# Highly Sensitive Hydrazine Chemical Sensor Based on ZnO Nanorods Field-Effect Transistor

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A highly sensitive hydrazine chemical sensor has been fabricated based on field-effect transistor (FET) by growing vertically aligned ZnO nanorods directly on silver electrodes using an aqueous method. The FET sensor showed a high sensitivity and a low limit of detection (LOD) of 59.175 μAcm-2μM-1 and ~3.86 nM, respectively. The key advantage of our work is directly grown ZnO NRs, which not only establish tight contacts with the electrode surface but also ensure extremely large surface area and fast electron transport. The encouraging results with a low-cost and ease of material fabrication presents an efficient platform for further development of FET based hydrazine sensors.