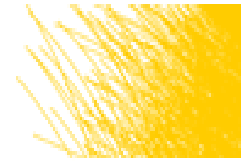
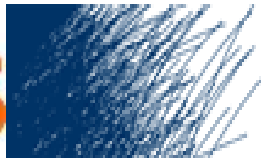


SMART TEXTILES SALON

Vol.4

25 June 2015, Ghent, Belgium



MAHIDOL UNIVERSITY

Wisdom of the Land



The Royal Golden Jubilee Ph.D. Program



On-cloth wearable e-nose for detecting the body odor signature of wearer

1. Fabric-based gas sensors
2 and 3. Sensing materials coated fabric fibers (100X and 600X)

(a) (b)

Insulating polymer matrix
Carbon nanotubes
Gas molecules

Smart Battery for plug-in battery (re-charge)

Wireless ZigBee module

LiPo/Polymer battery

Wireless module

MAX31857 8-channel analog multiplexer

Processor (ARM-Chip)

Sensing unit

Human voluntary odor

Sensor circuit

Intelligent sampling shirt

ZigBee wireless network



Presenter :

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Wearable E-Nose

Objective of the Prototype : To develop a fabrication process for wearable health monitoring device based on embroidered polymer/SWCNT chemical sensors on the fabric substrates for human body odor detection.



Prototype of wearable e-nose system

Armpit odor

Applications

