Special Issue

Open Quantum Systems Applied to Quantum Computation

Message from the Guest Editors

In this Special Issue, we intend to explore open quantum systems applied to quantum computation. The idea is to explore different perspectives: First, to investigate noise and dissipation for quantum algorithms, especially in certain quantum machine learning algorithms. Second, to propose OQS-based algorithms for realistic problems in chemistry, biology, and materials science, where environmental interactions are unavoidable and often essential to the phenomena under investigation. Finally, we expect to see manuscripts exploring quantum dissipative models, like open quantum walk models, quantum dissipative computation, tensor networks and hierarchical equations of motion.

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