

# 平成28年度 公益社団法人 応用物理学会 北陸・信越支部 講演会

入場  
無料

日時 平成28年5月20日(金)16:25~17:55

場所 新潟大学 自然科学研究科 大会議室  
(新潟市西区五十嵐2の町8050)

演題 Wearable Electronic Nose for Human Body  
Odor Detection : A New Approach for  
Personal Healthcare Monitoring

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## 講演内容:

Recently, wearable health monitoring systems have become of unprecedented interest owing to their versatile functionalities such as being point-of-care, easy-to-use, low-cost and real-time. So far, various wearable devices based on measuring of physiological signals and biokinetics have been proposed but only a few if not at all have existed based on measurement of the body odor. In this lecture, we will present the benefits of human body odor detection based on our research experience on the past several years. We will show the results to support the notion that volatile organic compounds as released from the human body can give some information about diseases, behavior and health status of a person. In addition, it was found that body odor is one of the physical characteristics of a human that can be used to identify people. We have invented various platforms to make electronic nose (e-nose, based on polymer/carbon nanotube composite materials) wearable, including armband e-nose, sniffing shoes and smelling shirts. These novel devices can collect human body information based on the volatiles released from the armpits and feet of human and transmit the data wirelessly via low-cost Zigbee networks, showing a viable potential for real-time personal healthcare monitoring.

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