

LIST OF PUBLICATIONS

1. **Tesfay Gebremariam et. al**, "Optimizing mechanical entanglement using squeezing and parametric amplification" **Results in Physics** **76** (2025) 108364.
2. **Tesfay Gebremariam et. al**, "Enhancement of quantum correlations in coupled magnomechanical systems via parametric amplifier" **Eur. Phys. J. Plus** (2025) 140:407
3. **Tesfay Gebremariam et. al**, "Enhancing quantum coherence in hybrid optomechanical systems with coherent feedback, atomic ensembles, and optical parametric amplifier", **Phys. Scr.** **100** (2025) 015117.
4. **Tesfay Gebremariam et. al**, "Generation of two mode mechanical squeezing induced by nondegenerate parametric amplification" **Scientific Reports**, **14**(1), 27234, 2025.
5. **Tesfay Gebremariam et. al**, "Enhancement of opto-electro-mechanical entanglement through three-level atoms", **Physics Letters A** **525** (2024) 129920
6. **Tesfay Gebremariam et. al**, "Generation of quantum correlations through optical parametric amplification in a hybrid optomechanical system". **Eur. Phys. J. Plus** (2024) 139:705
7. **Tesfay Gebremariam et. al**, "Boosting macroscopic entanglement in charged cavity optomechanical system through coherent feedback loop". **J Opt** (2024).
8. **Tesfay Gebremariam et. al**, "Distant bipartite entanglement generation in a hybrid optomagnomechanical system" **American Institute of Physics Advances** 14, 055201 (2024).
9. **Tesfay Gebremariam et. al**, "Generation of stationary entanglement and quantum discord in an optomechanical system through three-level atoms", **Journal of the Optical Society of America B**, 41, 8 (2024).
10. **Tesfay Gebremariam et. al**, "Transfer of quantum correlations through strong coupling in a three-mode optomechanical system", **J Opt** (2024).
11. **Tesfay Gebremariam et. al**, "Quantum Correlation in a nono-electro-optomechanical system enhanced by an optical parametric amplifier and Coulomb-type interaction", **Sci Rep** 13, 13800 (2023).
12. **Tesfay Gebremariam et. al**, "Steady-state entanglement in a hybrid optomechanical system enhanced by optical parametric amplifiers", Vol. 2, Iss. 10 -- October 15, 2023 **Optics Continuum**
13. **Tesfay Gebremariam et. al**, "Enhanced optomechanically induced transparency via atomic ensemble in optomechanical system." **Quantum Information Processing** 20(3) (2021): 1-12.
14. **Tesfay Gebremariam et. al**,, and Mengistu Markos Tsanger. "Quantum force sensing using backaction noise suppression in optomechanical system." **Journal of Optics** 50 (2021): 35-45.

15. **Tesfay Gebremariam et. al**, "Stationary Entanglement Dynamics in a Hybrid Opto-Electro-Mechanical System", *Rom. J. Phys.* **(2021)**: 66, 104.
16. **Tesfay Gebremariam et al.** "Application of machine learning for predicting strong phonon blockade" *Appl. Phys. Lett.* 118, 164003 **(2021)**.
17. **Tesfay Gebremariam et. al**, "Ye-Xiong Zeng, Mojtaba Mazaheri, and Chong Li." Enhancing optomechanical force sensing via precooling and quantum noise cancellation." *SCIENCE CHINA Physics, Mechanics & Astronomy* 63.1 **(2020)**: 1-11.
18. **Tesfay Gebremariam et al.** "Optimal teleportation via a non-maximally entangled channel in qutrits system", *International Journal of Theoretical Physics*, 60(8), 3197-3208 **(2021)**.
19. **Tesfay Gebremariam et. al**, "Steady-state quantum correlation measurement in hybrid optomechanical systems." *International Journal of Quantum Information* **(2020)**: 2050046.
20. **Tesfay Gebremariam et.al**, "Quantum control based on machine learning in an open quantum system". *Physics Letters A*, 384(35), **(2020)**:126886.
21. **Tesfay Gebremariam et. al.**, "Generation of the bipartite entanglement and correlations in an optomechanical array." *The Journal of the Optical Society of America* **(2020)**: 37.11 , A245-A252.
22. **Tesfay Gebremariam et. al**, "Dynamical quantum steering in a pulsed hybrid opto-electro-mechanical system." *The Journal of the Optical Society of America* 36 (2), **(2019)**: 168-177.
23. **Tesfay Gebremariam et. al**, "Observation and measures of robust correlations for continuous variable system." *Communications in Theoretical Physics* 68, no. 5 **(2017)**: 661.
24. **Tesfay Gebremariam et. al**, "Dynamics of quantum correlations for two mode entangled coherent fields." *Results in physics* 7 **(2017)**: 3773-3777.
25. **Tesfay Gebremariam et. al**, "Dynamics of quantum correlation of four qubits system." *Physica A: Statistical Mechanics and its Applications* 457 **(2016)**: 437-442.
26. **Tesfay Gebremariam et. al**, "The study of interference effect in a globally coupled quantum network." *Quantum Information Processing* 18, no. 7 **(2019)**: 1-19.
27. **Tesfay Gebremariam et. al**, "The Influence of Non-Markovian Characters on Quantum Adiabatic Evolution." *Annalen der Physik* 531, no. 1 **(2019)**: 1800234.
28. **Tesfay Gebremariam et. al**, "Quantum optical diode based on Lyapunov control in a superconducting system." *JOSA B* 35, no. 9 **(2018)**: 2334-2341.
29. **Tesfay Gebremariam et. al**, "Synchronization effect for uncertain quantum networks." *Physica A: Statistical Mechanics and its Applications* 465 **(2017)**: 621-627.
30. **Tesfay Gebremariam et al.** "Prospective Time Periodic Geographical Covid-19 Surveillance in Ethiopia Using a Space-time Scan Statistics: Detecting and Evaluating Emerging Clusters". <https://doi.org/10.21203/rs.3.rs-76052/v1> **(2020)**.

Books:

1. **Tesfay Gebremariam**, "An Introduction to Modern Physics " Publisher: LAP LAMBERT Academic Publishing (December 5, 2016). [https://www.amazon.com/Introduction-Modern-Physics-Tesfay Gebremariam/dp/3330015292](https://www.amazon.com/Introduction-Modern-Physics-Tesfay-Gebremariam/dp/3330015292)
2. **Tesfay Gebremariam**, "Dirac Equation For Different Potential" Publisher: LAP LAMBERT Academic Publishing (May 17, 2016 <https://www.amazon.com/Equation-Different-Potential-Tesfay-Gebremariam/dp/3659889938>