

Effect of Humidity on tin oxide gas sensor to Monitor BTEX

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Recently, a tin oxide gas sensor has been used as a cost effective gas sensor to monitor volatile organic compounds (VOCs). Because the tin oxide gas sensor was sensitive to humidity, the effect of humidity on tin oxide gas sensor was investigated. Representative VOCs such as benzene, toluene, ethylbenzene, and *p*-xylene (BTEX), were tested in the presence of 0-80% relative humidity. The effect of humidity decreased as the concentration of BTX increased, while the effect in the case of ethylbenzene was independent of ethylbenzene concentration. The humidity effect should be considered for the application of a tin oxide gas sensor in the monitoring because the effect of humidity on the response of tin oxide sensor was significant.