J. Zheng, J. F. McMillan, M. Yu, G.-Q. Lo, D. L. Kwong, and C. W. Wong, Stochastic bistable switching in CMOS-processed PECVD silicon nitride ring resonators, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, May 2012.
 178. J. Yang, T. Gu, J. Zheng, X. Yang, M. Yu, G.-Q. Lo, D.-L. Kwong, and C. W. Wong, Observations of temporal regenerative oscillations in high-Q heterostructured photonic crystal cavities, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, May 2012.
 179. J. F. McMillan, M. Yu, G.-Q. Lo, D.-L. Kwong, and C. W. Wong, Photonic crystal waveguide coupling analysis using swept wavelength interferometry, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, May 2012.
 180. P. Hsieh, S. Kocaman, C. Biris, M. Lu, J. Zheng, N. C. Panoiu, and C. W. Wong, Near-field observations of self-collimation in negative refraction photonic crystal superlattices, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, May 2012.
 181. S. Kocaman, M. S. Aras, N. C. Panoiu, M. Lu, and C. W. Wong, Integrated optical filters based on negative-index photonic crystals, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, May 2012.
 182. X. Sun, J. Zheng, M. Poot, C. W. Wong, and H. X. Tang, Femtogram Nanomechanical resonator embedded in a high-Q two-dimensional photonic crystal nanocavity, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, May 2012.
 183. F. Gesuele, M. Y. Sfeir, W.-K. Koh, C. B. Murray, T. F. Heinz, and C. W. Wong, Ultrafast supercontinuum spectroscopy of multiple exciton states in lead chalcogenide nanorods and nanocrystals, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, May 2012.
 184. J. Gao, S. Combrie, B. Liang, G. Lehoucq, D. L. Huffaker, D. R. Englund, A. De Rossi, and C. W. Wong, Exciton-photon coupling of InAs quantum dot in GaAs photonic crystal mode-gap nanocavities, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, Baltimore, MD, May 2011.
 185. Y. Li, J. Zheng, J. Gao, J. Shu, and C. W. Wong, Optomechanical coupling in slot-type photonic crystal cavities, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, Baltimore, MD, May 2011.
 186. T. Gu, S. Kocaman, X. Yang, J. F. McMillan, J. Zheng, M. Yu, G.-Q. Lo, D.-L. Kwong, and C. W. Wong, Deterministic resonance and phase control for photonic sub- and super-radiance in coupled nanocavities, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, Baltimore, MD, May 2011.
 187. J. Shu, J. Gao, Y. Li, J. Zheng, and C. W. Wong, Controlled optomechanical quantum phase gate of phonon states, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, Baltimore, MD, May 2011.
 188. J. Zheng, C. J. Chen, J. F. McMillan, M. Yu, G.-Q. Lo, D.-L. Kwong, and C. W. Wong, Selective tuning of silicon photonic crystal cavities via laser-assisted local oxidation, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, Baltimore, MD, May 2011.
 189. C.H. Bui, J. Zheng, I. Kositsky, L. Lee, J. G. E. Harris, and C. W. Wong, Ultrathin optomechanical SiN_x nanomembranes with photonic crystal Fano resonances for enhanced

- radiation pressure, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, Baltimore, MD, May 2011.
190. P. Hsieh, S. Kocaman, M. Tsai, T. Chen, M. Aras, M. Yu, D.-L. Kwong, A. Stein, and C. W. Wong, Near-field observation of zero index bandgaps in negative refraction photonic superlattices, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, Baltimore, MD, May 2011.
191. S. Kocaman, M.S. Aras, P.-C. Hsieh, N. C. Panoiu, M. Yu, D.-L. Kwong, A. Stein, and C. W. Wong, Zero phase delay in negative-index photonic crystal superlattices, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, Baltimore, MD, May 2011.
192. S. Combrié, C. Husko, A. De Rossi, P. Colman, I. Sagnes, and C. W. Wong, On-chip optical solitons, French-Israeli Symposium on Nonlinear and Quantum Optics (Frisno-11), Aussois, Alps, March 2011.
193. F. Gesuele, M. Y. Sfeir, W.-k. Koh, J. Misewich, C. B. Murray, and C. W. Wong, Broadband ultrafast transient absorption of multiple exciton dynamics in lead sulfide nanocrystals, *American Physical Society March meeting*, Dallas, Texas, March 2011.
194. O. Ajayi, J. Abramson, N. Anderson, Y. Zhao, F. Gesuele, P. Kim, J. Owen, and C. W. Wong, Exciton energy transfer from halide-terminated nanocrystals to graphene in solar photovoltaics, *American Physical Society March meeting*, Dallas, Texas, March 2011.
195. X. Liu, S. Saini, M. Vanhoutte, J. Bakalis, W. Lau, A. Eshed, L.C. Kimerling, N. Pervez, I. Kymissis, and C.W. Wong, Group IV nanocrystals for silicon photovoltaics, *Materials Research Society Fall meeting*, Boston, Massachusetts, November 2010.
196. P. Colman, C. Husko, S. Combrié, I. Sagnes, C.W. Wong, and A. De Rossi, Direct measurement of soliton-effect pulse compression in photonic crystal waveguides, *Proceedings of the 36th European Conference and Exhibition on Optical Communication*, Torino, Italy, September 2010.
197. N. Pervez, S. Kocaman, W. Cheng, C. W. Wong, and I. Kymissis, Weak 2D photonic crystals for outcoupling of multiple color bands, *Proceedings of the SPIE Annual Meeting*, San Diego, CA, August 2010.
198. M. Grad, D. Attinger, and C. W. Wong, Embedded refractive index sensing in microchannels using multiplexed microresonators, *8th International Conference on Nanochannels, Microchannels and Minichannels*, Montreal, Canada, August 2010.
199. P. Colman, C. Husko, S. Combrié, I. Sagnes, C.W. Wong, and A. De Rossi, Observation of soliton pulse compression in photonic crystal waveguides, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, May 2010 (post-deadline news).
200. S. Kocaman, X. Yang, J. F. McMillan, T. Gu, M. Yu, D. L. Kwong, and C. W. Wong, Time-domain demonstrations of slow-light in multi-coupled photonic crystal cavities, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, May 2010.
201. T. Gu, S. Kocaman, X. Yang, J. F. McMillan, M. Yu, D. L. Kwong, and C. W. Wong, Chip-scale integrated tuning of slow-light in all-optical multi-EIT analogue in photonic crystal cavities, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, May 2010.
202. M. T. Rakher, R. Bose, C. W. Wong, and K. Srinivasan, Fiber-based spectroscopy of 1.55 μm PbS Quantum Dots coupled to Si Microcavities, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, May 2010.
203. M. S. Aras, A. Biberman, N. Ophir, A. Stein, S. Kocaman, R. Chatterjee, M. Yu, D. L. Kwong, K. Bergman, and C. W. Wong, Transparent high-data-rate optical transmission through broadband hitless bypass switches for chip-scale optical networks, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, May 2010.

204. Y. Li, J. Gao, S. Nelliappan, and C. W. Wong, Strong optomechanical coupling in slot-type photonic crystal cavities: theory, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, May 2010.
205. J. Gao, F. Gesuele, W.-K. Koh, C. Murray, S. Assefa, and C. W. Wong, Weak exciton-photon coupling of PbS nanocrystals in air-slot mode-gap Si photonic crystal nanocavities in the near-infrared, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, May 2010.
206. J. F. McMillan, M. Yu, D.-L. Kwong, and C. W. Wong, Observation of Four-Wave Mixing Conversion Efficiency and Bandwidth in Silicon Photonic Crystal Waveguides, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, May 2010.
207. C. Husko, S. Combrié, Q.V. Tran, F. Raineri, A. De Rossi, C.W. Wong, Slow-light enhanced self-phase modulation, three-photon absorption and free-carriers in photonic crystals: experiment and theory, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, May 2010.
208. M. Grad, C. C. Tsai, M. Yu, D. L. Kwong, C. W. Wong, and D. Attinger, Transient sensing of liquid films in microfluidic channels with optofluidic microresonators, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, San Jose, CA, May 2010.
209. M. T. Rakher, R. Bose, C. W. Wong, and K. Srinivasan, Fiber-based spectroscopy of 1.55 μm PbS quantum dots coupled to Si microcavities, *American Physical Society March meeting*, abstract, Portland, Oregon, March 2010.
210. N. C. Panoiu, J. F. McMillan, and C. W. Wong, Pulse propagation in silicon photonic crystal slab waveguides, 2nd International Conf. on Metamaterials, Photonic Crystals and Plasmonics (META'10), Cairo, Egypt, February 2010.
211. J. Gao and C. W. Wong, Implementation scheme for phase switching through quantum dots in slow-light photonic crystal waveguide, *Proceedings of Photonics West*, San Francisco, CA, January 2010.
212. T. Gu, S. Kocaman, M. Yu, X. Yang, D.-L. Kwong, C. Jiang, and C. W. Wong, Observations of fast light and Hartman effect in photonic crystals, *Proceedings of Photonics West*, San Francisco, CA, January 2010.
213. N. C. Panoiu, J. F. McMillan, and C. W. Wong, Propagation of Picosecond Pulses in Silicon Photonic Crystal Slab Waveguides, *Proceedings of Frontiers in Optics 2009*, San Jose, CA, October 2009.
214. C. Husko, S. Combrié, Q.V. Tran, F. Raineri, C.W. Wong, and A. De Rossi, Pulse compression and slow-light enhanced three-photon absorption in GaInP photonic crystal waveguides, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, Baltimore, MD, May 2009 (post-deadline news).
215. J. F. McMillan, M. Yu, W.-K. Koh, C. B. Murray, D.-L. Kwong, and C. W. Wong, Purcell-enhanced spontaneous emission of colloidal PbS quantum dots in slow-light silicon photonic crystal waveguides at the near-infrared, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, Baltimore, MD, May 2009.
216. J. Gao, S. Assefa, X. Yang, Y. Vlasov, and C. W. Wong, Demonstrations of an air-slot photonic crystal nanocavity with ultrasmall mode volumes for enhanced light-matter interactions, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, Baltimore, MD, May 2009.
217. R. Bose, J. Gao, F. W. Sun, J. F. McMillan, X. Yang, C. Chen, and C. W. Wong, Weak Coupling of Monolayer Lead Sulfide Quantum Dots to Silicon Photonic Crystal Cavities at Near-Infrared Wavelengths, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, Baltimore, MD, May 2009.
218. S. Kocaman, R. Chatterjee, N. C. Panoiu, M. Yu, D. L. Kwong, R. M. Osgood, and C. W. Wong, Controlled zero-n bandgaps in negative refraction photonic superlattices for wavefront control

- and open resonances, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, Baltimore, MD, May 2009.
219. C. J. Chen, C. A. Husko, I. Meric, K. L. Shepard, and C. W. Wong, W. M. J. Green, Y. A. Vlasov, and S. Assefa, Digital deterministic control of slow light in photonic crystal waveguide membranes through atomic layer deposition, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, Baltimore, MD, May 2009.
 220. C. A. Husko, A. de Rossi, S. Combrié, Q. Tran, F. Raineri, and C. W. Wong, Ultrafast all-optical modulation in GaAs photonic crystal cavities, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, Baltimore, MD, May 2009.
 221. X. Yang, M. Yu, D.-L. Kwong, and C. W. Wong, Deterministic phase-control and resonance-detuning in optical EIT-like coupled resonances towards dynamical storage of light, *Proceedings of Conference of Lasers and Electro-Optics / International Quantum Electronics Conferences*, Baltimore, MD, May 2009.
 222. R. Bose, J. F. McMillan, J. Gao, K. M. Rickey, C. J. Chen, D. V. Talapin, C. B. Murray, and C. W. Wong, Observation of efficient Forster energy transfer at 1.5 μm through temperature-tuning of monodisperse quantum dot solids, in *Proceedings of Lasers and Electro-Optics Society annual meeting*, Newport Beach, CA, November 2008.
 223. S. Kocaman, R. Chatterjee, N. C. Panoiu, M. B. Yu, D. L. Kwong, R. M. Osgood, and C. W. Wong, Zero- n bandgap in photonic crystal superlattices at the near-infrared, in *Proceedings of Progress in Electromagnetics Research Symposium*, Cambridge, MA, July 2008.
 224. S. Kocaman, R. Chatterjee, N. C. Panoiu, M. B. Yu, D. L. Kwong, R. M. Osgood, and C. W. Wong, Experimental verification of zero- n bandgap in photonic crystal superlattices at the near-infrared, in *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Sciences*, San Jose, CA, May 2008.
 225. Y.-F. Xiao, J. Gao, X. Yang, R. Bose, G.-C. Guo, and C. W. Wong, Nanocrystals in photonic crystal cavities for quantum information processing, in *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Sciences*, San Jose, CA, May 2008.
 226. J. F. McMillan, M. Yu, D.-L. Kwong, and C. W. Wong, Demonstration of enhanced spontaneous Raman scattering in slow-light silicon photonic crystal waveguides, in *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Sciences*, San Jose, CA, May 2008.
 227. J. Gao, F. Sun, X. Yang, and C. W. Wong, Realizing quantum controlled phase gate through quantum dot in silicon photonic crystal waveguide, in *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Sciences*, San Jose, CA, May 2008.
 228. R. Chatterjee and C. W. Wong, Nanoelectromechanical proximity perturbation switching for transparent wavelength switching of resonant filters, in *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Sciences*, San Jose, CA, May 2008.
 229. X. Yang, M. Yu, D.-L. Kwong, and C. W. Wong, All-optical analogue to electromagnetically induced transparency with silicon photonic crystal nanocavities, in *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Sciences*, San Jose, CA, May 2008.
 230. Y.-F. Xiao, J. Gao, X.-B. Zou, J. McMillan, X. Yang, Y.-L. Chen, Z.-F. Han, G.-C. Guo, and C. W. Wong, Coupled quantum electrodynamics in photonic crystal nanocavities, in *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Sciences*, San Jose, CA, May 2008.
 231. C. J. Chen, X. Yang, C. A. Husko, and C. W. Wong, Digital resonance tuning of high-Q/Vm silicon photonic crystal nanocavities by atomic layer deposition in *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Sciences*, San Jose, CA, May 2008.
 232. F. Sun and C. W. Wong, Generation arbitrary permutation symmetric state with projection measurement, in *Progress toward Scalable Quantum Information Processing, American Physical Society March meeting*, New Orleans, Louisiana, March 2008.
 233. R. Chatterjee, N. C. Panoiu, K. Liu, Z. Dios, M. B. Yu, M. T. Doan, L. J. Kaufman, R. M. Osgood, and C. W. Wong, Achieving sub-diffraction imaging through bound surface states in

- negative-refracting photonic crystals at the near-infrared, in Negative Index Materials II, *American Physical Society March meeting*, New Orleans, Louisiana, March 2008.
234. J. Gao, P. Heider, C. J. Chen, X. Yang, C. A. Husko, and C. W. Wong, Observations of whispering gallery modes in asymmetric optical resonators with rational caustics, in *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Sciences*, Baltimore, Maryland, 2007.
235. R. Bose, R. Chatterjee, X. Yang, J. Gao, and C. W. Wong, Weak coupling interactions of silicon photonic crystals with PbS nanocrystals at room temperature, in *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Sciences*, Baltimore, Maryland, 2007.
236. X. Yang, C. Husko, C. W. Wong, Coupled-Mode Theory Analysis of Optical Bistability involving Fano Resonances in High- Q/V_m Silicon Photonic Crystal Nanocavities, in *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Sciences*, Baltimore, Maryland, 2007.
237. B. G. Lee, J. F. McMillan, A. Biberman, B. A. Small, C. W. Wong, and K. Bergman, Power Penalty of High-Data-Rate Transmission Delay through a Silicon Photonic Crystal Slow-Light Waveguide, in *IEEE LEOS Photonics in Switching*, San Francisco, CA, 2007.
238. K. Liu, R. Chatterjee, N. Panoiu, Z. Dios, M. Doan, M. Yu, R. M. Osgood, and C. W. Wong, Near-field observation of negative refraction in silicon photonic crystals at the near-infrared, in *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Sciences*, Long Beach, California, May 2006 (post-deadline news).
239. X. Li, C. W. Wong, D. Dornfeld, and B. Thomas, Research on Subwavelength Microphotonic Sensors for In-situ Monitoring with High Spatial and Temporal Resolution in Manufacturing Environments, *Proc. of 2006 NSF Design, Service, and Manufacturing Grantees and Research Conference*, St. Louis, Missouri, 2006.
240. C. Husko and C. W. Wong, Ultrafast All-optical Bistability in AlGaAs Photonic Crystals, in *Proceedings of Optics East*, Boston, Massachusetts, 2006.
241. C. J. Chen, J. I. Dadap, J. Urban, C. B. Murray, R. M. Osgood Jr., and C.W. Wong, Optical Nonlinearities in Strongly Quantum Confined Monodisperse PbSe Nanocrystals for All-Optical Tunable Nanophotonics at Telecommunication Wavelengths, in *Proceedings of Optics East*, Boston, Massachusetts, 2006.
242. X. Yang and C. W. Wong, Coupled-mode theory for stimulated Raman scattering in high- Q/V_m silicon photonic band gap nanocavity lasers, in *Proceedings of Optics East*, Boston, Massachusetts, 2006.
243. J. F. McMillan, X. Yang, N. C. Panoiu, R. M. Osgood Jr, and C. W. Wong, Enhanced stimulated Raman scattering in slow-light photonic crystal waveguides, in *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Sciences*, Long Beach, California, 2006.
244. L. G. Fréchet, C. W. Wong, K. Chin, G. Georgiou, K. F. Farmer, Floyd Miller, and Vijay Modi, Hands-On MEMS: Building Competence Through Practical Learning Experience, *Solid-State Sensor and Actuator Workshop*, Hilton Head Island, South Carolina, 2006.
245. R. Bose, D. Talapin, X. Yang, R. Harniman, P. Nguyen, and C. W. Wong, Interaction of infiltrated colloidal PbS nanocrystals with high Q/V_m silicon photonic band gap nanocavities for near-infrared enhanced spontaneous emissions, in *Proc. SPIE 6005*, 600509 (October 2005), Photonic Crystals and Photonic Crystal Fibers for Sensing Applications, H. Du, editor; *SPIE Proceedings of Optics East*, Boston, Cambridge, 2005.
246. X. Yang, J. Yan, and C. W. Wong, Design and fabrication of L5 photonic band gap nanocavities for stimulated Raman amplification in monolithic silicon, in *Proceedings of Conference of Lasers and Electro-Optics / Quantum Electronics and Laser Sciences*, Baltimore, Maryland, 2005.
247. R. Chatterjee, J. Strauss, and C. W. Wong, Hitless Switches and All-State Polarization Controllers with nanoelectromechanical dielectric perturbation, in *Proceedings of LEOS*, Puerto Rico, 2004.

248. P. T. Rakich, J. T. Gopinath, H. Sotobayashi, C. W. Wong, S. G. Johnson, J. D. Joannopoulos, and E. P. Ippen, Broadband Supercontinuum Based Measurements of High-Index Photonic Devices from 1 to 2 μm , in *Proceedings of LEOS*, Puerto Rico, 2004.

PATENTS AND PATENT APPLICATIONS

26 awarded and 7 provisional patents on optics in mesoscopic systems: ultrafast, nonlinear, quantum and precision measurements.