

Supporting Information

Tunable Volatile-Organic-Compound Sensor by using Au Nanoparticle Incorporation on MoS₂.

Soo-Yeon Cho,^{†,‡,⊥} Hyeong-Jun Koh,^{†,‡,⊥} Hae-Wook Yoo,[†] Jong-Seon Kim,^{†,‡} and Hee-Tae Jung^{*,†,‡}

[†] Department of Chemical and Biomolecular Engineering (BK-21 Plus), Korea Advanced Institute of Science and Technology (KAIST), 291 Daehak-ro, Yuseong-gu, Daejeon 305-701, Republic of Korea

[‡] KAIST Institute for Nanocentury, Korea Advanced Institute of Science and Technology (KAIST), 291 Daehak-ro, Yuseong-gu, Daejeon 305-701, Korea

[⊥] These authors contributed equally to this work.

Table of contents:

1. Schematic diagram of overall gas delivery system

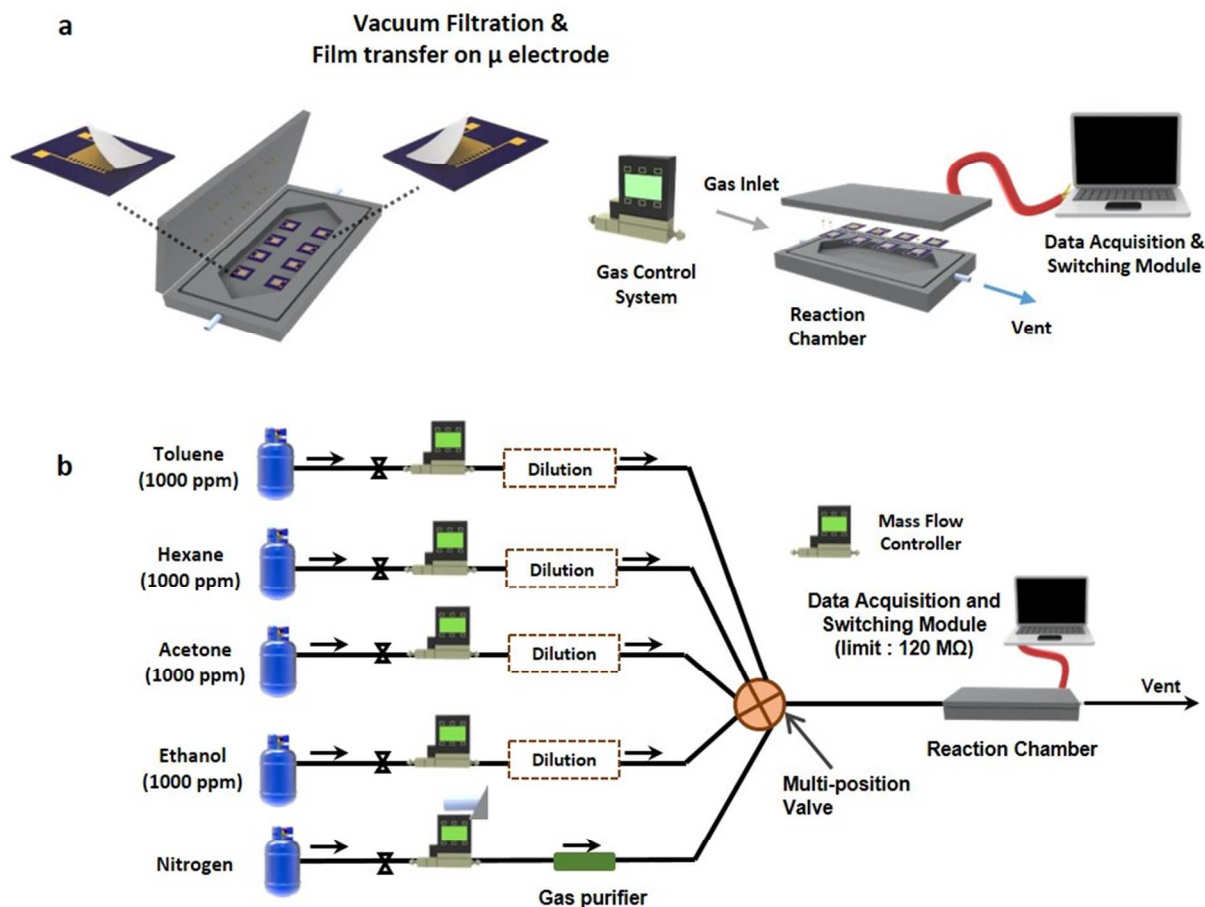


Figure S1. Schematic diagram of overall sensor loading and gas delivery system. (a) Au-doped MoS₂ channel is finely transferred onto μ -electrode with vacuum filtration and loaded in gas reaction chamber. (b) The flow of each VOCs (toluene, hexane, ethanol, acetaldehyde, acetone) and inert N₂ gas were controlled by MFC, tubing system, and multi-position valve to select the target gas into the reaction chamber. The serial dilution system was also introduced to generate the various concentration of target gas from 1 to 1,000 ppm.