

Nano-sensor System for Meat and Seafood Monitoring

監測肉類和海鮮的納米傳感器系統

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Award 獎項



This smart food monitor system integrates nano-sensors with IoT and AI to advance the food storage concept and experience. It is a sensitive tool for monitoring spoilage level of fresh and preserved meat and seafood by detecting biomarkers they release. Food safety is critical for public health, and there is a rapidly growing need for an accurate and simple monitoring system. This simple monitoring tool helps the public avoid over-purchasing and food-borne illnesses, and reduce food wastage.

這個智能食品監測系統結合納米傳感器、物聯網和人工智能，改革了食物儲存的習慣和體驗。無論是新鮮抑或包裝的肉類和海鮮，只要在變質後釋出生物指標，它都能靈敏地感應，從而監測食物腐壞程度。由於食物安全對公眾健康尤為重要，同時社會對精確、簡單的監測系統需求迅速增長，這個監測工具可幫助人們避免過度採購，預防食源性疾病和減少食物浪費。

Features & Applications 特點和應用

- 01** The system has a scientifically proven method and nano-sensor that can identify the freshness of meats and seafood (Cheuk-Fai Chow, Food Chemistry, 2020, 311, 125908; HK patent 1257474)
它是一個具科學權威驗證的納米傳感器，可識別肉類及海鮮的新鮮度（周卓輝，食品化學，2020，311，125908；香港專利記錄1257474）
- 02** It has a small, reliable, battery-free, low-cost nano-sensor, which can be directly used to examine pre-packaged meats and seafood products
小型、可靠、免電力且低成本的納米傳感器可直接用於檢測預先包裝的肉類和海鮮產品
- 03** Allows better use of food resources by reusing fresh meat and seafood that have passed their use-by date
以科學證據鼓勵妥善處理已過保鮮期的肉類和海鮮，善用食物資源
- 04** Relieves pressure on landfills by reducing food waste
透過減少浪費食物來減輕堆填區壓力
- 05** Enhances quality of life by tracing and tracking food condition
通過追蹤食品狀況提升生活質素