Quantum Entanglement in Photosynthetic Complexes

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Abstract. This article explores the role of quantum entanglement in photosynthetic complexes, focusing on its impact on energy transfer efficiency. The study employs advanced quantum models to simulate the behavior of entangled states in biological systems. Results indicate that quantum entanglement may enhance energy transfer rates, offering new insights into the efficiency of photosynthesis. This research could pave the way for bio-inspired quantum technologies, potentially revolutionizing energy harvesting methods.

Keywords: Quantum Entanglement, Photosynthesis, Energy Transfer, Quantum Models, Biophysics

Introduction

Photosynthesis is a process that has intrigued scientists for decades, particularly due to its remarkable efficiency. Recent studies suggest that quantum entanglement may play a crucial role in this biological phenomenon. This article investigates the presence and effects of entangled quantum states within photosynthetic complexes. By employing sophisticated quantum mechanical models, we simulate the dynamics of these systems under various conditions. Our findings reveal that quantum entanglement might significantly boost the rate of energy transfer, providing a novel perspective on photosynthetic efficiency.

References

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