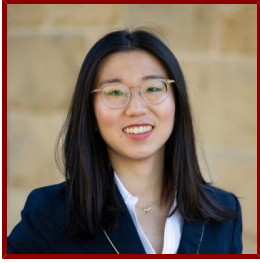


Stanford



Ziyan Zhu

Postdoctoral Scholar, Photon Science, SLAC

Bio

PROFESSIONAL EDUCATION

- Ph.D., Harvard University , Physics (2022)
- M.A., Harvard University , Physics (2022)
- B.Sc., University of California, Los Angeles , Physics, Applied Mathematics (2017)

STANFORD ADVISORS

- Thomas Devereaux, Postdoctoral Faculty Sponsor

Publications

PUBLICATIONS

- **Multi-moiré trilayer graphene: Lattice relaxation, electronic structure, and magic angles** *PHYSICAL REVIEW B*
Yang, C., May-Mann, J., Zhu, Z., Devakul, T.
2024; 110 (11)
- **Opto-twistronic Hall effect in a three-dimensional spiral lattice.** *Nature*
Ji, Z., Zhao, Y., Chen, Y., Zhu, Z., Wang, Y., Liu, W., Modi, G., Mele, E. J., Jin, S., Agarwal, R.
2024
- **Tunable inter-moiré physics in consecutively twisted trilayer graphene** *PHYSICAL REVIEW B*
Ren, W., Davydov, K., Zhu, Z., Ma, J., Watanabe, K., Taniguchi, T., Kaxiras, E., Luskin, M., Wang, K.
2024; 110 (11)
- **Twisto-Electrochemical Activity Volcanoes in Trilayer Graphene.** *Journal of the American Chemical Society*
Babar, M., Zhu, Z., Kurchin, R., Kaxiras, E., Viswanathan, V.
2024; 146 (23): 16105-16111
- **Local atomic stacking and symmetry in twisted graphene trilayers.** *Nature materials*
Craig, I. M., Van Winkle, M., Groschner, C., Zhang, K., Dowlatshahi, N., Zhu, Z., Taniguchi, T., Watanabe, K., Griffin, S. M., Bediako, D. K.
2024; 23 (3): 323-330
- **HubbardNet: Efficient predictions of the Bose-Hubbard model spectrum with deep neural networks** *PHYSICAL REVIEW RESEARCH*
Zhu, Z., Mattheakis, M., Pan, W., Kaxiras, E.
2023; 5 (4)
- **Topology of rotating stratified fluids with and without background shear flow** *PHYSICAL REVIEW RESEARCH*
Zhu, Z., Li, C., Marston, J. B.
2023; 5 (3)

- **Pressure-enhanced fractional Chern insulators along a magic line in moire transition metal dichalcogenides** *PHYSICAL REVIEW RESEARCH*
Morales-Duran, N., Wang, J., Schleder, G. R., Angeli, M., Zhu, Z., Kaxiras, E., Repellin, C., Cano, J.
2023; 5 (3)
- **Anomalous Interfacial Electron-Transfer Kinetics in Twisted Trilayer Graphene Caused by Layer-Specific Localization.** *ACS central science*
Zhang, K., Yu, Y., Carr, S., Babar, M., Zhu, Z., Kim, B. J., Groschner, C., Khaloo, N., Taniguchi, T., Watanabe, K., Viswanathan, V., Bediako, D. K.
2023; 9 (6): 1119-1128
- **Domain-Dependent Surface Adhesion in Twisted Few-Layer Graphene: Platform for Moire-Assisted Chemistry.** *Nano letters*
Hsieh, V., Halbertal, D., Finney, N. R., Zhu, Z., Gerber, E., Pizzochero, M., Kucukbenli, E., Schleder, G. R., Angeli, M., Watanabe, K., Taniguchi, T., Kim, E., Kaxiras, et al
2023
- **Electric field tunable layer polarization in graphene/boron-nitride twisted quadrilayer superlattices** *PHYSICAL REVIEW B*
Zhu, Z., Carr, S., Ma, Q., Kaxiras, E.
2022; 106 (20)
- **Gate-tunable Veselago interference in a bipolar graphene microcavity.** *Nature communications*
Zhang, X., Ren, W., Bell, E., Zhu, Z., Tsai, K., Luo, Y., Watanabe, K., Taniguchi, T., Kaxiras, E., Luskin, M., Wang, K.
2022; 13 (1): 6711
- **Low-energy moire phonons in twisted bilayer van der Waals heterostructures** *PHYSICAL REVIEW B*
Lu, J. Z., Zhu, Z., Angeli, M., Larson, D. T., Kaxiras, E.
2022; 106 (14)
- **Correlated Insulating States and Transport Signature of Superconductivity in Twisted Trilayer Graphene Superlattices.** *Physical review letters*
Zhang, X., Tsai, K. T., Zhu, Z., Ren, W., Luo, Y., Carr, S., Luskin, M., Kaxiras, E., Wang, K.
2021; 127 (16): 166802
- **Spectroscopic Signatures of Interlayer Coupling in Janus MoSSe/MoS₂ Heterostructures.** *ACS nano*
Zhang, K., Guo, Y., Larson, D. T., Zhu, Z., Fang, S., Kaxiras, E., Kong, J., Huang, S.
2021; 15 (9): 14394-14403
- **Twisted Trilayer Graphene: A Precisely Tunable Platform for Correlated Electrons.** *Physical review letters*
Zhu, Z., Carr, S., Massatt, D., Luskin, M., Kaxiras, E.
2020; 125 (11): 116404
- **Electronic structure calculations of twisted multi-layer graphene superlattices** *2D MATERIALS*
Tritsaris, G. A., Carr, S., Zhu, Z., Xie, Y., Torrisi, S. B., Tang, J., Mattheakis, M., Larson, D. T., Kaxiras, E.
2020; 7 (3)
- **Modeling mechanical relaxation in incommensurate trilayer van der Waals heterostructures** *PHYSICAL REVIEW B*
Zhu, Z., Cazeaux, P., Luskin, M., Kaxiras, E.
2020; 101 (22)
- **Topological Gaseous Plasmon Polariton in Realistic Plasma.** *Physical review letters*
Parker, J. B., Marston, J. B., Tobias, S. M., Zhu, Z.
2020; 124 (19): 195001
- **Ultraheavy and Ultrarelativistic Dirac Quasiparticles in Sandwiched Graphenes.** *Nano letters*
Carr, S., Li, C., Zhu, Z., Kaxiras, E., Sachdev, S., Kruchkov, A.
2020; 20 (5): 3030-3038
- **Exact continuum model for low-energy electronic states of twisted bilayer graphene** *PHYSICAL REVIEW RESEARCH*
Carr, S., Fang, S., Zhu, Z., Kaxiras, E.
2019; 1 (1)
- **First M87 Event Horizon Telescope Results. I. The Shadow of the Supermassive Black Hole** *ASTROPHYSICAL JOURNAL LETTERS*

Akiyama, K., Alberdi, A., Alef, W., Asada, K., Azulay, R., Baczko, A., Ball, D., Balokovic, M., Barrett, J., Bintley, D., Blackburn, L., Boland, W., Bouman, et al
2019; 875 (1)

- **Testing General Relativity with the Black Hole Shadow Size and Asymmetry of Sagittarius A*: Limitations from Interstellar Scattering** *ASTROPHYSICAL JOURNAL*

Zhu, Z., Johnson, M. D., Narayan, R.

2019; 870 (1)

- **Chaotic edge density fluctuations in the Alcator C-Mod tokamak** *PHYSICS OF PLASMAS*

Zhu, Z., White, A. E., Carter, T. A., Baek, S. G., Terry, J. L.

2017; 24 (4)