

Abstract Submitted
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Tracing Plasma Produced Atomic and Molecular species from Plasma into the Liquid and Living tissue for various applications ZORAN PETROVIC¹, NIKOLA SKORO, Institute of Physics, University of Belgrade Serbia, SUZANA ZIVKOVIC, MILICA MILUTINOVIC, Institute Sinisa Stankovic, University of Belgrade Serbia, OLIVERA JOVANOVIC, NENAD SELAKOVIC, NEVENA PUAC, Institute of Physics, University of Belgrade Serbia — Significant effects observed in applications of atmospheric pressure non-equilibrium plasmas have been shown to be due to the effect of plasma produced atomic and molecular reactive species. Some of those species are the ones acting as signaling agents initiating response of the living cells. At the same time, albeit in larger numbers, they may be chemical agents that can damage or dissociate unwanted living organisms, human cells or chemical components. We try to follow the trail of atomic and molecular physics starting from their formation, their passage into liquids and then passage into living cells or the reaction of cells that they invoke. Two examples will be the long term changes in enzymes regulating hydrogen peroxide in plant cells and destruction of malathion, a pesticide used in agriculture that may be a model of more lethal weapons of mass destruction. Finally we shall illustrate how presence of those active species in plasma treated water affects the germination of seeds. -/abstract- Authors Zoran Lj Petrovic, Nikola Skoro, Suzana Zivković, Milica Milutinovic, Olivera Jovanovic, Nenad Selakovic,

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