Supporting information

Bioinitiated Light Addressable Potentiometric Sensor for Unlabeled Biodetection and its MEDICI Simulation

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(A) XPS spectra

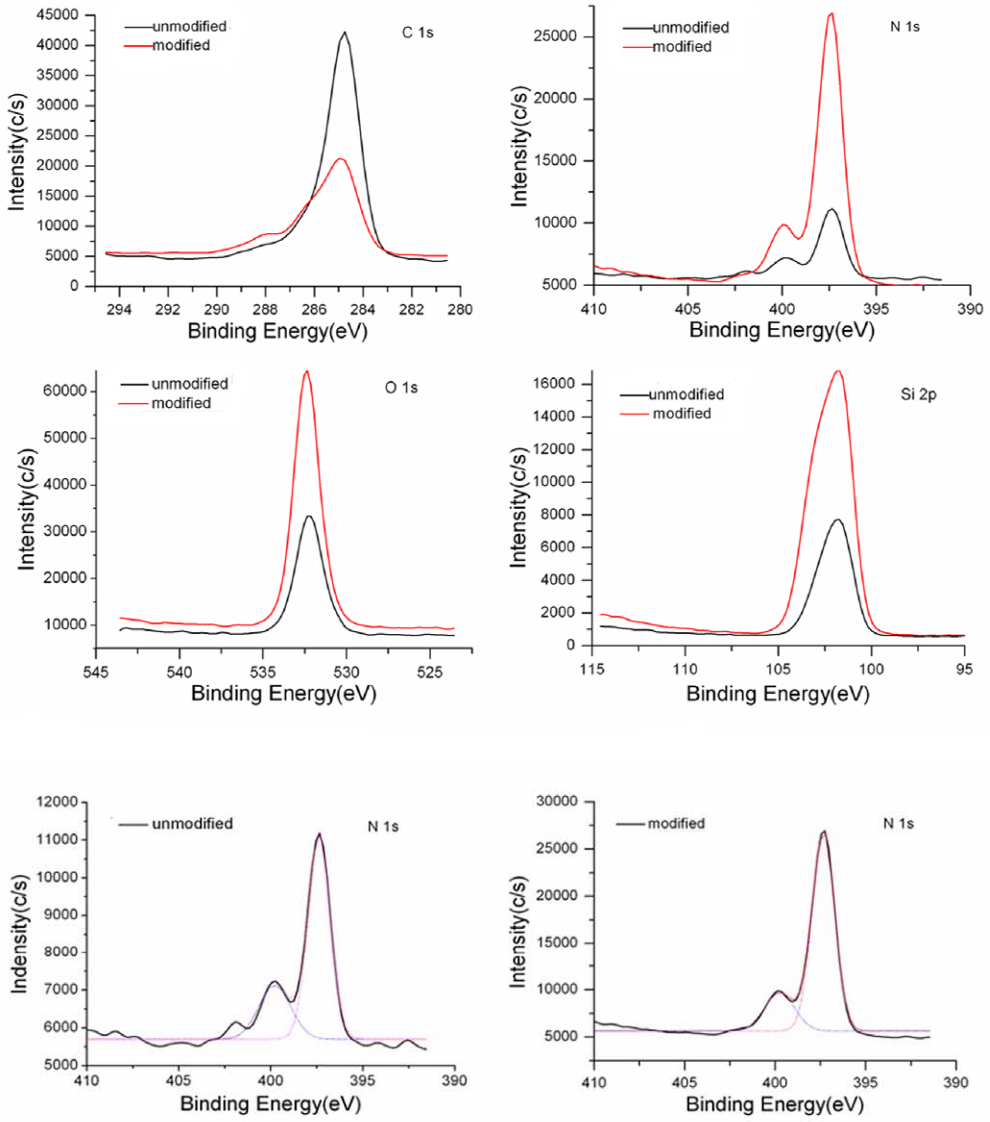

Fig. 1S. Core XPS spectra of C1s, N1s, O1s and Si2p before and after modified by L-DOPA (a) and the fitted curves of N1s (b).

Table 1S. XPS determination of the relative atomic composition

	C1s(%)	N1s(%)	O1s(%)	Si2p(%)
unmodified	62.35	6.96	19.91	10.6
L-DOPA modified	28.18	8.18	30.63	22.07

B. Structure of LAPS' chips

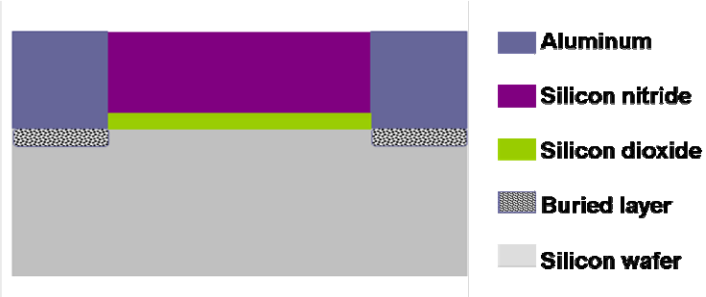

Fig. 2S Cross section of LAPS' chips

C. Mesh grid in LAPS simulation

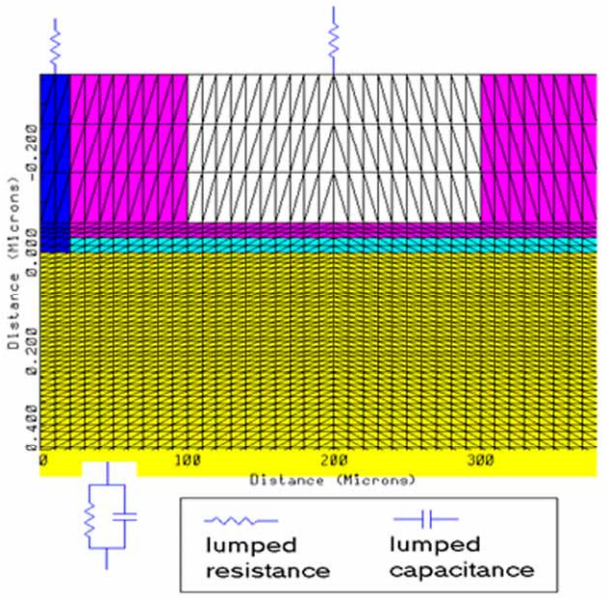

Fig. 3s Part of the mesh grid used in the simulation of LAPS. The lumped resistances and capacitances are modified according to the surface states of LAPS in the experiments.