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Trapped Ion Quantum Information

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Message from the Guest Editor

The field of trapped ions is probably the most promising platform for the development of quantum technologies and science, thanks to the continuous technological advances that have allowed for the efficient control of light and matter at the single-particle level. Indeed, trapped ions offer the largest coherence times and fidelities, including also some of the largest experiments with qubits oriented to quantum information processing tasks. Apart from the practical applications, trapped ions are essential for fundamental research, such as in testing the postulates of quantum mechanics or validation of the laws of thermodynamics at the quantum level.

The aim of this Special Issue is to collect novel and original works in the burgeoning field of trapped ions with a special emphasis on quantum information applications.



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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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