

## Supplementary

# Using Bayesian Inference Framework towards Identifying Gas Species and Concentration from High Temperature Resistive Sensor Array Data

**Yixin Liu <sup>a,\*</sup>, Kai Zhou <sup>b</sup> and Yu Lei <sup>c</sup>**

<sup>a</sup> ABB US Corporate Research Center, Windsor, CT 06095, USA

<sup>b</sup> Department of Mechanical Engineering, University of Connecticut, Storrs, CT  
06269-3139, USA

<sup>c</sup> Department of Chemical and Biomolecular Engineering, University of Connecticut,  
Storrs, CT 06269-3222, USA

**\*corresponding author. Tel.: +1 860 687 4923, Fax: +1 860 285 0273, Email  
address: [yixin.liu@us.abb.com](mailto:yixin.liu@us.abb.com) (Yixin Liu)**

## The statistical identification result using Artificial Neural Network

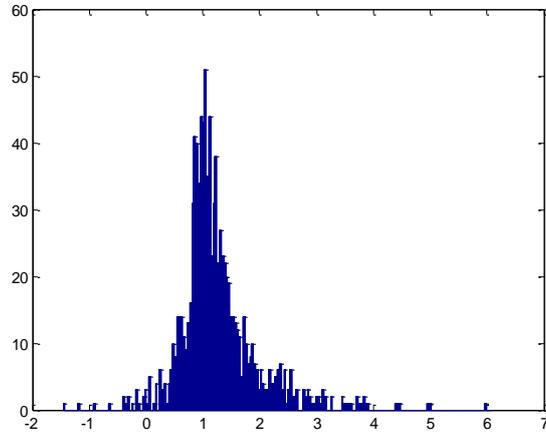


Figure S.1. The distribution of gas type identification results (Horizontal axis indicates the gas ID; Vertical axis indicates the frequency).

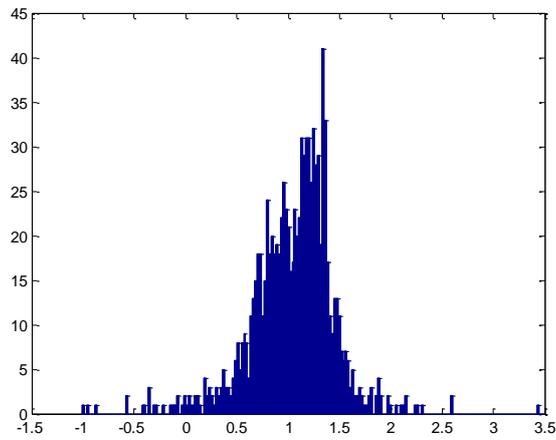


Figure S.2. The distribution of gas concentration results (Horizontal axis indicates the gas concentration; Vertical axis indicates the frequency)