

Supporting Information

Reduced Graphene Oxide-Transition Metal Hybrids as *p*-Type Semiconductor for Acetaldehyde Sensing

Yusuke Murashima¹, Mohammad Razaul Karim^{1, 2}, Ryo Furue¹, Takeshi Matsui¹, Hiroshi Takehira¹, Kosuke Wakata¹, Kei Toda¹, Ryo Ohtani¹, Masaaki Nakamura¹, and Shinya Hayami^{1, 3}

¹Graduate School of Science and Technology, Kumamoto University, 2-39-1 Kurokami, Chuo-ku, Kumamoto, 860-8555, Japan.

² Department of Chemistry, School of Physical Sciences, Shahjalal University of Science & Technology, Sylhet-3114, Bangladesh.

³Institute of Pulsed Power Science (IPPS), Kumamoto University, 2-39-1 Kurokami, Chuo-ku, Kumamoto, 860-8555, Japan.

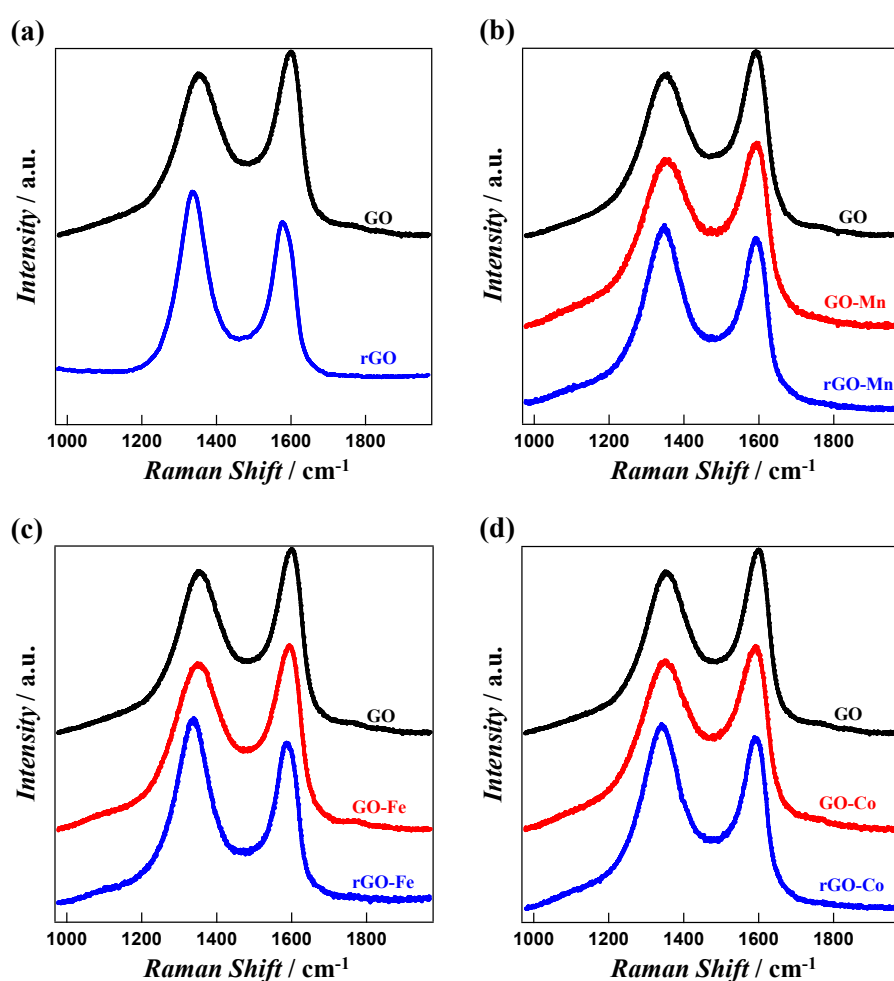


Figure S1. Raman spectra of (a) GO and rGO, (b) GO-Mn and rGO-Mn, (c) GO-Fe and rGO-Fe, and (d) GO-Co and rGO-Co.

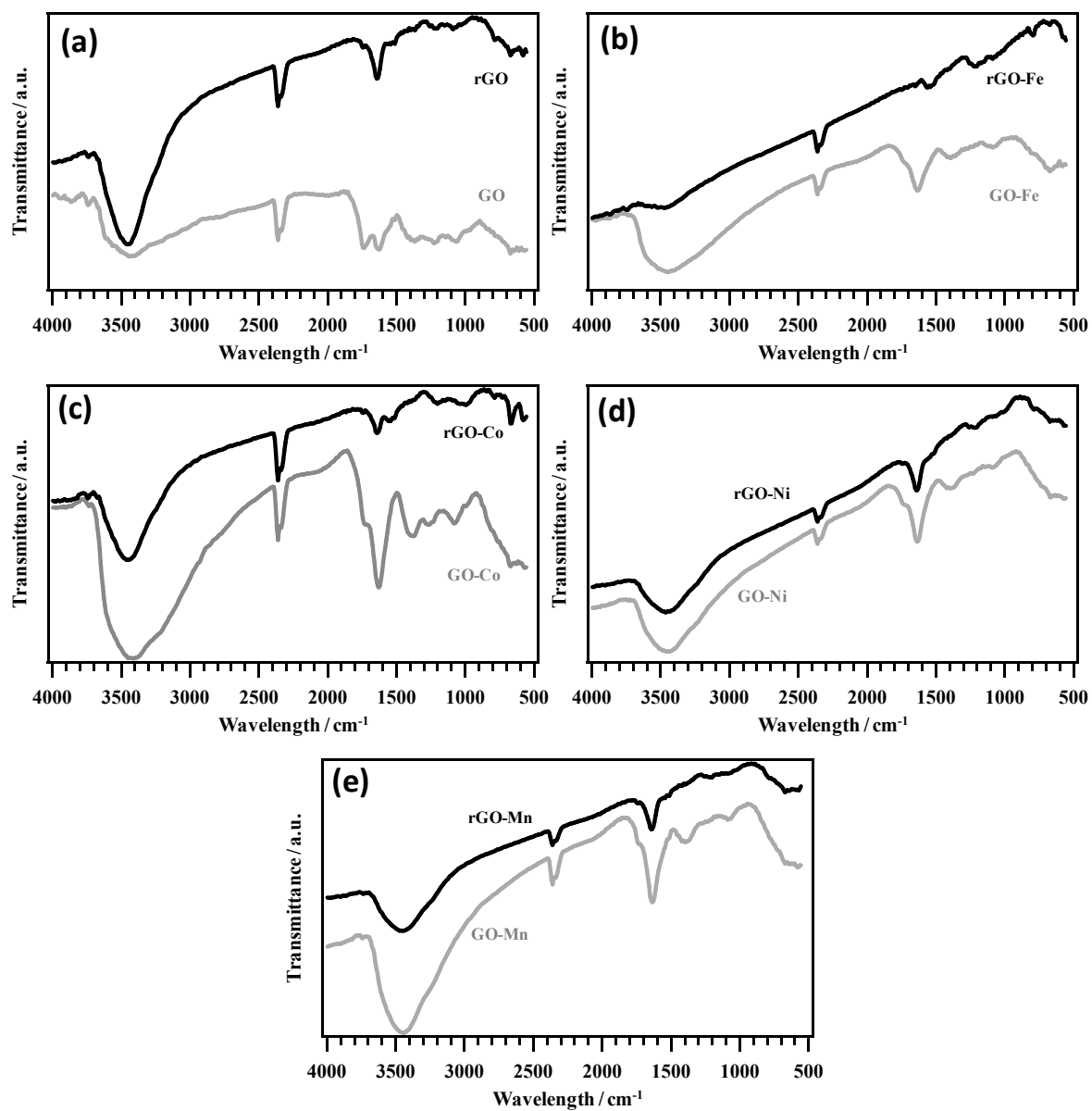


Figure S2. IR spectra of the samples.

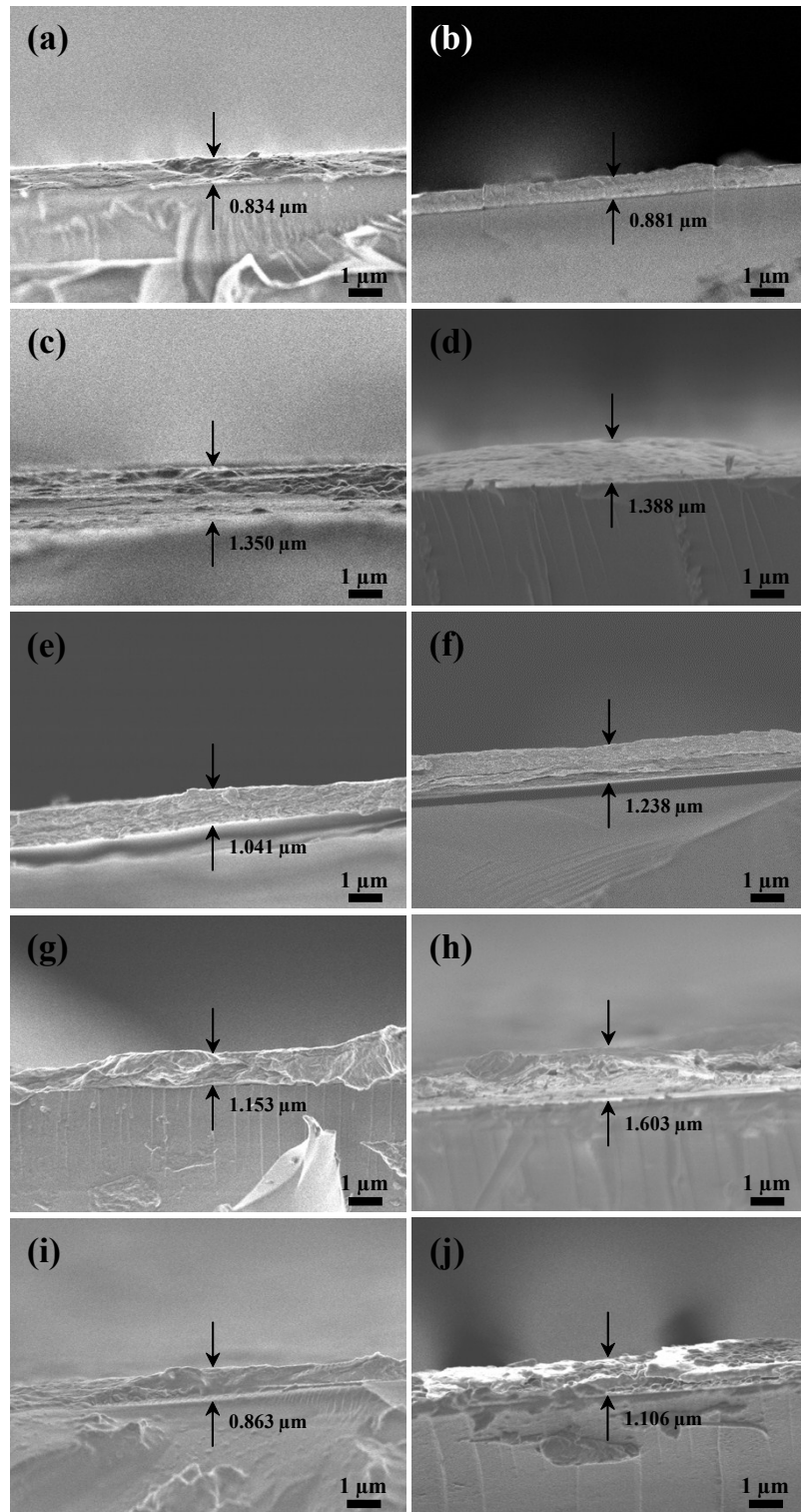


Figure S2. FE-SEM images of cross section for (a) GO, (b) rGO, (c) GO-Mn, (d) rGO-Mn, (e) GO-Fe, (f) rGO-Fe, (g) GO-Co, (h) rGO-Co, (i) GO-Ni and (j) rGO-Ni.

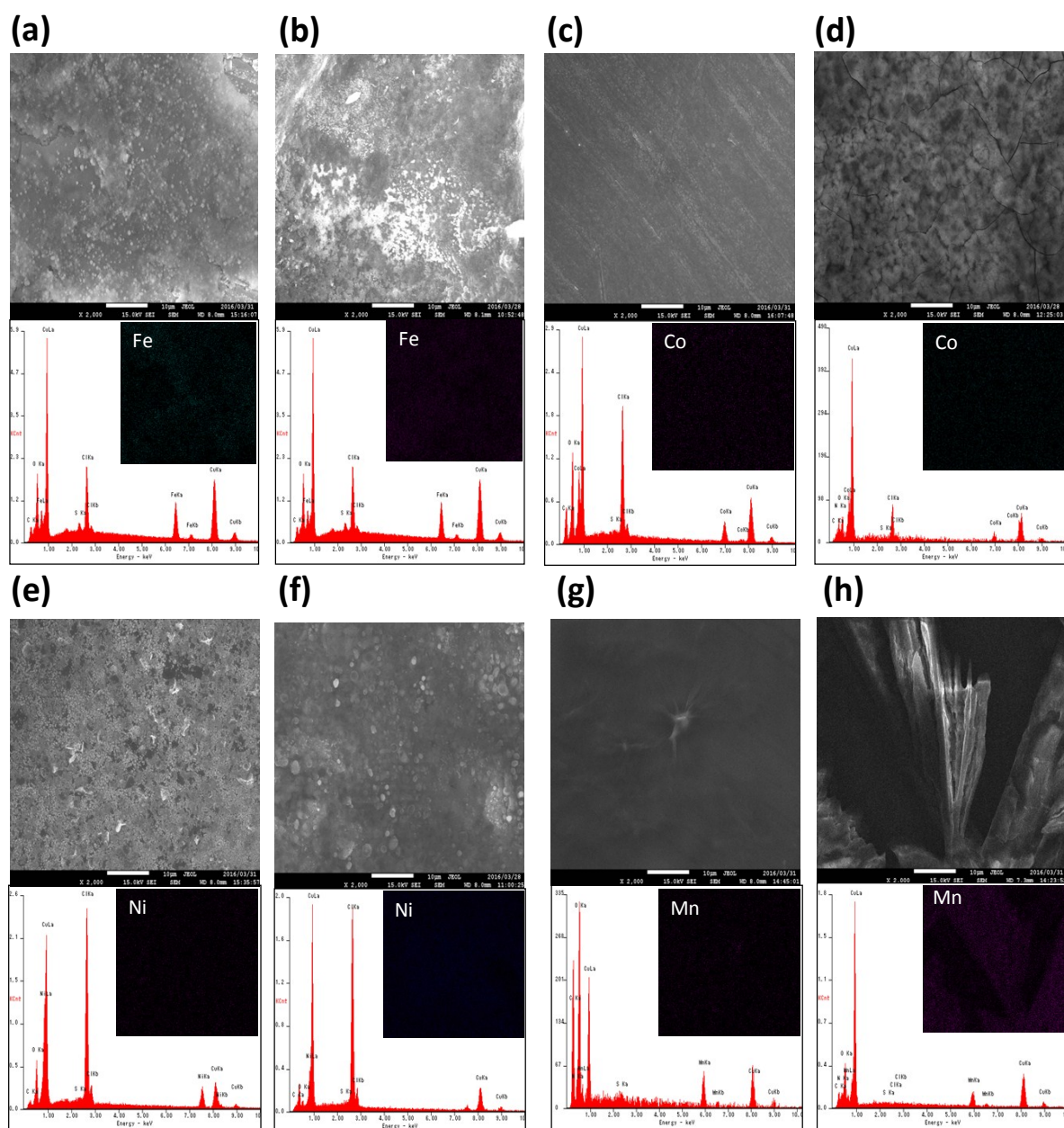


Figure S4. FE-SEM images of cross section for, (a) GO-Fe, (b) rGO-Fe, (c) GO-Co, (d) rGO-Co, (e) GO-Ni and (f) rGO-Ni (g) GO-Mn and (h) rGO-Mn.