

Capillary-based pH-responsive nano-enzymatic SERS sensors for the diagnosis of *Helicobacter pylori*

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1. Supplementary Tables

Fig. S1 XRD patterns of Au@Pd NRs

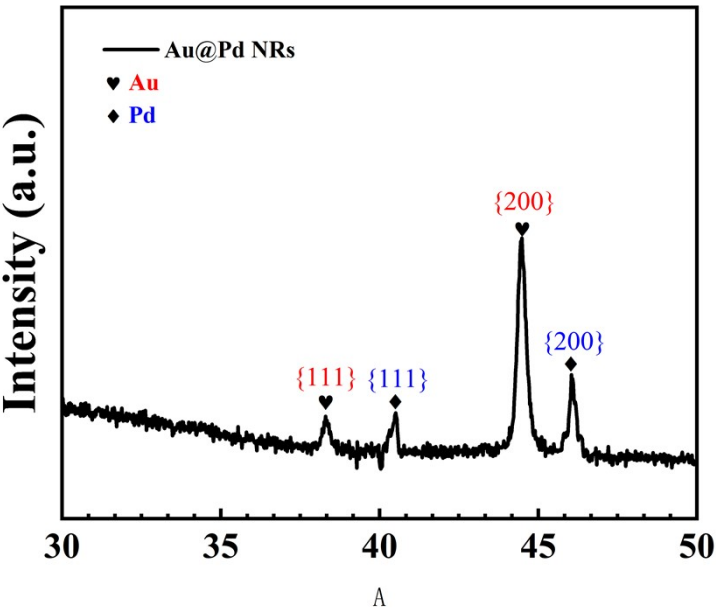


Table S1 Concentrations of urease detected by SERS using the proposed sensor and Urease Activity Detection Kit in healthy populations

Samples	SERS	Urease Activity Detection Kit
1	41.91	37.78
2	42.21	46.09
3	51.12	56.93
4	47.66	51.78
5	45.44	49.45
6	77.79	72.88
7	49.62	52.98
8	38.49	34.61
9	42.38	46.39

10	50.85	54.56
11	50.79	56.07
12	44.12	48.26
13	46.09	44.01
14	47.07	43.12
15	32.52	39.37
16	54.64	48.09
17	44.28	47.63
18	40.81	43.99
19	68.26	66.73
20	51.92	47.47
21	34.08	39.16
22	63.69	71.82
23	52.61	46.49
24	50.42	47.11
25	36.44	38.57
26	58.67	53.02
27	75.41	79.04
28	70.73	74.61
29	42.02	44.66
30	50.46	58.05

Table S2 Concentrations of urease detected by SERS using the proposed sensor and Urease Activity Detection Kit in H. pylori patients

Samples	SERS	Urease Activity Detection Kit
1	109.38	113.31
2	50.28	54.66
3	110.96	115.44
4	89.03	97.52
5	100.28	97.32
6	56.45	63.67
7	101.64	92.84
8	106.61	112.74
9	72.45	78.97
10	116.28	110.95
11	108.39	113.96
12	89.34	98.26
13	79.96	77.69
14	102.53	109.25
15	75.71	78.28
16	60.94	66.52
17	109.18	112.89
18	99.69	96.75
19	92.17	100.21

20	100.08	103.66
21	71.58	71.23
22	95.53	100.79
23	102.59	96.11
24	105.23	110.12
25	106.21	114.56
26	54.15	57.29
27	91.78	99.94
28	100.93	103.71
29	109.18	113.33
30	100.69	107.54

Table S3 Diagnostic value of urease content in 60 clinical saliva samples

Sample	Target	Sensitivity (%)	Specificity (%)	Youden index	AUC
Healthy VS H. pylori	Urease	86.7	93.3	80.0	95.9