FACILE STRUCTRED SNO_2@PANI NANOTUBE WITH ENHANCED SENSING PERFORMANCE FOR AMMONIA DETECTION AT ROOM TEMPERATURE *

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Gas sensor with excellent stability and high response at room temperature has drawn many attentions for the demand of it is huge. Surface design provides an inspiration to make the sensor device more useful. Facile electrosping process are used to fabricate core-shell structured SnO_2 polyaniline (PANI) nanotube. It shows that the surface coated PANI shell can enhance its sensor responsibility through reacting with the target Ammonia (NH_3) gas. It shows that the room temperature for the gas response of NH_3 can reach to 15 at 100 ppm. Finally, its good stability is demonstrated by the response-recovery performances of 3 weeks and multiple cycles. This work indicates that this well designed PANI -SnO_2 is a potential way for design ammonia gas sensors.

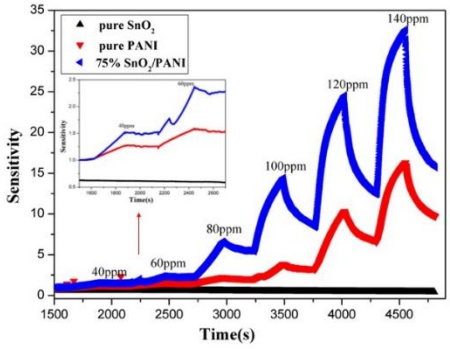

Fig.1. Resistance variation in gas sensing test of different samples.

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