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Ph.D. Student in Electrical Engineering, admitted Summer 2025

Publications

PUBLICATIONS

- **Tunable chiral magneto-transport through band structure engineering in magnetic topological insulators $\text{Mn}(\text{Bi}_{1-x}\text{Sbx})_2\text{Te}_4$.** *Science advances*
Chen, P., Huang, P., Li, Z., Liu, J., Yao, Q., Sun, Q., Li, A., Liu, X., Zhang, Y., Cai, X., Liu, J., Liao, L., Yang, et al
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- **Controllable magnetism and an anomalous Hall effect in $(\text{Bi}_{1-x}\text{Sbx})_2\text{Te}_3$ -intercalated MnBi_2Te_4 multilayers.** *Nanoscale*
Chen, P., Liu, J., Zhang, Y., Huang, P., Bollard, J., Yang, Y., Arnold, E. L., Liu, X., Yao, Q., Choueikani, F., van der Laan, G., Hesjedal, T., Kou, et al
2025; 17 (11): 6562-6569
- **Tunable interfacial Rashba spin-orbit coupling in asymmetric $\text{Al}_x\text{In}_{1-x}\text{Sb}/\text{InSb}/\text{CdTe}$ quantum well heterostructures** *APPLIED PHYSICS LETTERS*
Zhi, Z., Wu, Y., Ruan, H., Liu, J., Huang, P., Yao, S., Liu, X., Tang, C., Yao, Q., Sun, L., Zhang, Y., Xiao, Y., Che, et al
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- **Integrated Artificial Neural Network with Trainable Activation Function Enabled by Topological Insulator-Based Spin-Orbit Torque Devices.** *ACS nano*
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- **Observation of Moment-Dependent and Field-Driven Unidirectional Magnetoresistance in $\text{CoFeB}/\text{InSb}/\text{CdTe}$ Heterostructures.** *ACS applied materials & interfaces*
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- **Interfacial Resonance States-Induced Negative Tunneling Magneto-Resistance in Orthogonally Magnetized $\text{CoFeB}/\text{MgO}/\text{CoFeB}$** *IEEE TRANSACTIONS ON MAGNETICS*
Huang, P., Chen, A., Dong, J., Wu, D., Liu, X., Zhi, Z., Liu, J., Lee, A., Fang, B., Zhang, J., Zhang, X., Kou, X.
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- **Enhancement of Voltage-Controlled Magnetic Anisotropy in Orthogonally-Magnetized $\text{CoFeB}/\text{MgO}/\text{CoFeB}$**
Huang, P., Chen, A., Cai, X., Wu, D., Zhang, X., Kou, X., IEEE
IEEE.2024
- **Wafer-Scale Epitaxial Growth of the Thickness-Controllable Van Der Waals Ferromagnet CrTe_2 for Reliable Magnetic Memory Applications** *ADVANCED FUNCTIONAL MATERIALS*
Liu, X., Huang, P., Xia, Y., Gao, L., Liao, L., Cui, B., Backes, D., van der Laan, G., Hesjedal, T., Ji, Y., Chen, P., Zhang, Y., Wu, et al
2023; 33 (50)
- **Room-Temperature Gate-Tunable Nonreciprocal Charge Transport in Lattice-Matched InSb/CdTe Heterostructures.** *Advanced materials (Deerfield Beach, Fla.)*
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