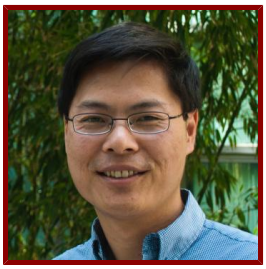
Stanford



Michael Lin

Professor of Neurobiology, of Bioengineering and, by courtesy, of Chemical and Systems Biology

NIH Biosketch available Online Curriculum Vitae available Online

CONTACT INFORMATION

- **Administrative Contact**

  Alissa Ceja - Administrative Assistant

  Email alceja@stanford.edu

  Tel (650) 498-1780

Bio

BIO

Michael Lin, MD PhD, is Professor of Neurobiology and Bioengineering, and by courtesy, Chemical and Systems Biology. Dr. Lin received his BA summa cum laude from Harvard University in biochemistry, then obtained a PhD at Harvard Medical School with Michael Greenberg studying signal transduction pathways controlling cell shape. After completing his MD training at UCLA, Dr. Lin performed postdoctoral research in engineering protein sensors and controllers with Roger Tsien at UCSD.

Dr. Lin is a translational synthetic biologist developing novel technologies to investigate in vivo biology and improve molecular medicines. Among his contributions have been the introduction of viral proteases and protease inhibitors to control protein function in vivo, the invention of cofactor-independent photoswitchable proteins for investigating signaling dynamics and controlling gene editing in vivo, the development of fluorescent voltage-sensing proteins for understanding neuronal circuit signaling in vivo, the discovery of luciferase-based reporters and substrates for non-invasive imaging of biochemical events in vivo, and the engineering of synthetic signaling pathways to rewire cancer signals to therapeutic outputs for tumor eradication in vivo.

ACADEMIC APPOINTMENTS

- Professor, Neurobiology
- Professor, Bioengineering
- Professor (By courtesy), Chemical and Systems Biology
- Member, Bio-X
- Member, Cardiovascular Institute
- Member, Maternal & Child Health Research Institute (MCHRI)
- Faculty Fellow, Sarafan ChEM-H
- Member, Stanford Cancer Institute
- Member, Wu Tsai Neurosciences Institute

HONORS AND AWARDS

- Burroughs Wellcome Career Award for Medical Scientists, Burroughs Wellcome Foundation (2007-2013)
- Damon Runyon-Rachleff Cancer Innovation Award, Damon Runyon Foundation (2012-2014)
- Pioneer Award, NIH (2013-2018)
- Roger Tsien Award for Excellence in Chemical Biology, World Molecular Imaging Society (2019)

PROFESSIONAL EDUCATION

- BA, Harvard University , Biochemical Sciences (1994)
- PhD, Harvard Medical School , Biological & Biomedical Sciences, Lab of Michael E. Greenberg (2002)
- MD, UCLA , Medicine (2004)
- Postdoctoral Fellowship, UCSD , Lab of Roger Y. Tsien (2009)

LINKS

- Lin Lab Web Site: https://linlab.stanford.edu

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Dr. Lin is a translational synthetic biologist developing novel technologies to investigate in vivo biology and improve molecular medicines. Among his contributions have been the introduction of viral proteases and protease inhibitors to control protein function in vivo, the invention of cofactor-independent photoswitchable proteins for investigating signaling dynamics and controlling gene editing in vivo, the development of fluorescent voltage-sensing proteins for understanding neuronal circuit signaling in vivo, the discovery of luciferase-based reporters and substrates for non-invasive imaging of biochemical events in vivo, and a new approach of rewiring cancer signals to therapeutic outputs for tumor eradication in vivo.

Teaching

COURSES

2026-27

- Protein Engineering: BIOE 231, BIOE 331 (Spr)

2025-26

- Protein Engineering: BIOE 231, BIOE 331 (Spr)

2024-25

- Protein Engineering: BIOE 231, BIOE 331 (Spr)

2023-24

- Protein Engineering: BIOE 231, BIOE 331 (Spr)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Hannah Field, Riley Merkel, Lexy Strom, Xiaowei Zhang

Postdoctoral Faculty Sponsor

Yuwoong Kim, Dain Lee, Daesun Song, Jeremy Tran, Yiting Wang, Xinzhi Zou

Doctoral Dissertation Advisor (AC)

Julisia Chau

Postdoctoral Research Mentor

Yuwoong Kim, Dain Lee, Jeremy Tran

Doctoral (Program)

Sijbren Kramer, Zixuan Liu, Shuyu Shi, Yinglin Situ, Catherine Zhao

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Neurosciences (PhD Program)

Publications

PUBLICATIONS

- **Rewiring oncogenic signalling to precision ablation of metastatic cancer.** *Nature biomedical engineering*
  Zou, X., Palafox, E., Zhao, C., Beier, K. T., Kang, C. Y., Lin, M. Z.
  2026
- **A fast and responsive voltage indicator with enhanced sensitivity for unitary synaptic events.** *Neuron*
  Hao, Y. A., Lee, S., Roth, R. H., Natale, S., Gomez, L., Taxidis, J., O'Neill, P. S., Villette, V., Bradley, J., Wang, Z., Jiang, D., Zhang, G., Sheng, et al
  2024
- **A positively tuned voltage indicator for extended electrical recordings in the brain.** *Nature methods*
  Evans, S. W., Shi, D., Chavarha, M., Plitt, M. H., Taxidis, J., Madruga, B., Fan, J. L., Hwang, F., van Keulen, S. C., Suomivuori, C., Pang, M. M., Su, S., Lee, et al
  2023; 20 (7): 1104-1113
- **Kinase-Modulated Bioluminescent Indicators Enable Noninvasive Imaging of Drug Activity in the Brain.** *ACS central science*
  Wu, Y., Walker, J. R., Westberg, M., Ning, L., Monje, M., Kirkland, T. A., Lin, M. Z., Su, Y.
  2023; 9 (4): 719-732
- **Optobiochemistry: Genetically Encoded Control of Protein Activity by Light.** *Annual review of biochemistry*
  Seong, J., Lin, M. Z.
  2021
- **A compact synthetic pathway rewires cancer signaling to therapeutic effector release.** *Science (New York, N.Y.)*
  Chung, H. K., Zou, X. n., Bajar, B. T., Brand, V. R., Huo, Y. n., Alcudia, J. F., Ferrell, J. E., Lin, M. Z.
  2019; 364 (6439)
- **StaPLs: versatile genetically encoded modules for engineering drug-inducible proteins.** *Nature methods*
  Jacobs, C. L., Badiee, R. K., Lin, M. Z.
  2018; 15 (7): 523–26
- **Optical control of cell signaling by single-chain photoswitchable kinases.** *Science*
  Zhou, X. X., Fan, L. Z., Li, P., Shen, K., Lin, M. Z.
  2017; 355 (6327): 836-842
- **Fluorescent indicators for simultaneous reporting of all four cell cycle phases.** *Nature methods*
  Bajar, B. T., Lam, A. J., Badiee, R. K., Oh, Y., Chu, J., Zhou, X. X., Kim, N., Kim, B. B., Chung, M., Yablonovitch, A. L., Cruz, B. F., Kulalert, K., Tao, et al
  2016
- **High-fidelity optical reporting of neuronal electrical activity with an ultrafast fluorescent voltage sensor.** *Nature neuroscience*
  St-Pierre, F., Marshall, J. D., Yang, Y., Gong, Y., Schnitzer, M. J., Lin, M. Z.
  2014; 17 (6): 884-889
- **Non-invasive intravital imaging of cellular differentiation with a bright red-excitable fluorescent protein** *NATURE METHODS*

Chu, J., Haynes, R. D., Corbel, S. Y., Li, P., Gonzalez-Gonzalez, E., Burg, J. S., Ataie, N. J., Lam, A. J., Cranfill, P. J., Baird, M. A., Davidson, M. W., Ng, H., Garcia, et al
2014; 11 (5): 572-578

- **Highly attenuated dendritic propagation of isolated synaptic potentials in vivo.** *Science advances*
  Cornejo, V. H., Bouazza-Arostegui, B., Alejandre-Garcia, T., Hao, Y., Lee, S., Lin, M. Z., Yuste, R.
  2026; 12 (33): eadz4123

- **Intrinsic space-time couplings governing multi-scale cortical dynamics.** *bioRxiv : the preprint server for biology*
  White, A. D., Wang, Y., Kochalka, J., Hao, Y. A., Li, C., Hernandez, M., Andini, N., Pyo, K. E., Wenderski, W., Mitra, A., Gharagoz, B. E., Kadur, C., Ganguli, et al
  2026

- **Causal and directional elements of global brain dynamics.** *bioRxiv : the preprint server for biology*
  Kochalka, J., Mitra, A., White, A. D., Wang, Y., Sheng, K., Hao, Y. A., Kadur, C., Ramakrishnan, C., Hernandez, M., Wenderski, W., Pyo, K. E., Andini, N., Clandinin, et al
  2026

- **Improving positively tuned voltage indicators for faster kinetics and higher contrast.** *bioRxiv : the preprint server for biology*
  Lee, S., Zhang, G., Hao, Y. A., Roth, R. H., Sun, Y., Dong, C., Zhu, J., Gomez, L. C., Natan, R. G., Jiang, D., Liu, L. X., Testa-Silva, G., Hiramoto, et al
  2026

- **Fast analysis and engineering of protein function by microbe-independent deep assembly and screening.** *Molecular systems biology*
  Wu, Y., Wang, P., Liu, L. X., Song, D., Qin, Q., Gao, C., Hageman, M., Kirkland, T. A., Su, Y., Lin, M. Z.
  2026

- **Pharmacodynamics of Akt drugs revealed by a kinase-modulatedbioluminescent indicator withBBB-permeable substrate.**
  Wu, Y., Hao, C., Gao, C., Hageman, M., Lee, S., Kirkland, T. A., Gray, N. S., Su, Y., Lin, M. Z.
  AMER ASSOC CANCER RESEARCH.2026: 2129

- **Membrane Curvature Activates Src kinase and Promotes Metastatic Cancer Cell Survival.** *bioRxiv : the preprint server for biology*
  Zhang, W., You, H., Zou, X., Lu, C. H., Zhang, X., Amine, A., Jahed, Z., Lin, M. Z., Cui, B.
  2026

- **Multimodal optical imaging combining voltage-sensitive dye ElectroFluor630 with genetically encoded calcium, glutamate, or voltage indicators.** *Neurophotonics*
  Milicevic, K. D., Abdulkadir, A. M., Tom, K. S., Acker, C. D., Yan, P., Hao, Y. A., Lee, S., Liu, L. X., Lin, M. Z., Loew, L. M., Antic, S. D.
  2026; 13 (Suppl 2): S23207

- **Bright calcium-modulated bioluminescent indicators for activity imaging and red photon-assisted synaptic transmission.** *bioRxiv : the preprint server for biology*
  Zhao, Y., Porta-de-la-Riva, M., Lee, S., Wu, Y., Klein, M., Hall, M. P., Su, Y., Encell, L. P., Kirkland, T. A., Krieg, M., Lin, M. Z.
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- **Steric disruption of EGFR oligomerization overcomes therapy resistance in non-small cell lung cancer.** *Science advances*
  Song, D., Jang, J., Lin, M. Z., Jung, Y.
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- **Novel Near-Infrared Fluorescent Protein for Biliverdin Biosensing with a Hydrogel Scaffold.** *ACS sensors*
  Zhao, Y., Kim, B. B., Sit, V. M., Malic, L., Veres, T., Lin, M. Z.
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- **Kilohertz volumetric imaging of in vivo dynamics using squeezed light field microscopy.** *Nature methods*
  Wang, Z., Zhao, R., Wagenaar, D. A., Espino, D., Sheintuch, L., Benshlomo, O., Kang, W., Zhu, E., Lee, C. K., Schmidt, W. C., Pammar, A., Wang, J., Wong, et al
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- **Voltage imaging reveals hippocampal inhibitory dynamics shaping pyramidal memory-encoding sequences.** *Nature neuroscience*
  Taxidis, J., Madruga, B., Safaryan, K., Dorian, C. C., Melin, M. D., Day, Z., Lin, M. Z., Golshani, P.
  2025

- **Imaging high-frequency voltage dynamics in multiple neuron classes of behaving mammals.** *Cell*
  Haziza, S., Chrapkiewicz, R., Zhang, Y., Kruzhilin, V., Li, J., Li, J., Delamare, G., Swanson, R., Buzsaki, G., Kannan, M., Vasan, G., Lin, M. Z., Zeng, et al
  2025
- **Imaging sensory transmission and neuronal plasticity in primary sensory neurons with a positively tuned voltage indicator.** *Nature communications*
  Zhang, Y., Shannonhouse, J., Gomez, R., Son, H., Ishida, H., Evans, S., Chavarha, M., Shi, D., Zhang, G., Lin, M. Z., Kim, Y. S.
  2025; 16 (1): 6396
- **An optimized luciferin formulation for NanoLuc-based in vivo bioluminescence imaging.** *Scientific reports*
  Gao, C., Wu, Y., Fitzgerald, C., Wang, H., Ugo, T., Uyeda, T., Zhou, W., Su, Y., Kirkland, T. A., Lin, M. Z.
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- **An axonal brake on striatal dopamine output by cholinergic interneurons.** *Nature neuroscience*
  Zhang, Y., Luan, P., Qiao, Q., He, Y., Zatka-Haas, P., Zhang, G., Lin, M. Z., Lak, A., Jing, M., Mann, E. O., Cragg, S. J.
  2025
- **A deep learning framework for automated and generalized synaptic event analysis.** *eLife*
  O'Neill, P. S., Baccino-Calace, M., Rupprecht, P., Lee, S., Hao, Y. A., Lin, M. Z., Friedrich, R. W., Mueller, M., Delvendahl, I.
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- **A robust fluorogenic substrate for chikungunya virus protease (nsP2) activity.** *Protein science : a publication of the Protein Society*
  Makhaik, S., Rut, W., Choudhary, S., Upadhyay, T., Hao, C., Westberg, M., Bobst, C., Yoo, E., Fejzo, J., Lin, M. Z., Bogyo, M., Thompson, P., Drag, et al
  2025; 34 (3): e70069
- **Visualizing drug effects over time in live animals using optical pharmacodynamics** *NATURE CHEMICAL BIOLOGY*
  Wu, Y., Su, Y., Lin, M.
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- **Pharmacodynamics of Akt drugs revealed by a kinase-modulated bioluminescent indicator.** *Nature chemical biology*
  Wu, Y., Hao, C., Gao, C., Hageman, M., Lee, S., Kirkland, T. A., Gray, N. S., Su, Y., Lin, M. Z.
  2025
- **Synaptic basis of feature selectivity in hippocampal neurons.** *Nature*
  Gonzalez, K. C., Negrean, A., Liao, Z., Terada, S., Zhang, G., Lee, S., Ócsai, K., Rózsa, B. J., Lin, M. Z., Polleux, F., Losonczy, A.
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- **Deep two-photon voltage imaging with adaptive excitation.** *Research square*
  Zhao, S., Hebert, E., Gruzdeva, A., Mahishi, D., Takahashi, H., Lee, S., Hao, Y. A., Lin, M. Z., Yapici, N., Xu, C.
  2024
- **Replication Capacity and Susceptibility of Nirmatrelvir-Resistant Mutants to Next-Generation Mpro Inhibitors in a SARS-CoV-2 Replicon System.** *Antiviral research*
  Lo, C., Kariv, O., Hao, C., Gammeltoft, K. A., Bukh, J., Gottwein, J., Westberg, M., Lin, M. Z., Einav, S.
  2024: 106022
- **Imaging high-frequency voltage dynamics in multiple neuron classes of behaving mammals.** *bioRxiv : the preprint server for biology*
  Haziza, S., Chrapkiewicz, R., Zhang, Y., Kruzhilin, V., Li, J., Li, J., Delamare, G., Swanson, R., Buzsáki, G., Kannan, M., Vasan, G., Lin, M. Z., Zeng, et al
  2024
- **Functional architecture of intracellular oscillations in hippocampal dendrites.** *Nature communications*
  Liao, Z., Gonzalez, K. C., Li, D. M., Yang, C. M., Holder, D., McClain, N. E., Zhang, G., Evans, S. W., Chavarha, M., Simko, J., Makinson, C. D., Lin, M. Z., Losonczy, et al
  2024; 15 (1): 6295
- **An orally bioavailable SARS-CoV-2 main protease inhibitor exhibits improved affinity and reduced sensitivity to mutations.** *Science translational medicine*
  Westberg, M., Su, Y., Zou, X., Huang, P., Rustagi, A., Garhyan, J., Patel, P. B., Fernandez, D., Wu, Y., Hao, C., Lo, C. W., Karim, M., Ning, et al

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- **Dendritic mGluR2 and perisomatic Kv3 signaling regulate dendritic computation of mouse starburst amacrine cells.** *Nature communications*
  Acarón Ledesma, H., Ding, J., Oosterboer, S., Huang, X., Chen, Q., Wang, S., Lin, M. Z., Wei, W.
  2024; 15 (1): 1819

- **Functional architecture of intracellular oscillations in hippocampal dendrites.** *bioRxiv : the preprint server for biology*
  Liao, Z., Gonzalez, K. C., Li, D. M., Yang, C. M., Holder, D., McClain, N. E., Zhang, G., Evans, S. W., Chavarha, M., Yi, J., Makinson, C. D., Lin, M. Z., Losonczy, et al
  2024

- **Imaging of Evoked Cortical Depolarizations Using Either ASAP2s, or chi-VSFP, or Di-4-Anepps, or Autofluorescence Optical Signals.** *Journal of integrative neuroscience*
  Milicevic, K. D., Zhu, M. H., Barbeau, B. L., Baser, O., Erol, Z. Y., Liu, L. X., Lin, M. Z., Antic, S. D.
  2023; 22 (6): 160

- **Machine learning identifies experimental brain metastasis subtypes based on their influence on neural circuits.** *Cancer cell*
  Sanchez-Aguilera, A., Masmudi-Martín, M., Navas-Olive, A., Baena, P., Hernández-Oliver, C., Priego, N., Cordón-Barris, L., Alvaro-Espinosa, L., García, S., Martínez, S., Lafarga, M., Lin, M. Z., Al-Shahrour, et al
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- **Kinase-Modulated Bioluminescent Indicators Enable Noninvasive Imaging of Drug Activity in the Brain** *ACS CENTRAL SCIENCE*
  Wu, Y., Walker, J. R., Westberg, M., Ning, L., Monje, M., Kirkland, T. A., Lin, M. Z., Su, Y.
  2023

- **An optimized bioluminescent substrate for non-invasive imaging in the brain.** *Nature chemical biology*
  Su, Y., Walker, J. R., Hall, M. P., Klein, M. A., Wu, X., Encell, L. P., Casey, K. M., Liu, L. X., Hong, G., Lin, M. Z., Kirkland, T. A.
  2023

- **Non-invasive bioluminescent imaging of kinase inhibition in mouse brain**
  Su, Y., Wu, Y., Lin, M.
  WILEY.2023

- **Rational Design of Improved and Novel Photodissociable GFPs and RFPs**
  Westberg, M., Trigo, M. L., Devenish, S., Huang, P., Lin, M. Z.
  WILEY.2023

- **Track: Protein Phase Separation in Biomolecular Condensates Using Phase Separation as Mechanism to Enhance Inducibility of a Synthetic Therapeutic Pathway**
  Chau, J., Westberg, M., Song, D., Lin, M.
  WILEY.2023

- **Combinatorial effects of RhoA and Cdc42 on the actin cytoskeleton revealed by photoswitchable GEFs** *SENSORS AND ACTUATORS B-CHEMICAL*
  Ryu, H., Lee, H., Ju, J., Park, J., Oh, E., Lin, M. Z., Seong, J.
  2022; 369

- **Optical regulation of endogenous RhoA reveals selection of cellular responses by signal amplitude.** *Cell reports*
  Ju, J., Lee, H. N., Ning, L., Ryu, H., Zhou, X. X., Chun, H., Lee, Y. W., Lee-Richerson, A. I., Jeong, C., Lin, M. Z., Seong, J.
  2022; 40 (2): 111080

- **Enhanced safety and efficacy of protease-regulated CAR-T cell receptors.** *Cell*
  Labanieh, L., Majzner, R. G., Klysz, D., Sotillo, E., Fisher, C. J., Vilches-Moure, J. G., Pacheco, K. Z., Malipatlolla, M., Xu, P., Hui, J. H., Murty, T., Theruvath, J., Mehta, et al
  2022

- **A red fluorescent protein with improved monomericity enables ratiometric voltage imaging with ASAP3.** *Scientific reports*
  Kim, B. B., Wu, H., Hao, Y. A., Pan, M., Chavarha, M., Zhao, Y., Westberg, M., St-Pierre, F., Wu, J. C., Lin, M. Z.
  2022; 12 (1): 3678

- **FRET Imaging of Rho GTPase Activity with Red Fluorescent Protein-Based FRET Pairs.** *Methods in molecular biology (Clifton, N.J.)*

Bajar, B. T., Guan, X., Lam, A., Lin, M. Z., Yasuda, R., Laviv, T., Chu, J.
2022; 2438: 31-43

- **A Bright, Nontoxic, and Non-aggregating red Fluorescent Protein for Long-Term Labeling of Fine Structures in Neurons.** *Frontiers in cell and developmental biology*
  Ning, L., Geng, Y., Lovett-Barron, M., Niu, X., Deng, M., Wang, L., Ataie, N., Sens, A., Ng, H., Chen, S., Deisseroth, K., Lin, M. Z., Chu, et al
  2022; 10: 893468
- **Optical control of fast and processive engineered myosins in vitro and in living cells.** *Nature chemical biology*
  Ruijgrok, P. V., Ghosh, R. P., Zemsky, S. n., Nakamura, M. n., Gong, R. n., Ning, L. n., Chen, R. n., Vachharajani, V. T., Chu, A. E., Anand, N. n., Eguchi, R. R., Huang, P. S., Lin, et al
  2021
- **Simultaneous Detection of Four Cell Cycle Phases with Live Fluorescence Imaging.** *Methods in molecular biology (Clifton, N.J.)*
  Bajar, B. T., Lin, M. Z.
  2021; 2274: 25-35
- **Brightening up Biology: Advances in Luciferase Systems for in Vivo Imaging.** *ACS chemical biology*
  Liu, S., Su, Y., Lin, M. Z., Ronald, J. A.
  2021
- **Integrated Neurophotonics: Toward Dense Volumetric Interrogation of Brain Circuit Activity-at Depth and in Real Time.** *Neuron*
  Moreaux, L. C., Yatsenko, D., Sacher, W. D., Choi, J., Lee, C., Kubat, N. J., Cotton, R. J., Boyden, E. S., Lin, M. Z., Tian, L., Tolias, A. S., Poon, J. K., Shepard, et al
  2020; 108 (1): 66–92
- **Novel NanoLuc substrates enable bright two-population bioluminescence imaging in animals.** *Nature methods*
  Su, Y., Walker, J. R., Park, Y., Smith, T. P., Liu, L. X., Hall, M. P., Labanieh, L., Hurst, R., Wang, D. C., Encell, L. P., Kim, N., Zhang, F., Kay, et al
  2020
- **On the cutting edge: protease-based methods for sensing and controlling cell biology.** *Nature methods*
  Chung, H. K., Lin, M. Z.
  2020
- **Kilohertz two-photon fluorescence microscopy imaging of neural activity in vivo.** *Nature methods*
  Wu, J., Liang, Y., Chen, S., Hsu, C., Chavarha, M., Evans, S. W., Shi, D., Lin, M. Z., Tsia, K. K., Ji, N.
  2020
- **Two-Photon Voltage Imaging of Spontaneous Activity from Multiple Neurons Reveals Network Activity in Brain Tissue.** *iScience*
  Li, B. n., Chavarha, M. n., Kobayashi, Y. n., Yoshinaga, S. n., Nakajima, K. n., Lin, M. Z., Inoue, T. n.
  2020; 23 (8): 101363
- **An Axonal Blueprint: Generating Neuronal Polarity with Light-Inducible Proteins** *CELL CHEMICAL BIOLOGY*
  Lin, M. Z.
  2019; 26 (12): 1634–36
- **An Axonal Blueprint: Generating Neuronal Polarity with Light-Inducible Proteins.** *Cell chemical biology*
  Lin, M. Z.
  2019; 26 (12): 1634-1636
- **Ultrafast Two-Photon Imaging of a High-Gain Voltage Indicator in Awake Behaving Mice.** *Cell*
  Villette, V., Chavarha, M., Dimov, I. K., Bradley, J., Pradhan, L., Mathieu, B., Evans, S. W., Chamberland, S., Shi, D., Yang, R., Kim, B. B., Ayon, A., Jalil, et al
  2019; 179 (7): 1590
- **Novel NanoLuc substrates enable bright and sustained bioluminescence imaging in animals**
  Walker, J., Park, Y., Smith, T., Wang, D., Hall, M., Liu, L., Hurst, R., Su, Y., Encell, L., Kim, N., Casey, K., Kirkland, T., Lin, et al
  AMER CHEMICAL SOC.2019
- **Novel substrates for NanoLuc luciferase with improved brightness and signal duration for bioluminescence imaging in vivo**
  Walker, J. R., Park, Y., Lin, M., Kirkland, T. A., Hall, M. P., Encell, L. P., Oh, Y., Liu, L.

AMER ASSOC CANCER RESEARCH.2019

- **SYNTHETIC BIOLOGY A compact synthetic pathway rewires cancer signaling to therapeutic effector release** *SCIENCE*
  Chung, H. K., Zou, X., Bajar, B. T., Brand, V. R., Huo, Y., Alcudia, J. F., Ferrell, J. E., Lin, M. Z.
  2019; 364 (6439): 451-+
- **An orange calcium-modulated bioluminescent indicator for non-invasive activity imaging** *NATURE CHEMICAL BIOLOGY*
  Oh, Y., Park, Y., Cho, J. H., Wu, H., Paulk, N. K., Liu, L., Kim, N., Kay, M. A., Wu, J. C., Lin, M. Z.
  2019; 15 (5): 433-+
- **An orange calcium-modulated bioluminescent indicator for non-invasive activity imaging.** *Nature chemical biology*
  Oh, Y., Park, Y., Cho, J. H., Wu, H., Paulk, N. K., Liu, L. X., Kim, N., Kay, M. A., Wu, J. C., Lin, M. Z.
  2019
- **Kinase pathway inhibition restores PSD95 induction in neurons lacking fragile X mental retardation protein.** *Proceedings of the National Academy of Sciences of the United States of America*
  Yang, Y. n., Geng, Y. n., Jiang, D. n., Ning, L. n., Kim, H. J., Jeon, N. L., Lau, A. n., Chen, L. n., Lin, M. Z.
  2019
- **A Suite of Transgenic Driver and Reporter Mouse Lines with Enhanced Brain-Cell-Type Targeting and Functionality** *CELL*
  Daigle, T. L., Madisen, L., Hage, T. A., Valley, M. T., Knoblich, U., Larsen, R. S., Takeno, M. M., Huang, L., Gu, H., Larsen, R., Mills, M., Bosma-Moody, A., Siverts, et al
  2018; 174 (2): 465-+
- **Excitation wavelength optimization improves photostability of ASAP-family GEVIs** *MOLECULAR BRAIN*
  Xu, F., Shi, D., Lau, P., Lin, M. Z., Bi, G.
  2018; 11: 32
- **A Single-Chain Photoswitchable CRISPR-Cas9 Architecture for Light-Inducible Gene Editing and Transcription.** *ACS chemical biology*
  Zhou, X. X., Zou, X., Chung, H. K., Gao, Y., Liu, Y., Qi, L. S., Lin, M. Z.
  2018; 13 (2): 443-448
- **Understanding CRY2 interactions for optical control of intracellular signaling** *NATURE COMMUNICATIONS*
  Duan, L., Hope, J., Ong, Q., Lou, H., Kim, N., McCarthy, C., Acero, V., Lin, M. Z., Cui, B.
  2017; 8: 547
- **The Growing and Glowing Toolbox of Fluorescent and Photoactive Proteins** *TRENDS IN BIOCHEMICAL SCIENCES*
  Rodriguez, E. A., Campbell, R. E., Lin, J. Y., Lin, M. Z., Miyawaki, A., Palmer, A. E., Shu, X., Zhang, J., Tsien, R. Y.
  2017; 42 (2): 111-129
- **A Single-Chain Photoswitchable CRISPR-Cas9 Architecture for Light-Inducible Gene Editing and Transcription** *A Single-Chain Photoswitchable CRISPR-Cas9 Architecture for Light-Inducible Gene Editing and Transcription*
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