



Supplementary Materials

Boosting the Humidity Performances of $\text{Na}_{0.5}\text{Bi}_x\text{TiO}_3$ by Tuning Bi Content

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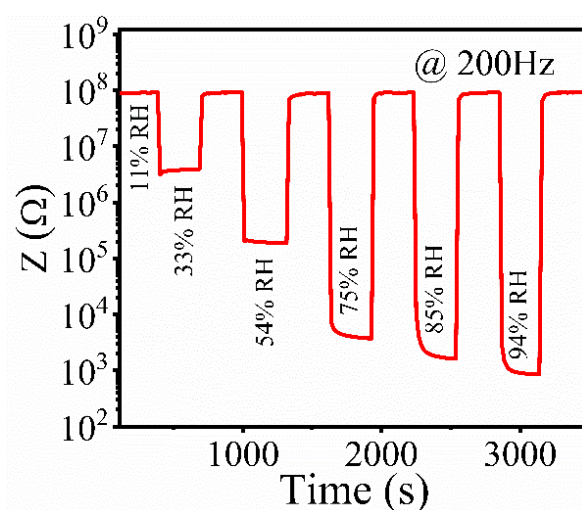


Figure S1. Dynamic response–recovery curve of the $\text{Na}_{0.5}\text{Bi}_{0.35}\text{TiO}_3$ -based sensor between 11 % RH and other RHs.

Table S1. Response/recovery time of the $\text{Na}_{0.5}\text{Bi}_{0.35}\text{TiO}_3$ -based sensor between 11% and other RH levels.

RH level variation (% RH)	Response time (s)	RH level variation (% RH)	Recovery time (s)
11→33	17.2	33→11	22.4
11→54	10.2	54→11	51
11→75	6.8	75→11	10.6
11→85	3.8	85→11	45.9
11→95	4.5	95→11	56.9

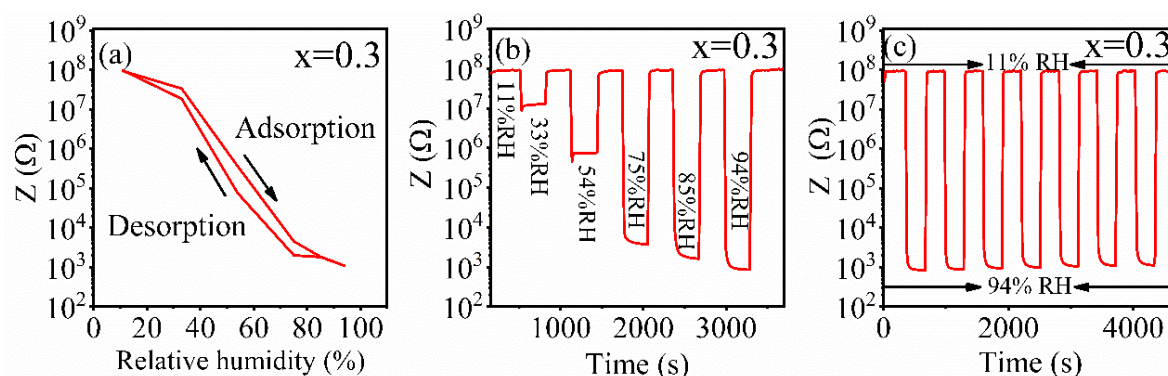


Figure S2. The humidity properties of $\text{Na}_{0.5}\text{Bi}_{0.3}\text{TiO}_3$ -based sensor: (a) Hysteresis behavior, (b) response/recovery curve between 11 % RH and other RHs, and (c) repeatability curve.

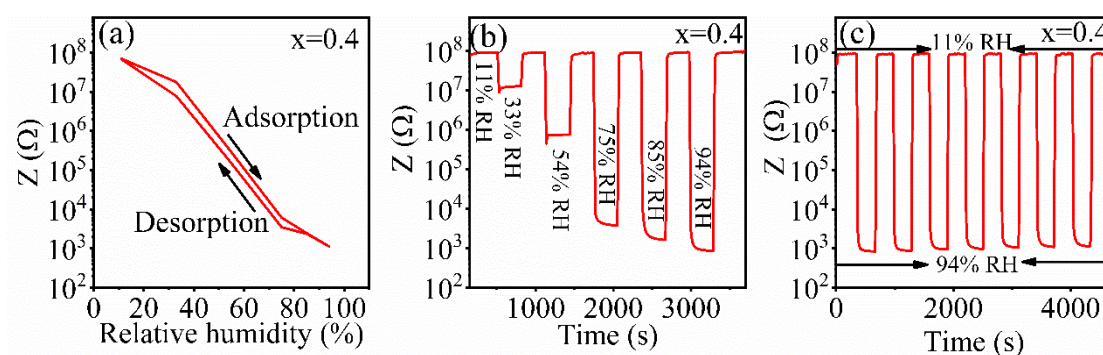


Figure S3. The humidity properties of $\text{Na}_{0.5}\text{Bi}_{0.4}\text{TiO}_3$ -based sensor: (a) Hysteresis behavior, (b) response/recovery curve between 11 % RH and other RHs, and (c) repeatability curve.

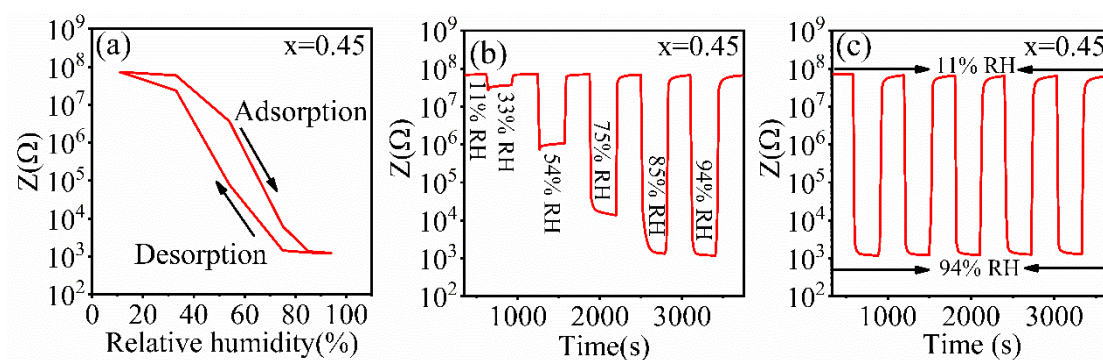


Figure S4. The humidity properties of $\text{Na}_{0.5}\text{Bi}_{0.45}\text{TiO}_3$ -based sensor: (a) Hysteresis behavior, (b) response/recovery curve between 11 % RH and other RHs, and (c) repeatability curve.

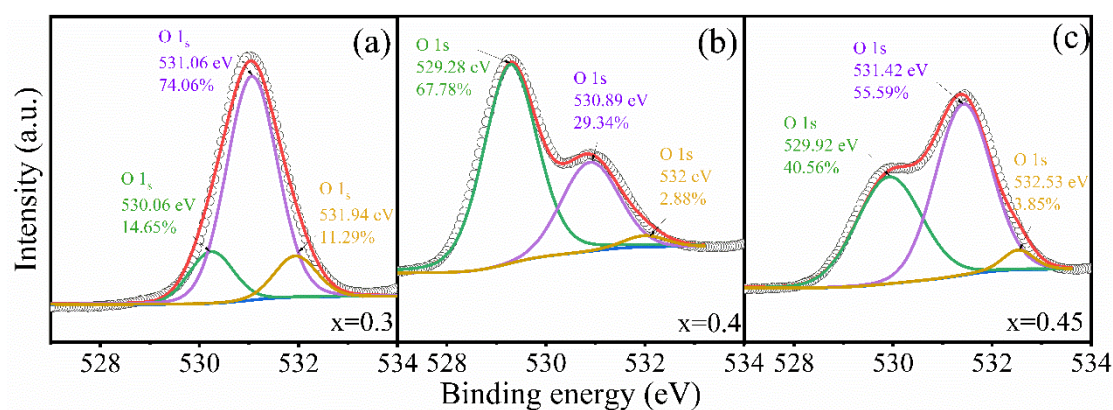


Figure S5. High-resolution XPS spectra of the O 1s (a–c) for the $\text{Na}_{0.5}\text{Bi}_x\text{TiO}_3$ ($x = 0.3, 0.4$, and 0.45).