

# Supplementary Materials

## Highly Sensitive Ammonia Gas Sensor Using Micrometer-Sized Core-Shell Type Spherical Polyaniline Particles

Masanobu Matsuguchi\*, Tomoki Nakamae, Ryoya Fujisada, and Shunsuke Shiba

Department of Materials Science and Biotechnology, Graduate School of Science and Engineering, Ehime University, Bunkyo-cho 3, Matsuyama, Ehime 790-8577, Japan; matsuguchi.masanobu.mm@ehime-u.ac.jp

\* Correspondence: matsuguchi.masanobu.mm@ehime-u.ac.jp; Tel.: +81-89-927-9933

---

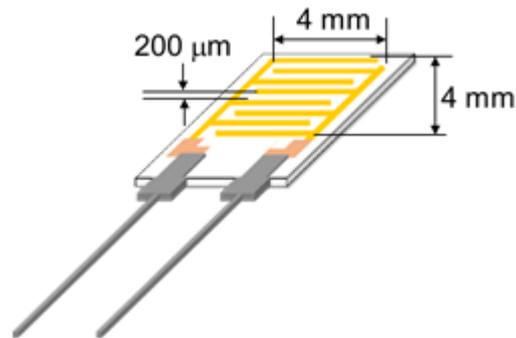


Figure S1. Illustration of an alumina substrate having a pair of interdigitated gold electrodes.

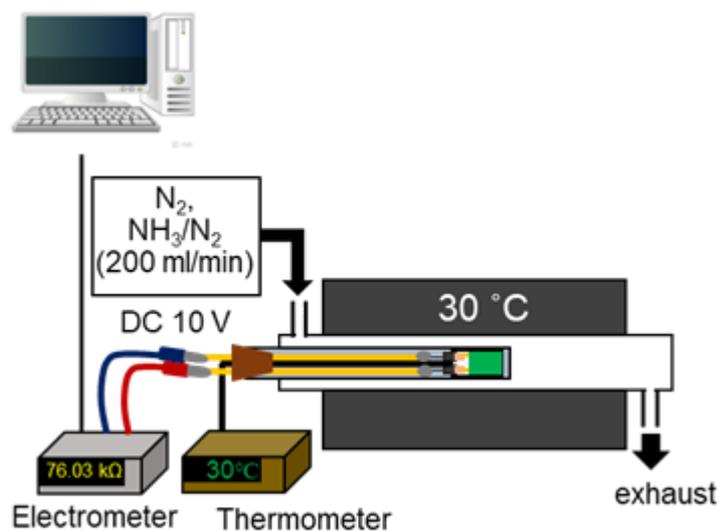
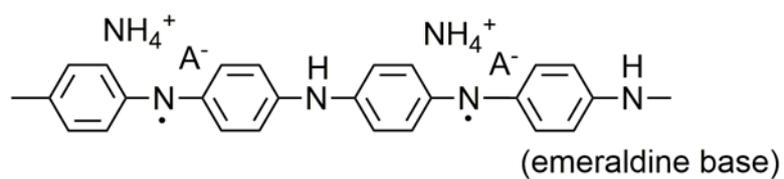
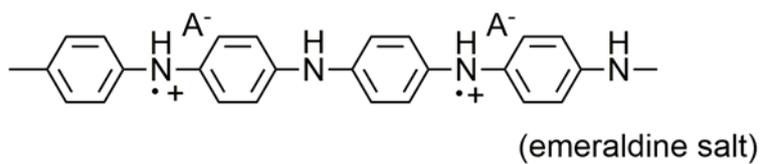


Figure S2. Experimental setup used for NH<sub>3</sub> gas sensing measurement.

Low conductivity



- NH<sub>3</sub> ↓ desorption  
↑ adsorption + NH<sub>3</sub>



High conductivity

Figure S3. Sensing mechanism of PANI-based NH<sub>3</sub> gas sensors.