Curriculum Vitae Ning-Jing Yang

Personal information

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- **Career stage:** PhD student, 2nd year

Education

- **Ph. D. in Condensed Matter Physics** (2023–2027), Fujian Normal University, China
  Supervisor: Prof. Jian-Min Zhang
- **M. Sc. in Condensed Matter Physics** (2020–2023), Kunming University, China
  Master thesis supervisor: Prof. Guojun Jin (Nanjing University) and Prof. Hai Yang (Kunming University)
- **B. Sc. in Physics** (2015–2019), Xiangtan University, China

Research Overview

My research centers on topological phase transitions and Hall effects, with a focus on higher-order topological phenomena in 2D systems driven by multiple degrees of freedom during my Ph.D. research. I also have strong interests in topological superconductivity, ferroelectricity, and ferromagnetism, as well as interdisciplinary applications involving machine learning.

Selected Publications

- *Sliding ferroelectrics induced hybrid-order topological phase transitions*,
  Ning-Jing Yang and Jian-Min Zhang, Xiao-Ping Li, Zeying Zhang, Zhi-Ming Yu, Zhigao Huang, Yugui Yao,
  Physical Review Letters 134, 256602 (2025)
- *Orbital Hall effect characterizing higher-order topological phase transition in monolayers of ferromagnetic materials*,
  Ning-Jing Yang, Jun-Hao Li, Zhigao Huang, Jian-Min Zhang,
  Physical Review B 111, 235435 (2025)
- *Higher-order topological phase diagram revealed by anomalous Nernst effect in a Janus ScClI monolayer*,
  Ning-Jing Yang and Jian-Min Zhang,
  Physical Review B 109, 035423 (2024)
- *Hybrid-order topological phase and transition in 1H transition metal compounds*,
  Ning-Jing Yang, Zhigao Huang, Jian-Min Zhang
  Applied Physics Letters 125, 263102 (2024)

- *Second-order topological insulators in Kekulé-patterned hexagonal biphenylene networks*,
  Ning-Jing Yang, Hai Yang, Zhigao Huang, Jian-Min Zhang
  Applied Physics Letters 126, 033101 (2025)
- *Topological phases, local magnetic moments, and spin polarization triggered by C_{558}-line defects in armchair graphene nanoribbons*,
  Ning-Jing Yang, Wen-Ti Guo, Hai Yang, Zhigao Huang, Jian-Min Zhang
  Physical Chemistry Chemical Physics 26, 17075 (2024)
- *Novel magnetic topological insulator FeBi2Te4 with controllable topological quantum phase*,
  Wen-Ti Guo, **Ning-Jing Yang**, Zhigao Huang, Jian-Min Zhang
  Journal of Materials Chemistry C 11, 12307 (2023)
- *Interface-induced topological phase and doping-modulated bandgap of two-dimensioanl graphene-like networks*,
  Ningjing Yang, Hai Yang, Guojun Jin,
  Chinese Physics B 32, 017201 (2023)