Supporting Information

Configuring highly sensitive formaldehyde colorimetric sensor on hierarchical wood substrate

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**Fig. S1** show the relationship between NaOH addition and pH and the initial colors of W-c in the range of NaOH addition, where the relationship between the amount of sodium hydroxide added and pH is shown in **Fig. S1a**, the initial color of the W-c sensor base-material was red, the wood-block colors shown in **Fig. S1b**.

**Figure S2a** shows the color difference of cotton fabric in 500 ppb formaldehyde solution under different humidity environment at 35°C. **Figure S2b** shows the color difference measured for W-l0.025 sensor at different temperatures of 500 ppb at 60%