

33

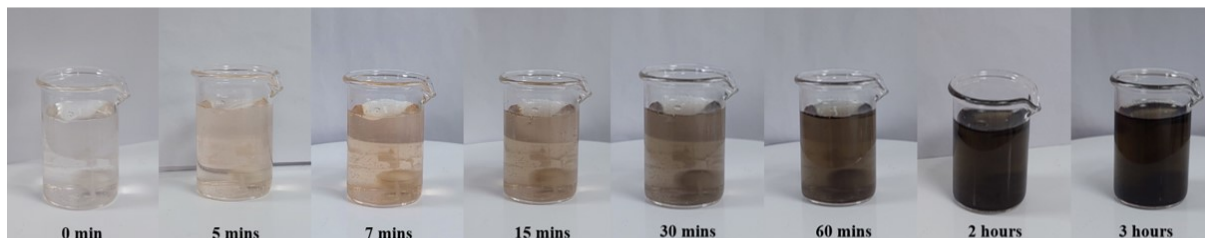
34

Figure 1S. Photos of rGO/FTO electrode, AuNPs/rGO/FTO electrode, and

35

PDA/AuNPs/rGO/FTO electrode (from left to right).

36



37

38

Figure 2S. The change in solution color during oxidation of dopamine in Tris (pH 8.5).

39

40

41

42

43

44

45

46

47

48

49

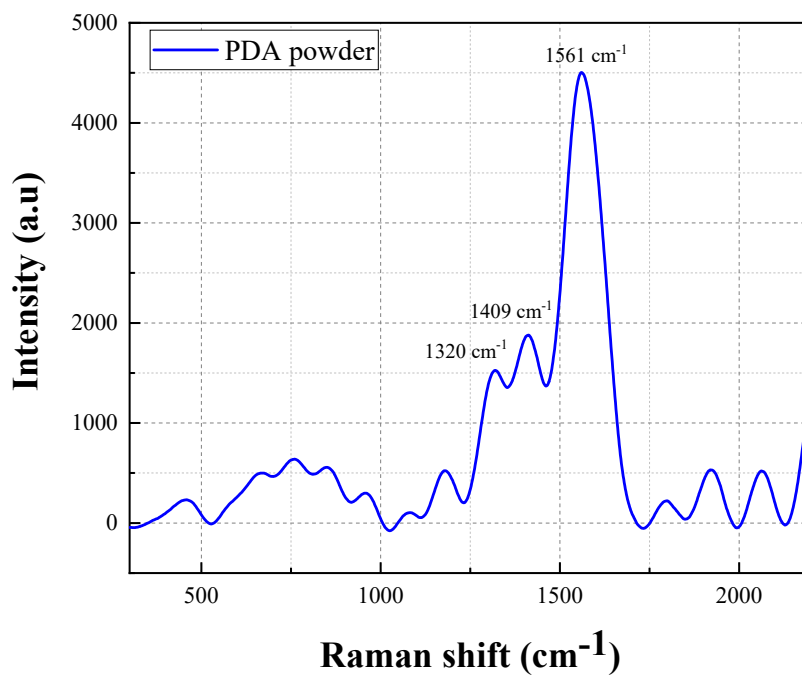
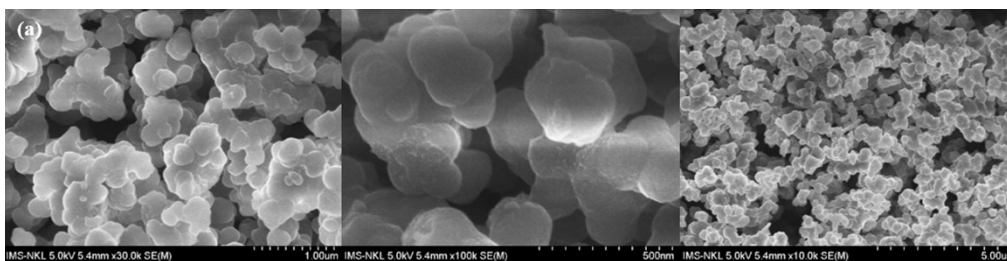
50

51

52

53

54



55

56

57

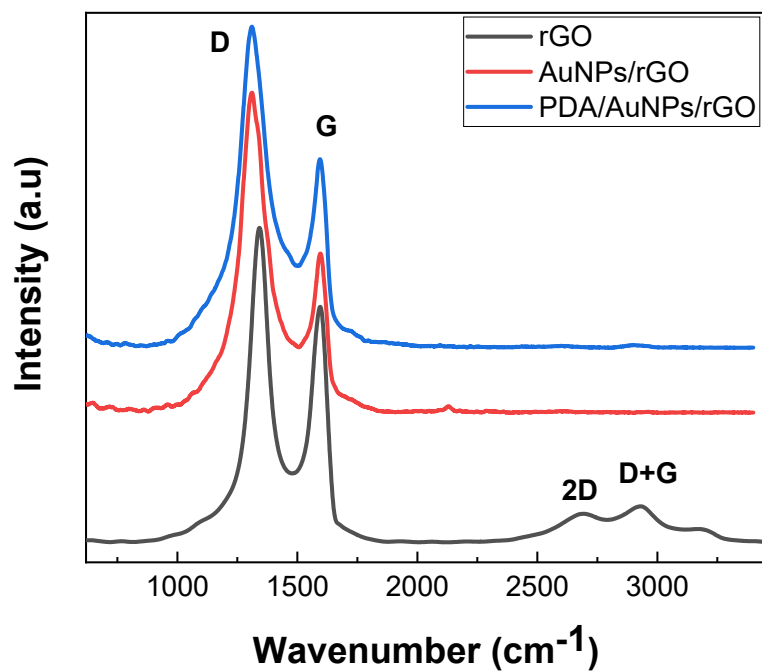
58

59

60

61

Figure 3S. Morphology and structural behaviors of PDA powder.



62

Figure 4S. Raman spectra of FTO electrodes modified with rGO, AuNPs/rGO, PDA/AuNPs/rGO

63

64

65

66

67

68

69

70

71

72

73

74

75

76

77

78

79

80

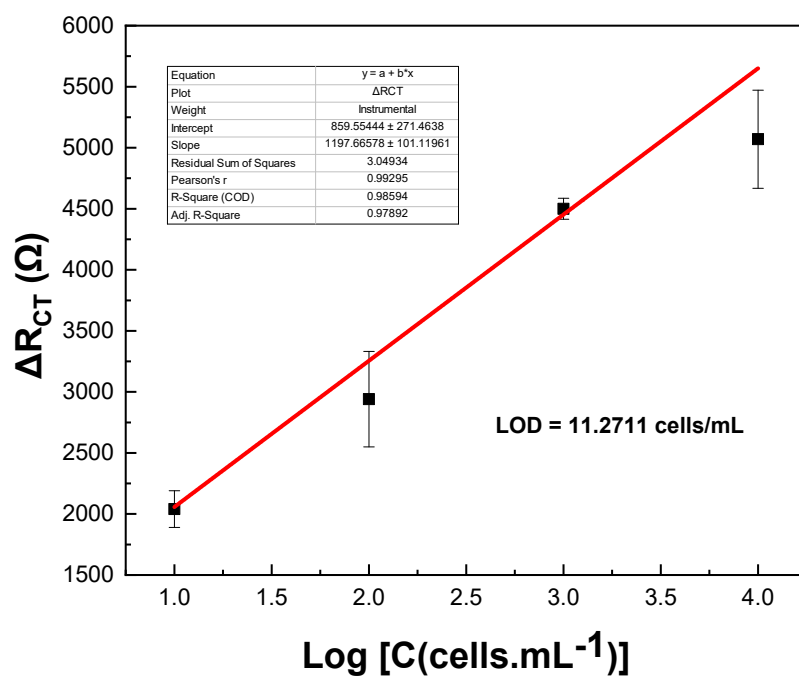


Figure 5S. Cell detection on PDA/FTO

81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100

101

Table 1S. EDX analysis data

Sample	Element	Weight%	Atomic%
PDA/AuNPs/rGO/ FTO	C	6.97	25.30
	O	16.90	46.02
	Si	2.34	3.63
	Ca	1.12	1.21
	Sn	53.17	19.52
	Au	19.50	4.31

102

103

104

Table 2S. Comparisation of cytosensing performances for circulating tumor cells.

Electrode	Targeted cell	Linear range (cells.mL ⁻¹)	Detection limit (cells.mL ⁻¹)	Ref
PGE/PDA	A-549 (lung cancer)	1E2 – 1E5	25	(23)
AuE/Carbon black/AuNPs/anti- EpCAM	A-549 (lung cancer)	5-1E6	1	(43)
AuE/GO-AuNSs@rBSA-FA	MGC-803 (gastric cancer)	3E2 – 7E6	100	(26)
GCE/Bpene@PDA-SCX8-FA	LNCaP (prostate cancer)	2E2-1E5	36	(44)
AuE/MoS ₂ /FA	HeLa (cervical cancer)	50-1E5	52	(45)

105

106

PGE: Pencil graphite electrode

107

AuNSs: gold nanostars

108

BSA: bovine serum albumin

109

FA: Folic acid

110