

The prospects for atmospheric gas plasmas in the food industry

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Résumé

Despite the fact that recent years have seen an exponential growth in fundamental knowledge concerning the causative agents of food poisoning, incidences of this disease continue to grow in Western industrialized countries. In attempting to meet the changing demands of society for low-cost convenience foods it has become clear that the technology for ensuring its safe production has not kept up pace. In this presentation the various contributions that low temperature atmospheric gas plasmas can make to the production of safe food will be considered. Any process for decontaminating foodstuffs is subject to operational constraints; the nutritional value of the food must be preserved and its organoleptic properties must not be altered so as to render it unpalatable or unappealing to the consumer. In addition to examining the prospects which gas plasmas hold for microbially decontaminating foods themselves, the application of novel plasma configurations to food processing equipment – either to render it free of microbial contaminants or of residues that might cause allergic reactions in susceptible consumers – will be also be examined.

