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Characteristics of plasma activated water (PAW) produced by moderated pressure RF discharges

Recently, plasma activated waters (PAW) have been investigated intensively for sustainable agriculture and post-harvest technology. The waters can be used effectively as green fertilizers, decontamination agent and green pesticides, while no harmful by products left over[1-2]. The acidic characteristics of the PAW, resulted from nitrate and hydrogen peroxide, can produce high germination rate of various seeds[1,3]. In this work, PAW produced by RF cold atmospheric plasma in moderated pressure will be presented. The plasma is generated in closed chamber, whereas part of the chamber volume was filled with water. The floating electrode, made of tungsten rod and inserted in the Pyrex glass tube, is powered by RF power supply of 7 –9 kV and 50 –800 kHz. The plasmas, generated above the water surface, for production of PAW. Various characteristics of large volume PAW for the setup will be discussed.

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