Gong, X., Y. Teng, J. Zhang, Q. Gan, M. Song, A. Alaraj, P. Kner and Y. Yan (2024). *Architecting a transcriptional repressor-based genetic inverter for tryptophan derived pathway regulation in Escherichia coli.* Metabolic Engineering 86: 66-77. doi: 10.1016/j.ymben.2024.09.008

Li, S. and P. Kner (2024). *Self-interference digital holography with computational aberration correction*. Optics Express 32(20): 35406-35418. doi: 10.1364/OE.535429

Liu, Y., Y. Chen, C. R. Duffy, A. J. VanLeuven, J. B. Byers, H. C. Schriever, R. E. Ball, J. M. Carpenter, C. E. Gunderson, N. M. Filipov, P. Ma, P. A. Kner and J. D. Lauderdale (2024). *Decreased GABA levels during development result in increased connectivity in the larval zebrafish tectum*. bioRxiv: 2024.2009.2011.612511. doi: 10.1101/2024.09.11.612511

Rosen, J., S. Alford, B. Allan, V. Anand, S. Arnon, F. G. Arockiaraj, J. Art, B. Bai, G. M. Balasubramaniam, T. Birnbaum, N. S. Bisht, D. Blinder, L. Cao, Q. Chen, Z. Chen, V. Dubey, K. Egiazarian, M. Ercan, A. Forbes, G. Gopakumar, Y. Gao, S. Gigan, P. Gocłowski, S. Gopinath, A. Greenbaum, R. Horisaki, D. Ierodiaconou, S. Juodkazis, T. Karmakar, V. Katkovnik, S. N. Khonina, P. Kner, V. Kravets, R. Kumar, Y. Lai, C. Li, J. Li, S. Li, Y. Li, J. Liang, G. Manavalan, A. C. Mandal, M. Manisha, C. Mann, M. J. Marzejon, C. Moodley, J. Morikawa, I. Muniraj, D. Narbutis, S. H. Ng, F. Nothlawala, J. Oh, A. Ozcan, Y. Park, A. P. Porfirev, M. Potcoava, S. Prabhakar, J. Pu, M. R. Rai, M. Rogalski, M. Ryu, S. Choudhary, G. R. Salla, P. Schelkens, S. F. Şener, I. Shevkunov, T. Shimobaba, R. K. Singh, R. P. Singh, A. Stern, J. Sun, S. Zhou, C. Zuo, Z. Zurawski, T. Tahara, V. Tiwari, M. Trusiak, R. V. Vinu, S. G. Volotovskiy, H. Yılmaz, H. B. De Aguiar, B. S. Ahluwalia and A. Ahmad (2024). *Roadmap on computational methods in optical imaging and holography [invited]*. Applied Physics B 130(9): 166. doi: 10.1007/s00340-024-08280-3

S. Li, and P. A. Kner, Optimizing self-interference digital holography for single-molecule localization, Opt. Express 31, 29352-29367 (2023). doi: 10.1364/OE.499724

Y. Liu, B. Liu, J. Green, C. Duffy, M. Song, J. D. Lauderdale, and P. Kner, Volumetric light sheet imaging with adaptive optics correction, Biomedical Optics Express 14, 1757-1771 (2023). doi: 10.1364/BOE.473237

Q. Zhang, Q. Hu, C. Berlage, P. Kner, B. Judkewitz, M. Booth, and N. Ji, Adaptive optics for optical microscopy, Biomedical Optics Express 14, 1732-1756 (2023). doi: 10.1364/BOE.479886

T. Zheng, A. R. Liversage, K. F. Tehrani, J. A. Call, P. A. Kner, and L. J. Mortensen, Imaging mitochondria through bone in live mice using two-photon fluorescence microscopy with adaptive optics, Frontiers in Neuroimaging 2 (2023). doi: 10.3389/fnimg.2023.959601

J. Rosen, S. Alford, V. Anand, J. Art, P. Bouchal, Z. Bouchal, M.-U. Erdenebat, L. Huang, A. Ishii, S. Juodkazis, N. Kim, P. Kner, T. Koujin, Y. Kozawa, D. Liang, J. Liu, C. Mann, A. Marar, A. Matsuda, T. Nobukawa, T. Nomura, R. Oi, M. Potcoava, T. Tahara, B. L. Thanh, and H. Zhou, Roadmap on Recent Progress in FINCH Technology, Journal of Imaging 7 (2021). doi: 10.3390/jimaging7100197

M. A. Inal, K. C. Bui, A. Marar, S. Li, P. Kner, and D. Kamiyama, Imaging of in vitro and in vivo neurons in Drosophila using stochastic optical reconstruction microscopy, Current Protocols **1**(7), e203. (2021) doi: 10.1002/cpz1.203

R. Lin, E. T. Kipreos, J. Zhu, C. H. Khang and P. Kner, Subcellular three-dimensional imaging deep through multicellular thick samples by structured illumination microscopy and adaptive optics, Nature Communications **12**(1), 3148 (2021), doi: 10.1038/s41467-021-23449-6

A. Marar, P. Kner, Fundamental precision bounds for three-dimensional optical localization microscopy using self-interference digital holography, Biomedical Optics Express **12**(1), 20-40 (2021).

R. Lin, E. T. Kipreos, J. Zhu, C. H. Khang, P. Kner, *Full three-dimensional imaging deep through multicellular thick samples with subcellular resolution by structured illumination microscopy and adaptive optics*, posted to bioRxiv (2020). doi: 10.1101/2020.04.15.043026

A. Marar, P. Kner, Three-dimensional nanoscale localization of point-like objects using self-interference digital holography. Optics Letters **45**(2), 591-594 (2020).

Liu, Y., J. D. Lauderdale and P. Kner, Stripe artifact reduction for digital scanned structured illumination light sheet microscopy, Optics Letters **44**(10), 2510-2513 (2019).

Liu, Y., S. Dale, R. Ball, A. J. VanLeuven, A. Sornborger, J. D. Lauderdale and P. Kner, Imaging neural events in zebrafish larvae with linear structured illumination light sheet fluorescence microscopy, Neurophotonics **6**(1), 015009 (2019).

Tehrani, K. F., Y. Zhang, P. Shen and P. Kner, Adaptive optics stochastic optical reconstruction microscopy (AO-STORM) by particle swarm optimization, Biomedical Optics Express **8**(11), 5087-5097 (2017).

Tehrani, K. F., P. Kner and L. J. Mortensen, Characterization of wavefront errors in mouse cranial bone using second-harmonic generation, Journal of Biomedical Optics **22**, 036012 (2017).

T. Huelsnitz, and P. Kner, Interferometric imaging with three objectives, Journal of the Optical Society of America A **33**(2), 179-191 (2016). [[Link](http://dx.doi.org/10.1364/josaa.33.000179)]

K. F. Tehrani, J. Xu, Y. Zhang, P. Shen, and P. Kner, *Adaptive optics stochastic optical reconstruction microscopy (AO-STORM) using a genetic algorithm*, Optics Express **23**, 13677-13692 (2015). [[Link](http://dx.doi.org/10.1364/OE.23.013677)]

J. Xu, K. F. Tehrani, and P. Kner, *Multicolor 3D Super-resolution Imaging by Quantum Dot Stochastic Optical Reconstruction Microscopy*, ACS Nano **9**, 2917-2925 (2015). [[Link](http://dx.doi.org/10.1021/nn506952g)]

B. Thomas, A. Wolstenholme, S. N. Chaudhari, E. T. Kipreos, and P. Kner, *Enhanced resolution through thick tissue with structured illumination and adaptive optics*, J. Biomed. Opt. **20**, 026006 (2015) [[Link](http://dx.doi.org/10.1117/1.JBO.20.2.026006)]

J. M. Craft, J. A. Harris, S. Hyman, P. Kner, and K. F. Lechtreck, *Tubulin transport by IFT is upregulated during ciliary growth by a cilium-autonomous mechanism*, The Journal of Cell Biology **208**, 223-237 (2015). [[Link](http://dx.doi.org/10.1083/jcb.201409036)]

X. Zhang, and P. Kner, *Binary wavefront optimization using a genetic algorithm*, Journal of Optics **16**(12), 125704 (2014). [[Link](http://dx.doi.org/10.1088/2040-8978/16/12/125704)]

J. Xu, Q. Fan, K. D. Mahajan, G. Ruan, A. Herrington, K. F. Tehrani, P. Kner, and J. O. Winter, *Micelle-templated composite quantum dots for super-resolution imaging*, Nanotechnology **25**, 195601 (2014). [[Link](http://dx.doi.org/10.1088/0957-4484/25/19/195601)]

K. N. Wren, J. M. Craft, D. Tritschler, A. Schauer, D. K. Patel, E. F. Smith, M. E. Porter, P. Kner, and K. F. Lechtreck, *A differential cargo-loading model of ciliary length regulation by IFT*, Curr Biol **23**, 2463-2471 (2013). [[Link](http://dx.doi.org/10.1016/j.cub.2013.10.044)]

P. Kner, *Phase Diversity for Three-Dimensional Imaging*, Journal of the Optical Society of America A **30**(10), pp. 1980-1987 (2013) [[Link](http://dx.doi.org/10.1364/josaa.30.001980)]

B. Thomas, M. Momany, and P. Kner, *Optical sectioning structured illumination microscopy with enhanced sensitivity*, Journal of Optics **15**(9), 094004 (2013) [[Link](http://dx.doi.org/10.1088/2040-8978/15/9/094004)]

P. Kner, Z. Kam, D. Agard, and J. Sedat, *Adaptive Optics in Wide-Field Microscopy*, Book Chapter to be published in Adaptive Optics for Biological Imaging (ed. J. A. Kubby), Taylor and Francis.

L. Shao, P. Kner, E. H. Rego, and M. G. Gustafsson, Super-resolution 3D microscopy of live whole cells using structured illumination, Nature Methods **8**, pp. 1044-1046 (2011).

A. Matsuda, L. Shao, J. Boulanger, C. Kervrann, P. M. Carlton, P. Kner, D. Agard, and J. W. Sedat, *Condensed mitotic chromosome structure at nanometer resolution using PALM and EGFP- histones*, PLoS One **5**, e12768 (2010).

O. Azucena, J. Crest, J. Cao, W. Sullivan, P. Kner, D. Gavel, D. Dillon, S. Olivier, and J. Kubby, *Wavefront aberration measurements and corrections through thick tissue using fluorescent microsphere reference beacons*, Opt Express **18**, 17521-17532 (2010).

P. M. Carlton, J. Boulanger, C. Kervrann, J. B. Sibarita, J. Salamero, S. Gordon-Messer, D. Bressan, J. E. Haber, S. Haase, L. Shao, L. Winoto, A. Matsuda, P. Kner, S. Uzawa, M. Gustafsson, Z. Kam, D. A. Agard, and J. W. Sedat, *Fast live simultaneous multiwavelength four-dimensional optical microscopy*, Proc Natl Acad Sci USA **107**, 16016-16022 (2010)

P. Kner, J. W. Sedat, D. A. Agard, and Z. Kam, *High-resolution wide-field microscopy with adaptive optics for spherical aberration correction and motionless focusing*, Journal of Microscopy **237**(2), pp. 136-147 (2010)

P. Kner, B. B. Chhun, E. R. Griffis, L. Winoto, and M. G. L. Gustafsson, *Super-Resolution Video Microscopy of Live Cells by Structured Illumination*, Nature Methods **6**, pp. 339-342 (2009)

L. Schermelleh, P. M. Carlton, S. Haase, L. Shao, L. Winoto, P. Kner, B. Burke, M. C. Cardozo, D. A. Agard, M. G. Gustafsson, H. Leonhardt, and J. W. Sedat, *Subdiffraction multicolor imaging of the nuclear periphery with 3D structured illumination microscopy*, Science **320**, pp. 1332-1336 (2008)

Z. Kam, P. Kner, D. A. Agard, and J. W. Sedat, *Modelling the* a*pplication of Adaptive Optics to Live Imaging*, J. Microscopy **226**, pp. 33-42 (2007)

D. Sun, W. Fan, P. Kner, J. Boucart, T. Kageyama, Z. Dongxu, R. Pathak, R. F. Nabiev, W. Yuen, *Long wavelength tunable VCSELs with optimized MEMS bridge tuning structure*, IEEE Photon. Technol. Lett. **16**, p. 714 (2004)

J. Boucart, R. Pathak, D. Zhang, M. Beaudoin, P. Kner, D. Sun, R. Stone, R. Nabiev and W. Yuen, *Long Wavelength MEMS Tunable VCSEL with InP-InAlGaAs Bottom DBR*, IEEE Photon. Technol. Lett. **15**, p. 1186 (2003)

P. Kner, T. Kageyama, J. Boucart, R. Stone, D. Sun, R. F. Nabiev, R. Pathak, and W. Yuen, *A Long-wavelength MEMS Tunable VCSEL Incorporating a Tunnel Junction*, IEEE Photon. Technol. Lett. **15**, p. 1183 (2003)

D. Sun, W. Fan, P. Kner, J. Boucart, T. Kageyama, R. Pathak, D. Zhang, and W. Yuen, *Sub-mA Threshold 1.5-µm VCSELs With Epitaxial and Dielectric DBR Mirror*, IEEE Photon. Technol. Lett. **15**, p. 1677 (2003)

W. Yuen, G. S. Li, R. F. Nabiev, J. Boucart, P. Kner, R. J. Stone, D. Zhang, M. Beaudoin, T. Zheng, C. He, K. Yu, M. Jansen, D. P. Worland, and C. J. Chang-Hasnain, *High-Performance 1.6µm single epitaxy top-emitting VCSEL*, Electron. Lett. **36**, p. 1121 (2000)

R. J. Stone, R. F. Nabiev, J. Boucart, W. Yuen, P. Kner, G. S. Li, R. Carico, L. Scheffel, M. Jansen, D. P. Worland, and C. J. Chang-Hasnain, *50km Error-free 10 Gbit/s WDM Transmission using Directly Modulated Long-wavelength VCSELs*, Electron. Lett. **36**, p. 1793 (2000)

N. A. Fromer, P. Kner, D. S. Chemla, R. Lövenich, and W. Schäfer, *Correlation effects beyond Hartree-Fock theory and polarization dependence of four-wave mixing in bulk GaAs at high magnetic field*, Phys. Rev. B **62**, no.4, p. 2516 (2000)

P. Kner, S. Bar-Ad, M. V. Marquezini, D. S. Chemla, R. Lövenich, and W. Schäfer, *Effect of magnetoexciton correlations on the coherent emission of semiconductors*, Phys. Rev. B **60**, p. 4731 (1999)

M. V. Marquezini, P. Kner, S. Bar-Ad, J. Tignon, and D. S. Chemla, *Density dependence of the spectral dielectric function across a Fano resonance*, Phys. Rev. B **57**, p. 3745 (1998)

P. Kner, W. Schäfer, R. Lövenich, and D. S. Chemla, *Coherence of Four-Particle Correlations in Semiconductors*, Phys. Rev. Lett. **81**, p. 5386 (1998)

R. Lövenich, W. Schäfer, P. Kner, and D. S. Chemla, *Theory of Coherently Driven Biexcitons in Strong Magnetic Fields*, Phys. Stat. Sol. (a) **164**, p. 347 (1997)

P. Kner, S. Bar-Ad, M. V. Marquezini, S. Mukamel, and D. S. Chemla, *Quantum Confined Fano Interference*, Phys. Stat. Sol. (a) **164**, p. 319 (1997)

P. Kner, S. Bar-Ad, M. V. Marquezini, D. S. Chemla, and W. Schäfer, *Exciton-Exciton Correlations in High Magnetic Fields*, Phys. Stat. Sol. (a) 164, p. 579 (1997)

S. Bar-Ad, P. Kner, M. V. Marquezini, S. Mukamel, and D. S. Chemla, *Quantum Confined Fano Interference*, Phys. Rev. Lett. **78**, p. 1363 (1997)

P. Kner, S. Bar-Ad, M. V. Marquezini, D. S. Chemla, and W. Schäfer, *Magnetically Enhanced Exciton-Exciton  Correlations in Semiconductors*, Phys. Rev. Lett. **78**, p. 1319 (1997)

S. Bar-Ad, P. Kner, M. V. Marquezini, D. S. Chemla, and K. El-Sayed, *Carrier Dynamics in the Quantum Kinetics Regime*, Phys. Rev. Lett. **77**, p. 3177 (1996)

U. Siegner, S. Glutsch, S. Bar-Ad, M.-A. Mycek, P. Kner, and D. S. Chemla, *Coherent dynamics and dephasing of one-dimensional magnetoexcitons in GaAs*, J. Opt. Soc. Am. B **13**, p. 969 (1996)