

PO3055

**Pesticidal Effects of Atmospheric Pressure Gas Discharge Using Industrial Gases**Avramidis Georg<sup>1</sup>, Martin Bellmann<sup>2</sup>, Richard Wascher<sup>2</sup>, Wolfgang Viöl<sup>3</sup>

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Studies about interaction of plasmas with microorganisms usually focus on the usage of synthetic air as process gas to operate the discharge. The aim of this work is to evaluate the impact of atmospheric pressure plasma treatment using different industrial gases (synthetic air, compressed air, welding gas, and forming gas) on growth inhibition of the phytopathogenic fungus *Ascochyta pinodella* and on deactivation curve of the phytopathogenic bacterium *Clavibacter michagenensis*. Additionally mixtures of these gases were tested on their fungicidal and bactericidal properties as process gases for plasma treatment of microorganisms. It could be demonstrated that forming gas and mixtures with forming gas are well suited for pesticidal applications.

**Keywords**

Pathogens

DBD

Growth inhibition

Deactivation