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Supplementary Materials

Wearable Humidity Sensor Using $Cs_3Cu_2I_5$ Metal Halides with Hydroxyl Selective Phase Transition for Breath Monitoring

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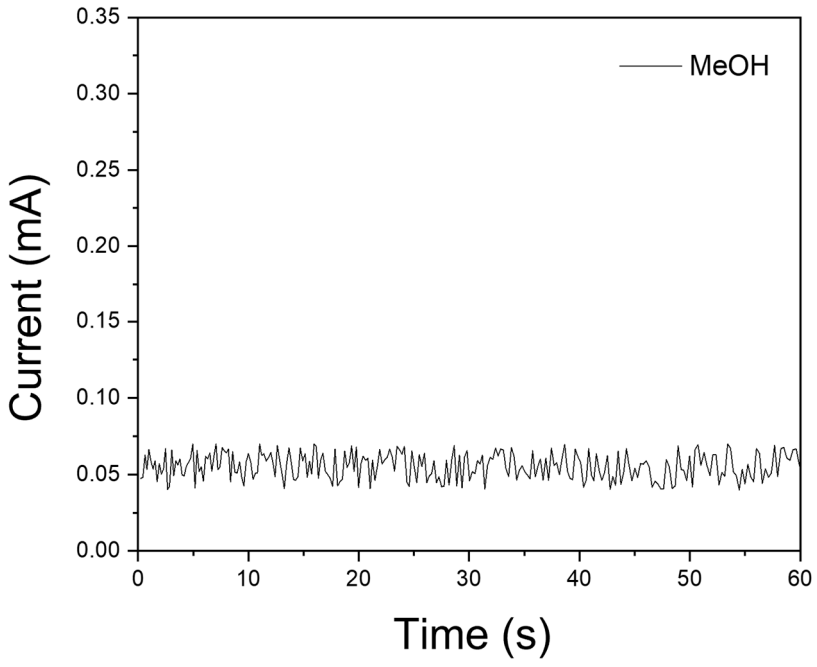


Figure S1. Electrical response of the $Cs_3Cu_2I_5$ gas sensor to methanol (MeOH).

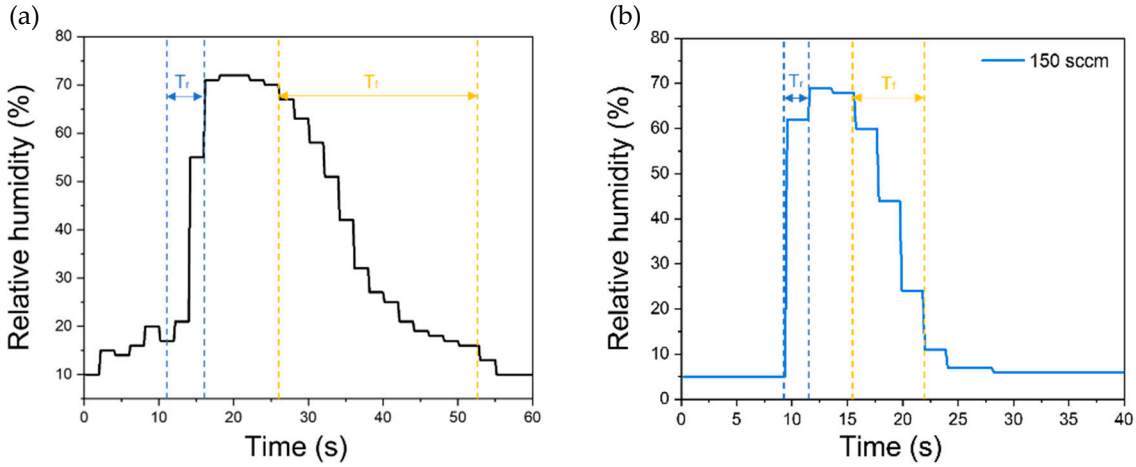


Figure S2. The rising time (T_r) and falling time (T_f) of the (a) DHT11 sensor and (b) $Cs_3Cu_2I_5$ gas sensor under 150 sccm of H_2O vapor.

Table S1. The performance parameters of reported humidity sensors

Materials	RH Range	Response/Recovery time	Ref
CNF/CB/TX-100	30–90%	10 s / 6 s	[1]
o-MWCNTs	33–95%	300 s/ 420 s	[2]
GNPS/MWCNT	20-90%	0.35 s / 2.5 s	[3]
Silk fibroin	59-95%	73.1 s / 11.3 s	[4]
CNT/PI	20-90%	480 s / 600 s	[5]
PEG/Gold Nanoparticle	1.8-95%	1.2 s / 3 s	[6]
$Cs_3Cu_2I_5$	20-90%	2 s / 6 s	This work

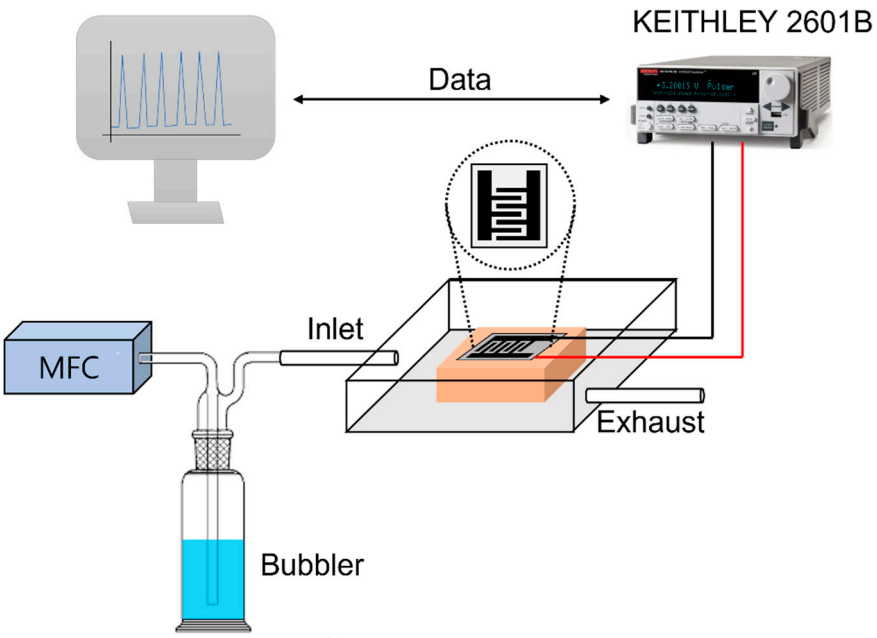


Figure S3. Schematic illustration of gas sensor system configuration.

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