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Development of Atmospheric Pressure Plasma Sources in KRISS

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Atmospheric-pressure plasmas are used in a variety of materials processes. The lifetime of most atmospheric-pressure plasma sources is limits by electrode erosion due to energetic ion bombardment. These drawbacks were solved recently by several microplasma sources based on microstrip structure, which are more efficient and less prone to perturbations than other microplasma sources. In this work, we propose microplasma sources based on strip line and microstrip line, developed for the generation of microplasmas even in atmospheric air and analyzes these systems with microwave field simulation via comparative study with two previous microwave sources (Microstrip Spit Ring Resonator (MSRR), Microstrip Structure Source (MSS)).

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