

Abstract Submitted
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Singlet delta oxygen production in low-temperature plasma. ANDREY IONIN, Lebedev Physics Institute — The overview of experimental research in the field of physics and engineering of singlet delta oxygen (SDO) production in low-temperature plasma of various electric discharges is presented. The main attention is paid to the SDO production with SDO yield adequate for the development of an electric discharge oxygen-iodine laser (DOIL). Experimental procedures of SDO production in self-sustained and non-self-sustained discharges, and analysis of different plasma-chemical processes occurring in oxygen low-temperature plasma which brings limitation to the maximum SDO yield and to the life-time of the SDO in an electric discharge and its afterglow are discussed.

Andrey Ionin
Lebedev Physics Institute

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