

Supplementary Information

Enhanced Amperometric Acetone Sensing Using Electrospun Non-Stoichiometric WO_{3-x} Nanofibers

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Table S1. response magnitude (current) of WO_{3-x} NFs based sensor towards acetone at 350 °C.

Acetone (ppm)	Response (%)			
	3 V Bias	5 V Bias	7 V Bias	9 V Bias
1.2	9.48	18.23	27.57	34.71
1.8	11.75	22.43	32.72	42.95
2.5	13.50	25.34	37.58	49.37
5.0	19.07	34.61	51.15	68.49
7.5	23.21	41.02	61.71	81.18
10	26.67	46.35	69.17	91.42
12.5	29.58	50.26	74.63	99.96

Table S2. Normalized response of WO_{3-x} NFs based sensor towards acetone at 350 °C.

Acetone (ppm)	Response (μ A)			
	3 V Bias	5 V Bias	7 V Bias	9 V Bias
1.2	25.03	79.55	116.08	148.13
1.8	50.30	95.88	141.33	183.44
2.5	57.40	108.70	161.05	210.15
5.0	79.52	149.31	220.79	292.95
7.5	97.47	178.45	262.73	348.83
10	112.42	201.10	295.98	395.10
12.5	127.60	219.22	325.80	434.96

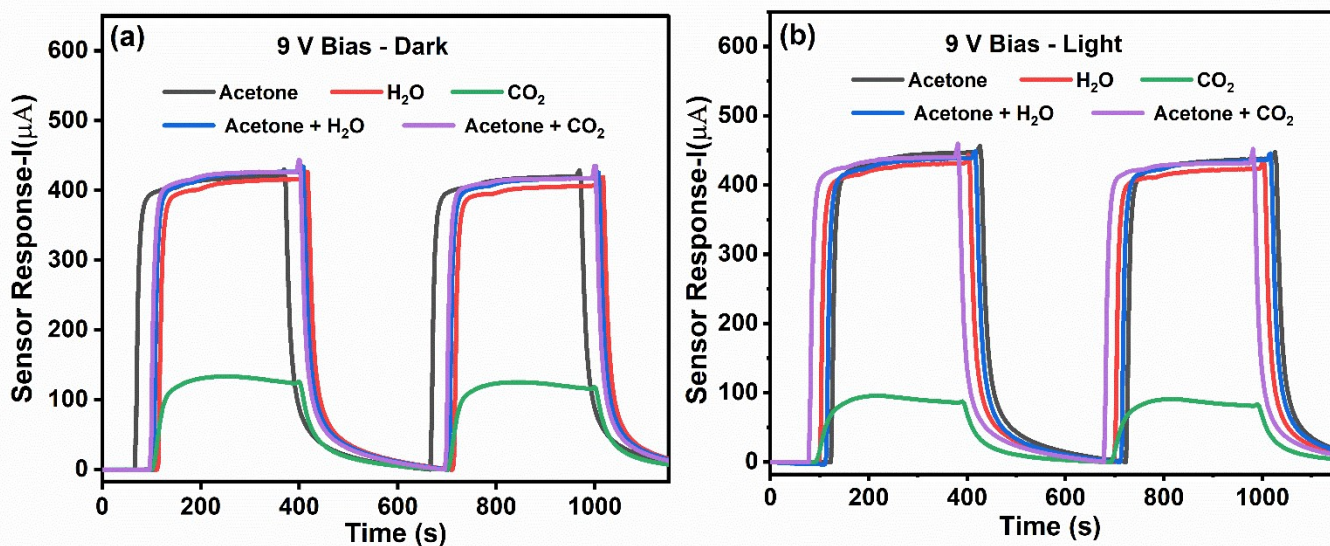


Fig. S1. Normalized response during Selectivity tests of WO_{3-x} NFs based sensor (a) under dark and (b) UV conditions in the interfering environment of CO_2 (500 ppm) and humidity (20% RH at 30°C) and 12.5 ppm acetone.

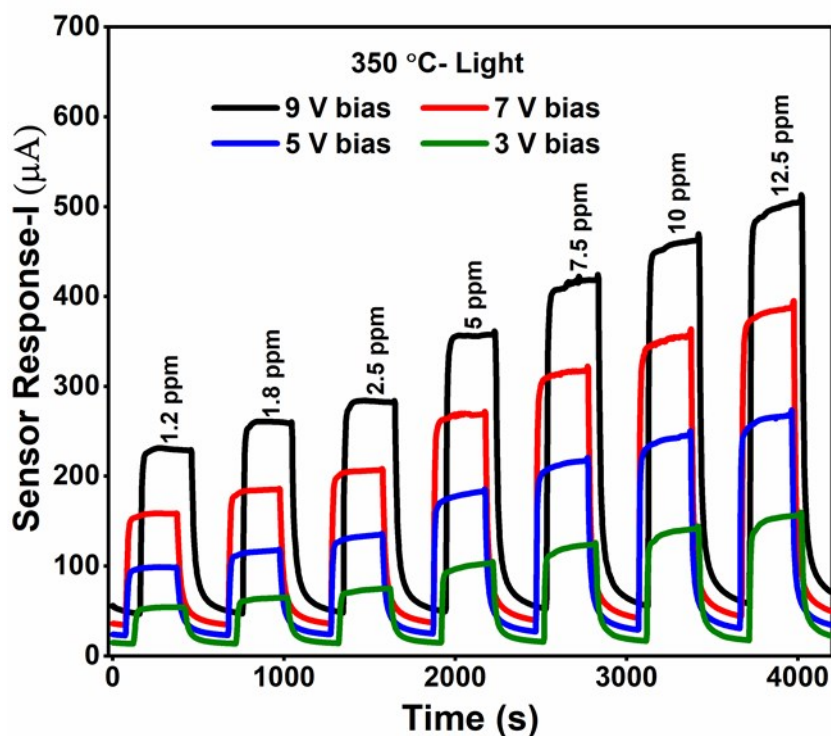


Fig. S2. Gas sensing response of WO_{3-x} NFs at 350°C under UV irradiation for various concentrations and bias voltages.