Supporting Information

Multifunctional sustainable materials: The role of carbon existing protein in the enhanced gas and UV sensing performances of ZnO-based biofilms

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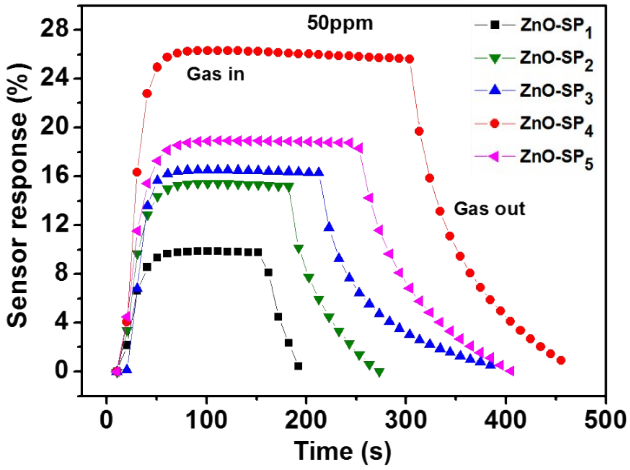

Figure S1: The H_2 response and recovery curves of ZnO-SP_{1-5} measured at 50 ppm at room temperature.

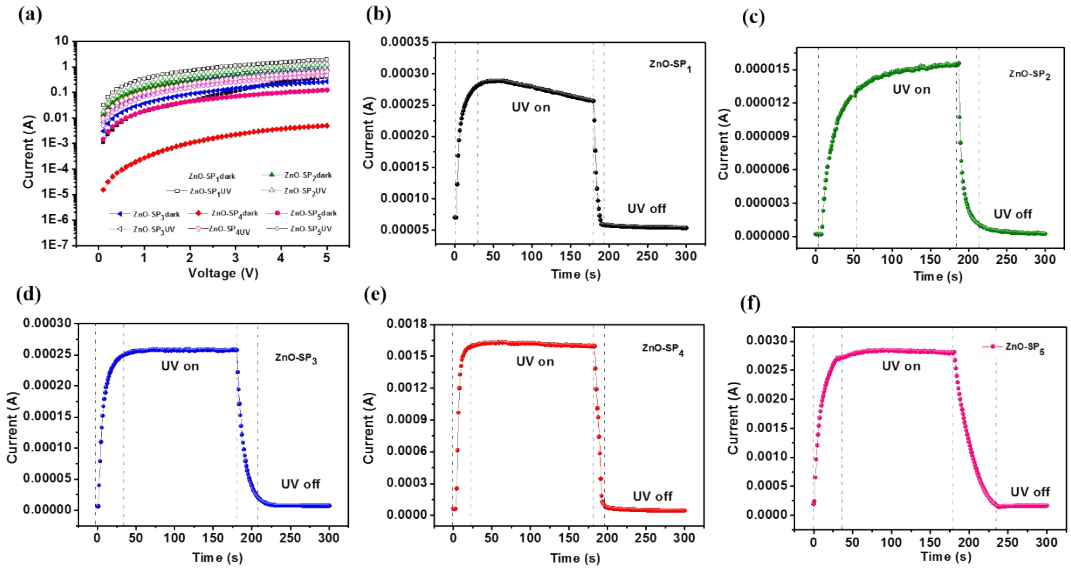

Figure S2: (a) The I-V characteristics of ZnO-SP_{1-5} measured under the applied bias of 5 V at room temperature and (b to f) I-t characteristics of ZnO-SP_{1-5} measured under the applied bias of 5 V at room temperature.

Table S1 Comparison of sensor response of as-fabricated H_2 sensors in this study.

As-fabricated H_2 sensors	Sensor response (%)				
	10 ppm	30 ppm	50 ppm	100 ppm	200 ppm
ZnO-SP_1	4.002	7.04	9.8	14.38	18.5
ZnO-SP_2	7.98	10.5	15.4	20.69	27.9
ZnO-SP_3	10.75	13.8	16.5	20.44	24.7
ZnO-SP_4	**16.37**	**20.3**	**26.32**	**31.24**	**36.4**
ZnO-SP_5	8.33	11.76	18.92	21.9	24.9

Table S2 Comparison of sensor response of as-fabricated UV sensors in this study.

As-fabricated UV sensors	*Responsivity* *(AW^{-1})*
ZnO-SP_1	445
ZnO-SP_2	470
ZnO-SP_3	510
ZnO-SP_4	**650**
ZnO-SP_5	330