

Abstract Submitted
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Comparison of an APPJ discharge characteristics to internal properties of living cells¹ PIETRO RANIERI, SARAH GUCKER, JOHN FOSTER, ANIRUDDHA RAY, RAOUL KOPELMAN, LESHERN KARAMCHAND, University of Michigan — Plasma medicine is quickly developing into a novel research field for decontamination and treatment for both wounds and disease. A common question between the research efforts is the effect of plasma both around the cell and within it. This study aims to discover the effect of an atmospheric pressure plasma jet on the internal properties of living cells as a function of treatment time. Through the use of nanoparticles, relative changes in pH and singlet oxygen both inside the cells and the cell media have been determined for various plasma exposure times. Further diagnostic tests on the plasma discharge will allow this effort to compare the results from changes inside the cell to those in the surrounding atmosphere to gain further insight on the reaction of the cell to plasma treatment.

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