Electron Quantum Optics in a Quantum Information Perspective

Guest Editor:

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Message from the Guest Editor

In recent years the possibility to create, manipulate, and measure single- to few-electron quantum states opened the way to the field of electron quantum optics. This branch of research has now reached a high level of maturity, making it possible to envisage the application of these propagating electronic wave-packets as flying qubits able to carry the information enclosed into a static qubit and transfer it unaffected along quantum circuits.

In this spirit, the present Special Issue is devoted to collecting the current experimental and theoretical state-of-the-art on this subject to settle a common ground for a new phases of electron quantum optics aimed at reaching an high level of control of individual electronic quantum states.

Special Issue

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Message from the Editor-in-Chief

The concept of entropy is traditionally a quantity in physics that has to do with temperature. However, it is now clear that entropy is deeply related to information theory and the process of inference. As such, entropic techniques have found broad application in the sciences.

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