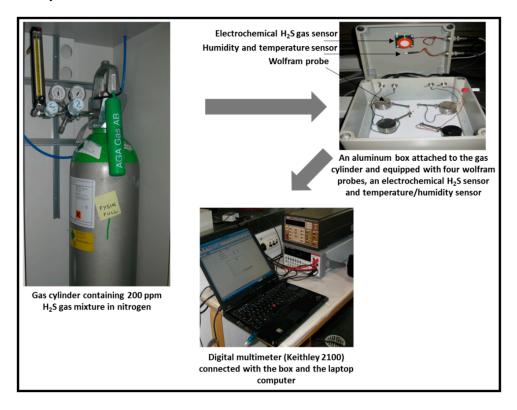
## Supplementary Materials



**Figure S1.** Pictures showing the experimental setup.

**Table S1:** Average RGB values of the sensing films on paper substrate towards different concentrations of H<sub>2</sub>S with print density of 2028 drops/mm<sup>2</sup>, 8112 drops/mm<sup>2</sup> and 16224 drops/mm<sup>2</sup>

Sample 1: 2028	R	G	В
drops/mm²	mean	mean	mean
Reference	229.6	229.6	229.6
Exposed to 200 ppb	219	208	188.7
Exposed to 1.5 ppm	211	191.6	155
Exposed to 5 ppm	204.6	178	129
Exposed to 10 ppm	203	173.5	121.6
Sample 4: 8112 drops/mm2			
Reference	212.5	205.5	186.5
Exposed to 200 ppb	213.4	207.4	186.5

Exposed to 1.5 ppm	209	197.3	165.4
Exposed to 5 ppm	199.8	180.5	135.3
Exposed to 10 ppm	182	148.3	92
Sample 8: 16224 drops/mm²			
Reference	203.5	202.5	182.5
Exposed to 200 ppb	206	205	185.5
Exposed to 1.5 ppm	202.9	200	175
Exposed to 5 ppm	190.5	174.9	131.8
Exposed to 10 ppm	163.7	141.3	85