
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 xxx, xxx (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 $FeBi_2Te_4$ 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-dimensional graphene-like networks*,
Ningjing Yang, Hai Yang, Guojun Jin,
Chinese Physics B **32**, 017201 (2023)