

## List of publications

1. "Topological dynamical quantum phase transition in a quantum skyrmion phase", **Vipin Vijayan**, L. Chotorlishvili, A. Ernst, S. S. P. Parkin, M. I. Katsnelson, and S. K. Mishra, Phys. Rev. B **107**, L100419 (2023).
2. "Quantum heat engine with near-zero irreversible work utilizing quantum skyrmion working substance", **Vipin Vijayan**, L. Chotorlishvili, A. Ernst, M.I. Katsnelson, S.S.P. Parkin, Sunil K. Mishra, Physica A: Statistical Mechanics and its Applications, **669**, 130599 (2025).
3. "Topological entanglement entropy to identify topological order in quantum skyrmions", **Vipin Vijayan**, L. Chotorlishvili, A. Ernst, S.S.P. Parkin, M.I. Katsnelson, Sunil K. Mishra (under review in EPL).
4. "Entanglement entropies across dynamical quantum phase transitions: From skyrmionic to ferromagnetic phases", **Vipin Vijayan** and Sunil K. Mishra (under review in Int. J. Quantum Inf).

Other publications by the same author:

1. "Scrambling and quantum feedback in a nanomechanical system", A. K. Singh, Kushagra Sachan, L. Chotorlishvili, **V. Vipin**, and Sunil K. Mishra, . Eur. Phys. J. D **76**, 17 (2022).
2. "Quantum information diode based on the magnonic crystal", Rohit Kumar Shukla, L. Chotorlishvili, **Vipin Vijayan**, Harshit Verma, A. Ernst, S. S. P. Parkin, and Sunil K. Mishra, Mater. Quantum. Technol. **3**, 035003 (2023).