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Application of Plasma Processing to Food & Agriculture

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Plasma technologies are based on the use of ionized gases, and impact our everyday life with a huge number of applications and products in the field of microelectronics, semiconductors, polymers, packaging, environment, hygiene, and health, as reported in recent review papers.

Such technologies are now gaining great attention in food and agricultural scenario for their multiple applications, especially on seeds, having been applied for the decontamination of crops and for increasing the growth of lentils, soybeans, peas, radishes, tomatoes, sweet peppers, oats, wheat, and many others vegetable.

Little, though, has been published on the plasma deposition of protective coatings on seeds. This talk will mostly address this topic highlighting the advantages of this approach.

Keywords: plasma processing, plasma agriculture, seeds protection

Short Bio: Fabio Palumbo holds a PhD in Chemical Sciences at the University of Bari (1998), and is CNR researcher since 2001 (at the following Institutes: Centro Di Studio per la Chimica dei Plasmi, then Istituto di Metodologie Inorganiche e Plasmi, now Istituto di Nanotecnologia).

He has well established competences onto plasma processing of materials and surface engineering particularly in the field of biomaterials, corrosion protection, food packaging, plasma agriculture, antifog and in general extreme wettability control.

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