

عنوان مقاله:

Nanotechnology used for food packaging and food contact materials

محل انتشار:

دومین کنگره بین المللی علوم و فناوری نانو (سال: 1387)

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خلاصه مقاله:

One of the earliest commercial applications of nanotechnology within the food sector is in packaging. Between 400 and 500 nano-packaging products are estimated to be in commercial use now, while nanotechnology is predicted to be used in the manufacture of 25% of all food packaging within the next decade [1]. A key purpose of nano packaging is to deliver longer shelf life by improving the barrier functions of food packaging to reduce gas and moisture exchange and UV light exposure. For example, DuPont has announced the release of a nano titanium dioxide plastic additive 'DuPont Light Stabilizer 210' which could reduce UV damage of foods in transparent packaging[3]. Over 90% of nano packaging (by revenue) was based on nano-composites, in which nanomaterials are used to improve the barrier functions of plastic wrapping for foods, and plastic bottles for soft drinks and juice. Nano packaging can also be designed to release antimicrobials, antioxidants, enzymes, flavours and nutraceuticals to extend shelf-life. In the featured article the latest in world of food nano-packaging will be introduced and issues related to edible nano coatings for food such as cheese, meat and fruits, chemical release nano packaging, nano-based antimicrobial packaging and food contact materials, nano-sensor and track and trace packaging, nano biodegradable packaging, non-stick nano lining for sauce bottles would be discussed

کلمات کلیدی:

Nanotechnology, food packaging, contact material, antimicrobial packaging

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