Edible sensors for rotten food

Nature uses colour in many different ways for example to attract pollinating insects to plants or warn to animals their prey is poisonous. Here we take inspiration from nature and its use of colour in the development of a visual sensor for food degradation.

Using edible plant pigments the student will develop an edible film that is capable of detecting changes in the pH of food. Changes in food pH are a key indicator of the degradation of the food and therefore can be used to demonstrate to a consumer that the food is no long fit for consumption.

This project is part of the new EPFL’s biomimicry initiative for food technologies. The student will be part of an interdisciplinary team with other students working on various bio-inspired strategies relevant for food technologies including packaging materials, transportation logistics, etc.

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