Special Issue

Quantum Processes in Living Systems

Message from the Guest Editors

Phenomena such as quantum tunneling, exciton coherent propagation, resonances of molecular vibrations, entanglement as a tool for weak signals perception, quantum stability and modification of DNA, and even the ambitious project of unveiling the mysteries of the mind's working are all applications of quantum mechanics that appear nowadays in scientific literature. Are these quantum phenomena really necessary for life? What are the other ingredients that are missing for a true understanding of life? This Special Issue's goal is to be a milestone for our current understanding of what life is from the point of view of quantum mechanics. Not only we are looking for contributions that review or give different interpretations of the already known quantum effects, but we welcome proposals of novel statistical mechanisms. Moreover, we will appreciate both experimental and theoretical papers as long as they contribute to discussing their results within the wider perspective of assessing the quantum nature of life processes.

Guest Editors

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Deadline for manuscript submissions

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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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