# Self-Assembled One-Dimensional Metal-Oxide-Nanowire-Based Electronic Nose

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Exceptionally sensitive gas sensors were produced using self-assembled one-dimensional (1-D) metal-oxide-nanowired. The previous method to make gas sensor based on the 1D nanowire in sophisticated because of its tedious and time consuming process involving synthesis, detachment of nanowires from the substrate by sonication, and dispersal of nanowires on another substrate for detaching on an electrode. In this research, we can detect the toxic gases using self-assembled CuO and ZnO nanowire air-bridge;through manufacturing this structure, more simple method can be realize by 1-D nanowire-based sensor.

One of the most important things in fabricating 1D-nanostructure devices is manipulation and making electrical contacts of the nanostructures. This structure (contacted with nanowire and nanowire) is better than previous process about sensitivity, because the electrical contacts to nanowires are self-assembled during the synthesis of nanowires. Also, these junctions act as electrical conducting path for electrons.