



東京大学ナノバイオ国際研究教育拠点セミナー #03

C2CNB Seminar Series

International Core Research Center for NanoBio, The University of Tokyo

Bioelectronic Nose and Tongue

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Date: Monday, May 26, 2014
Time: 16:00 - 17:30
Venue: # 537 Seminar Room, Faculty of Engineering Bldg. 5,
The University of Tokyo



We have five senses, which are the sense of vision, sound, touch, smell, and taste. Among these five senses, the sense of smell and taste is the chemical sense, while the other three senses are physical sense. Regarding the sense of vision and sound, human developed the devices which can measure their activating stimuli, which are light and vibration. However, we do not have any device which can measure the smell and taste.

We still depend on the sensory evaluation using our own nose and tongue. In the smelling process of the human olfactory system, the initiation step in the odor recognition is the binding of odorants to the olfactory receptor proteins. Similarly in the tasting process for the bitter, sweet and umami tastes, the initial recognition step is also the binding of tastants to the taste receptor protein. Therefore, human's olfactory and taste receptors can be used to develop the human-like bioelectronics nose and tongue. In this presentation, I am going to present a demonstration of olfactory and taste biosensor using human receptors combined with nanodevices.

Organizer: International Core Research Center for NanoBio, The University of Tokyo

Teruyuki Nagamune, Professor, Graduate School of Engineering, The University of Tokyo

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