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Diagnostics on atmospheric pressure plasmas and their relevance for plasma medicine STEPHAN REUTER, Centre for Innovation Competence plasmatis, INP Greifswald e.V. — Non-equilibrium atmospheric pressure plasmas play a major role in the growing field of low temperature plasma applications, especially in those areas where vacuum equipment cannot be utilized. Radio-frequency driven atmospheric pressure plasma jets (APPJ) can provide high reactive species concentrations at low gas temperatures, important e.g. for modification of sensitive surfaces in biomedicine or in interaction with DNA. The desire to gain control over the output of the discharges calls for a detailed insight into the plasma chemical processes [1]. Specifically oxygen species are of interest in plasma medicine. This work presents diagnostics of reactive oxygen species in an atmospheric pressure plasma, relevant for plasma medical applications.

[1] S. Reuter, K. Niemi, V. Schulz-von der Gathen, and H. F. Döbele, Plasma Sources Sci. Technol., **18**, 015006 (2009)

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