

Abstract Submitted
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A Biochemical Double Slit IANNIS KOMINIS, University of Crete - Physics Department — Radical-ion-pair reactions, fundamental in photosynthesis and at the basis of the avian magnetic compass mechanism, have been recently shown to offer a rich playground for applying methods and concepts from quantum measurement/quantum information science. We will demonstrate that radical-ion-pair reactions are almost the exact analog of the optical double slit experiment, i.e. Nature has already engineered biochemical reactions performing the act of quantum interference. We will further elaborate on the non-trivial quantum effects pertaining in these reactions and the recent debate on their fundamental theoretical description that these effects have sparked.

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