Supplementary Information

A thermal-responsive microfluidic system integrated by shape memory polymer-modified textile and paper-based colorimetric sensor for human sweat glucose detection

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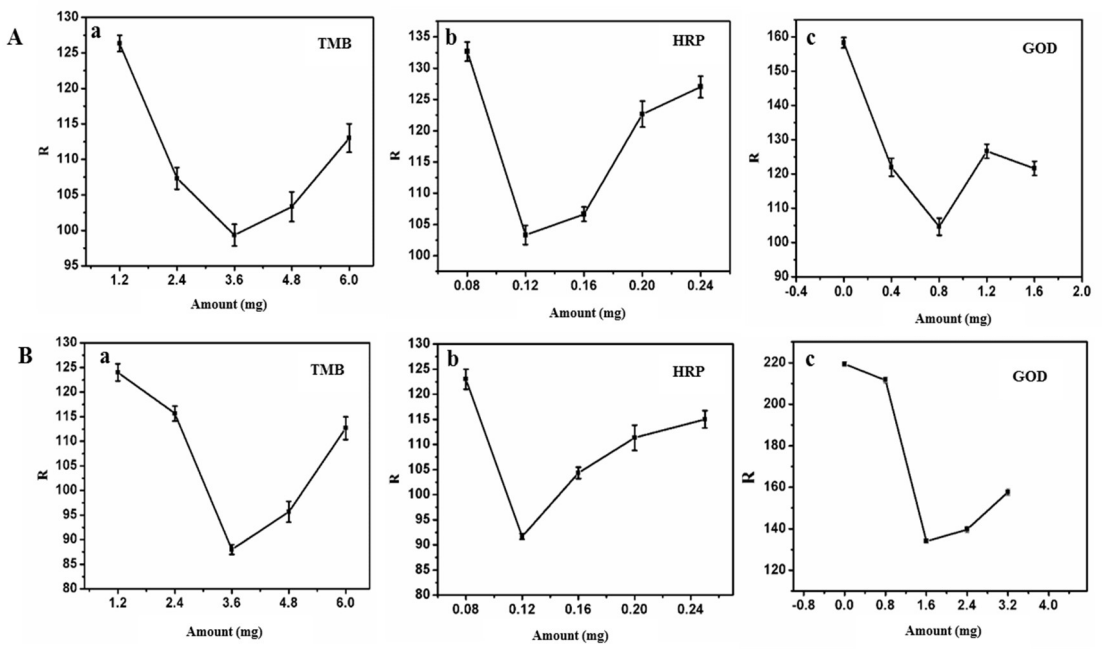

Figure S1. Optimization of the amount of TMB (a), HRP (b) and GOD (c) at room temperature (A) and 60 °C (B), respectively.

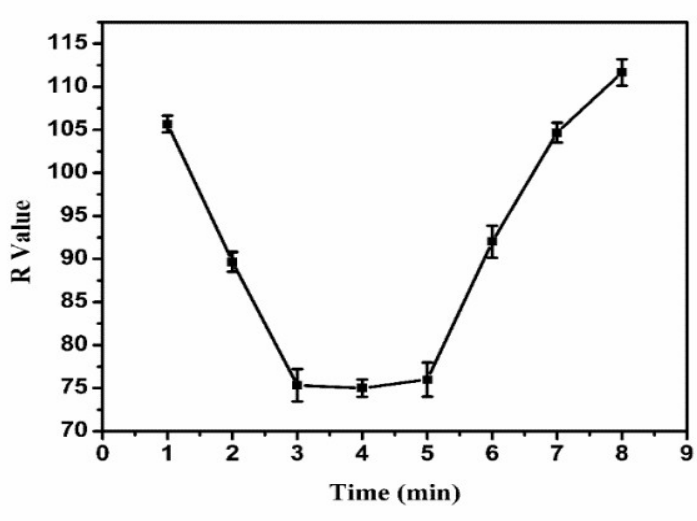

Figure S2. Optimization of reaction time in the sensing unit.

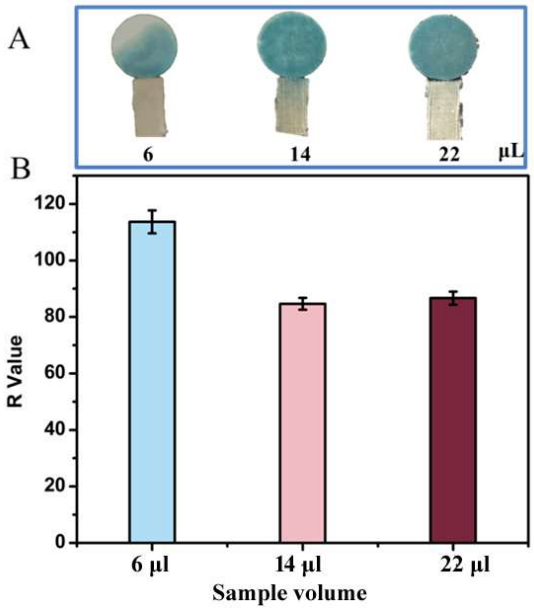

Figure S3. Effect of sample volume on paper-based glucose detection.

Table S1. Comparison of the sensing performance

Ref.	Analytical technique	Materials and platform	Recognition element	dynamic range	LOD
[1]	Electrochemical	PET wristband/handband	GOD	0-300 μM	_
[2]	Electrochemical	Metal and Metal/Oxide thin film	Gold/Zinc Oxide	0.01-200mg/dl	0.1 mg/dl
[3]	Piezoelectrical	Tatto-Based and Nanoarrays	GOD	0-200 μM	0.01 mM
[4]	Colormetric	PDMS and Paper	GOD	0.5-15mM	200 μM
[5]	Colormetric	Cotton thread and paper	GOD	35-250 μM	35 μM
This work	Colormetric	Cotton and paper	GOD	0-600 μM	13.49 μM

References:

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[4] Koh A, Kang D, Xue Y, et al. A soft, wearable microfluidic device for the capture, storage, and colorimetric sensing of sweat [J]. Science Translational Medicine, 2016, 8(366):366ra165.

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