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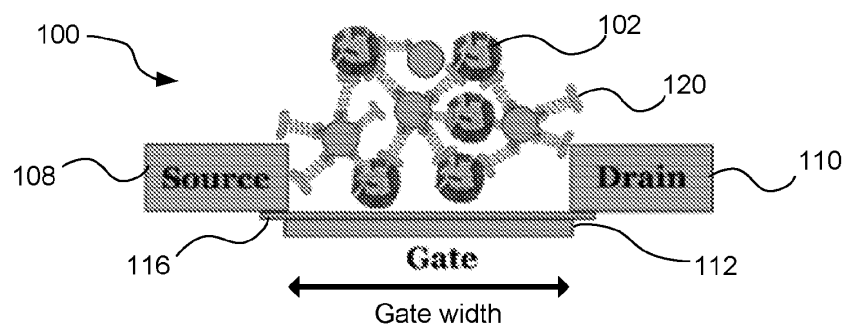


FIG. 1a

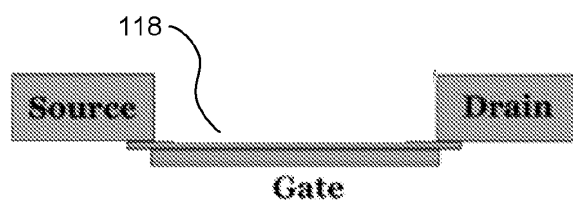


FIG. 1b

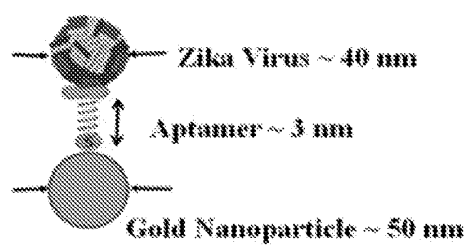


FIG. 1c

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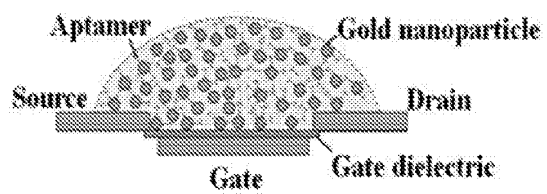


FIG. 1d

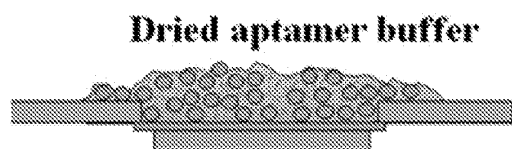


FIG. 1e

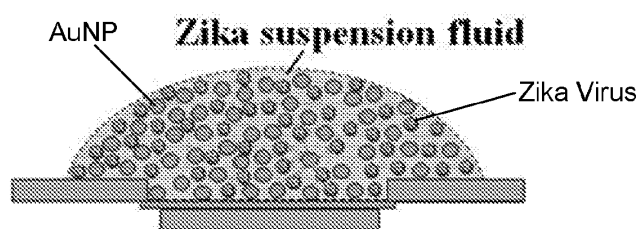


FIG. 1f

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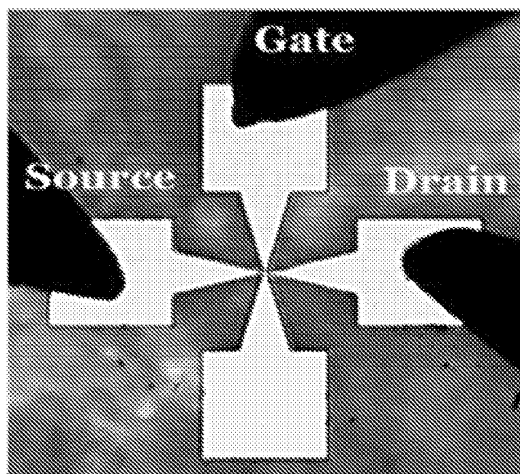


FIG. 2a

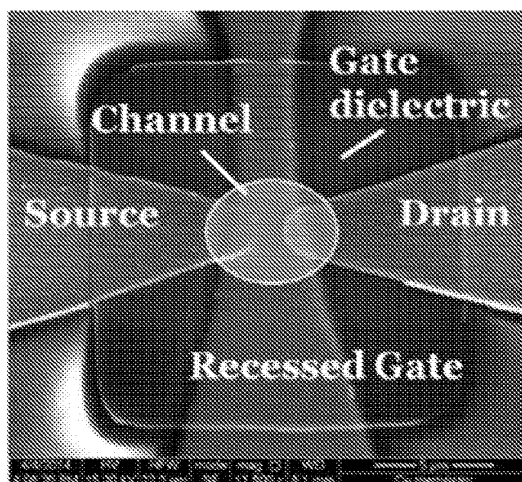


FIG. 2b

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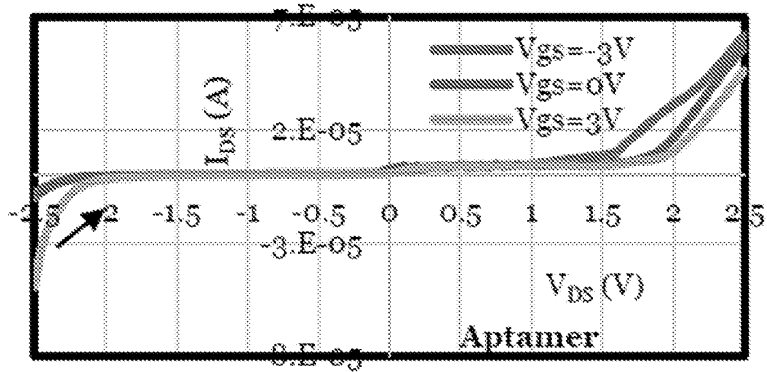


FIG. 3a

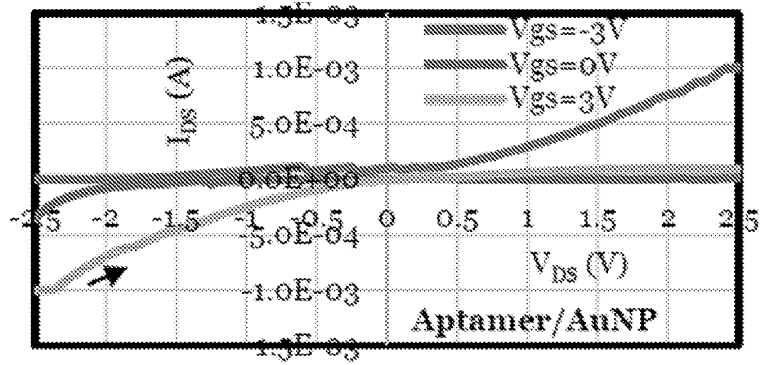


FIG. 3b

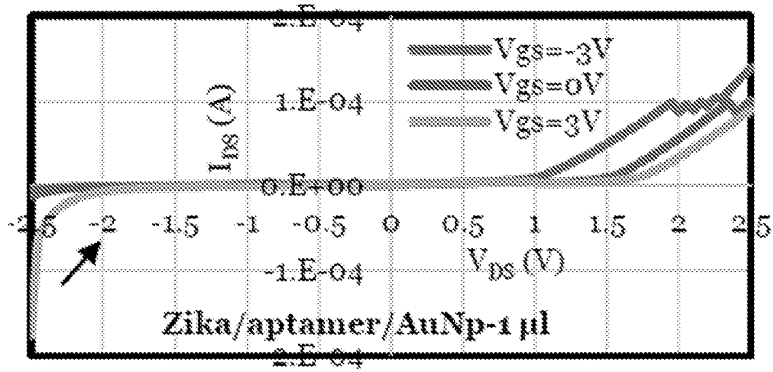


FIG. 3c

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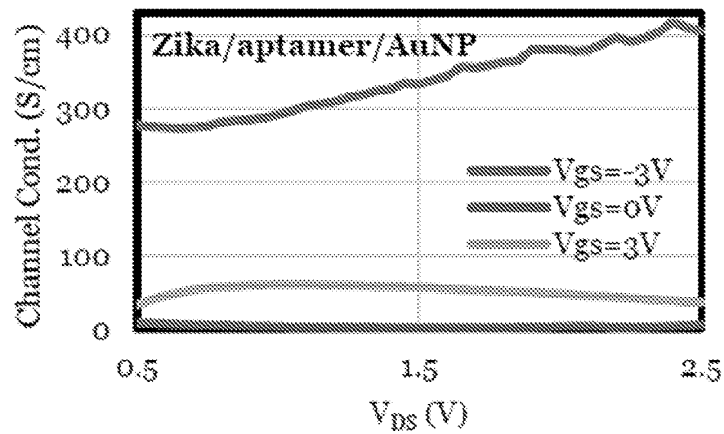


FIG. 3d

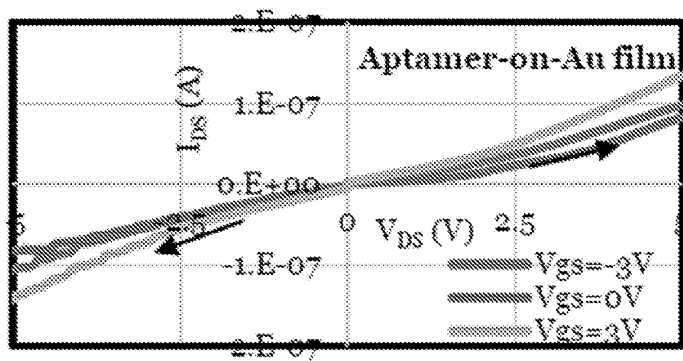


FIG. 4a

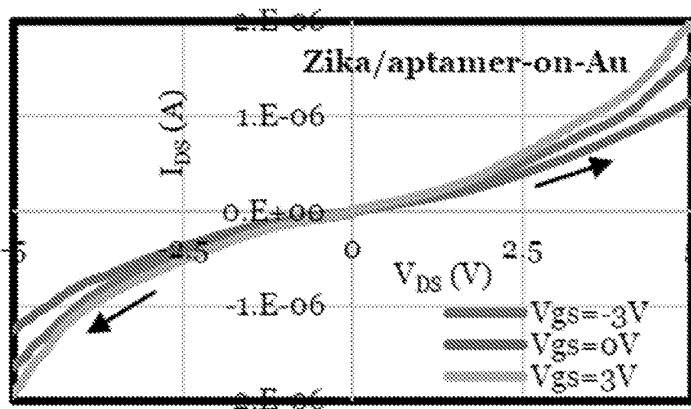


FIG. 4b

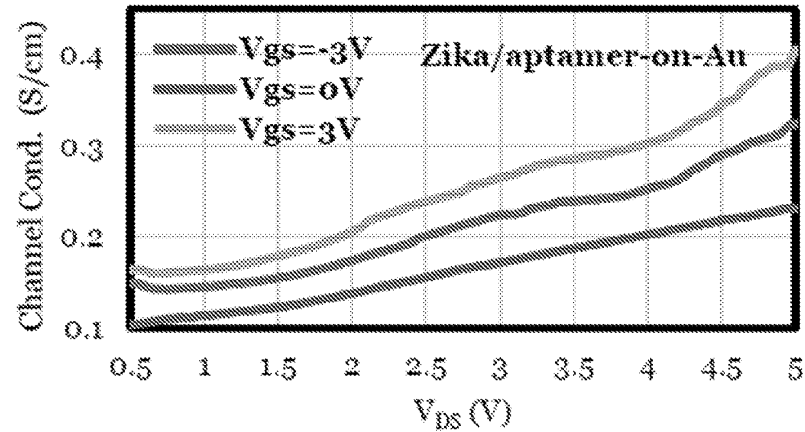


FIG. 4c

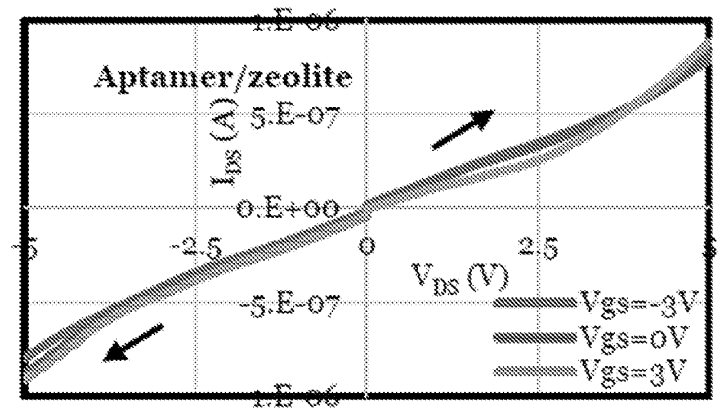


FIG. 5a

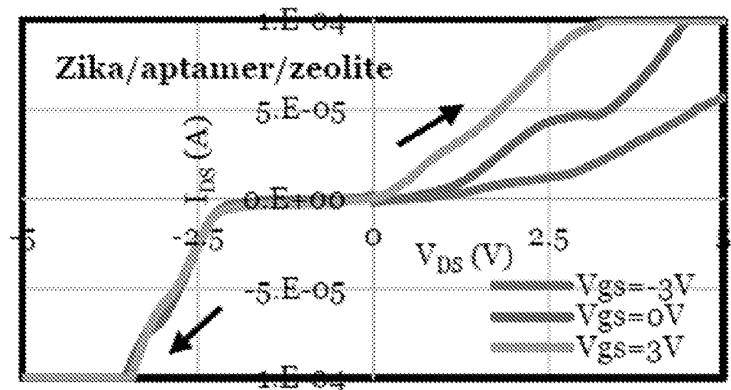


FIG. 5b

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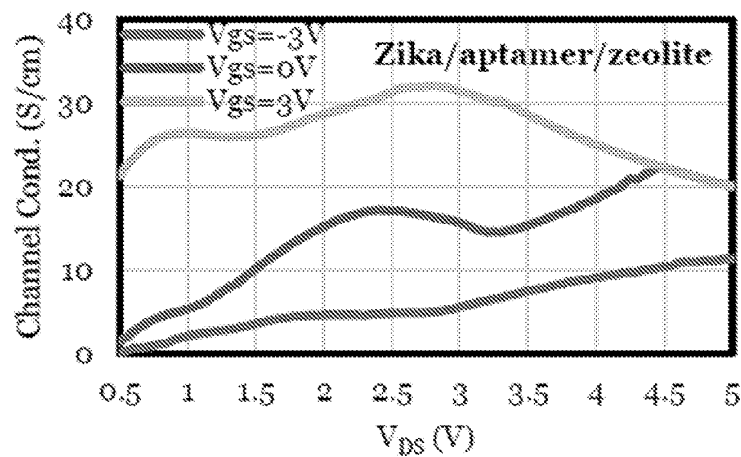


FIG. 5c

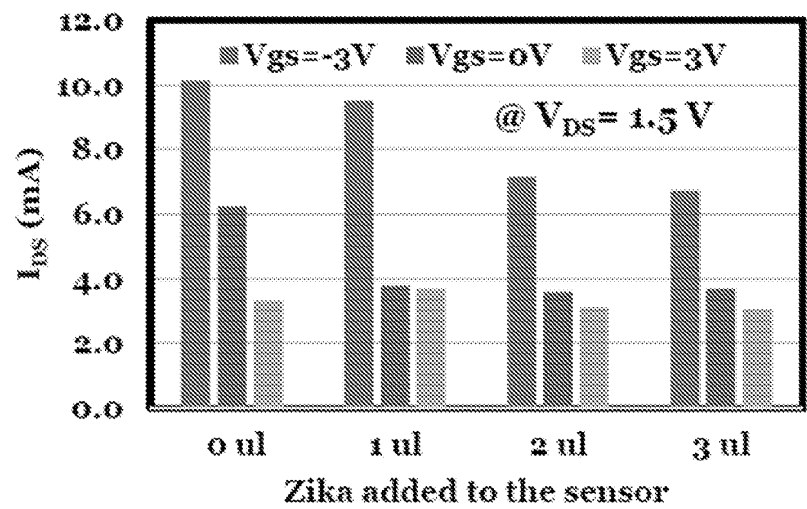


FIG. 7

Device: Channel Conductance	Zika/apptamer/AuNP channel (p-type)		Zika/appt./Au film/ (n-type)		Zika/appt./zeolite (n-type)	
	Apt./AuNP (alone)	Zika/AuNP/appt.	Apt./ Au film	Zika/appt./ Au film	Apt./ zeolite	Zika/zeolite/ apptamer
G _{ch} (V _g = -3 V)	15.6	437	14E-03	0.17	0.144	4.6
G _{ch} (V _g = 0 V)	8.31	2.69	7.2E-03	0.14	0.14	15.2
G _{ch} (V _g = +3V)	5.16	45.8	18E-03	0.21	0.1	28.6
G _{ch} (-3)/Ga(3)	3	10	0.8	0.8	1.4	0.2

FIG. 6

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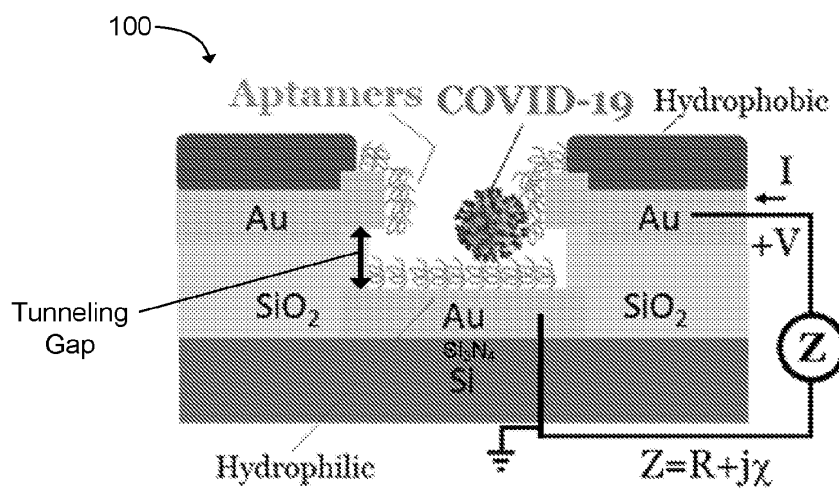


FIG. 8a

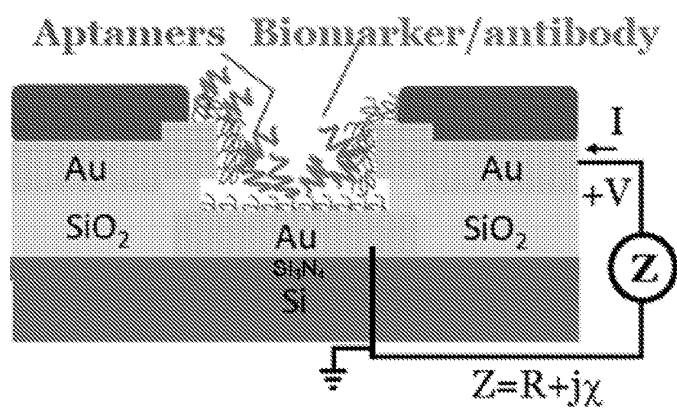


FIG. 8b

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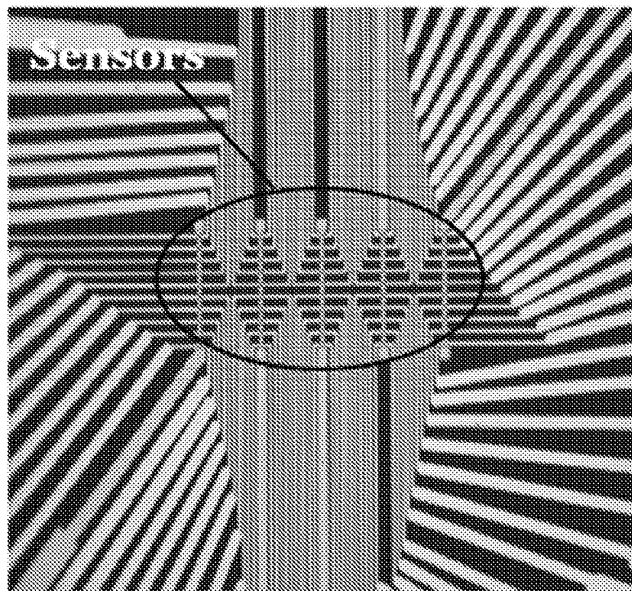


FIG. 8c

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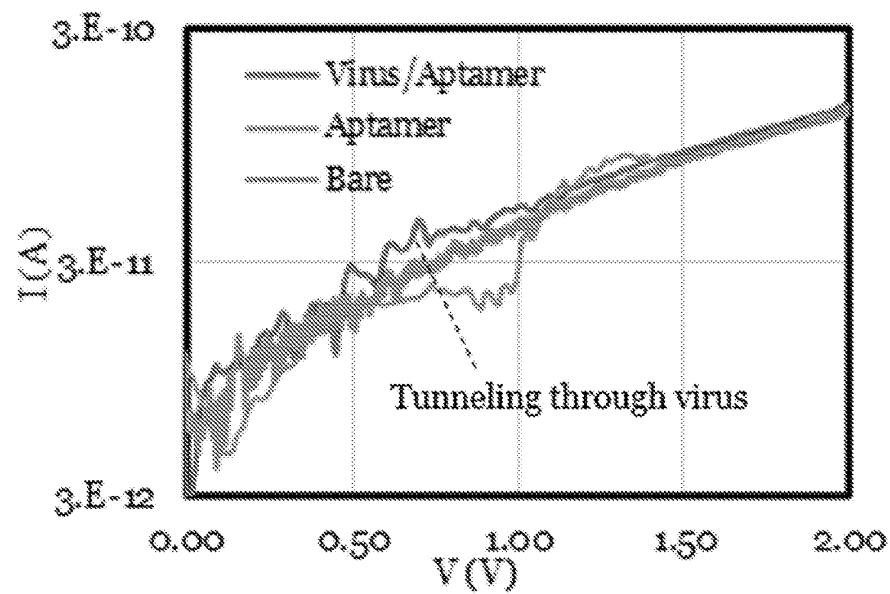


FIG. 9a

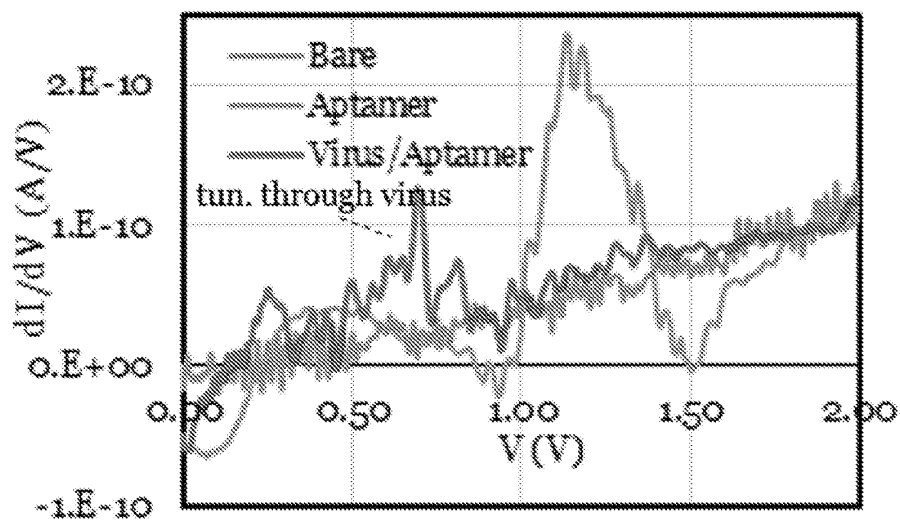


FIG. 9b

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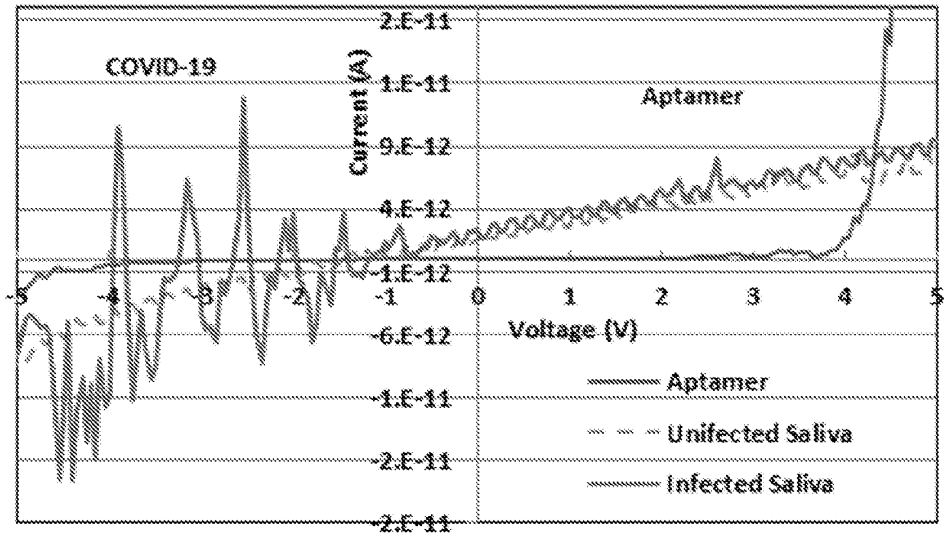


FIG. 9c

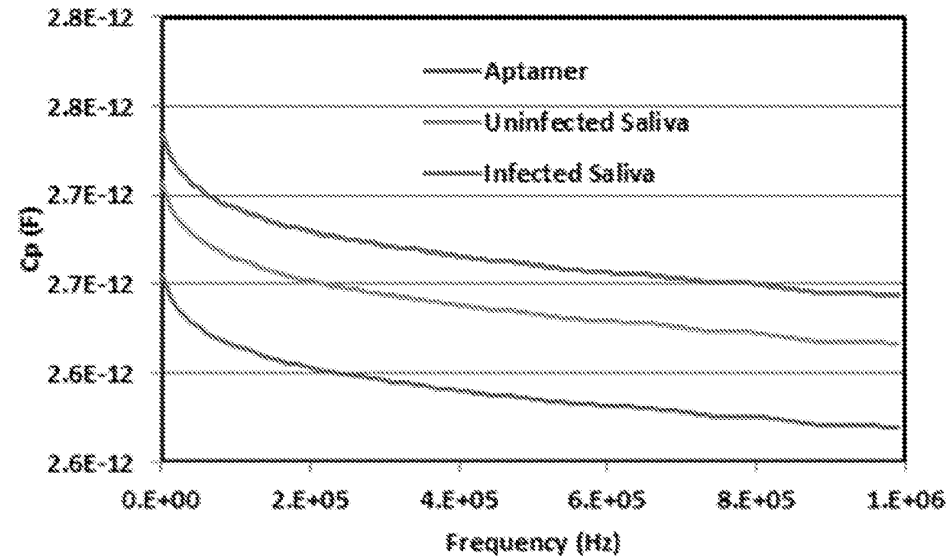


FIG. 9d

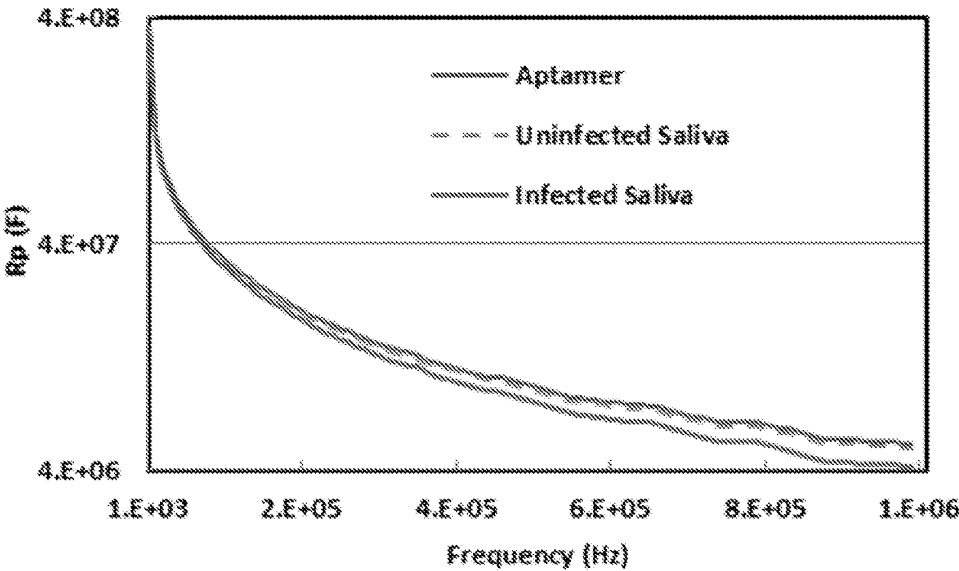


FIG. 9e

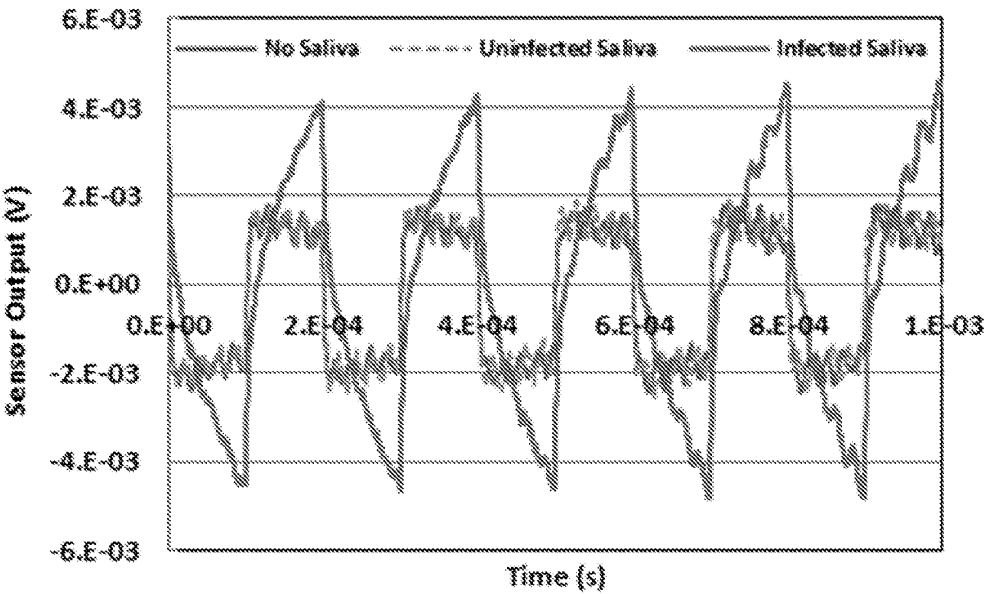


FIG. 9f

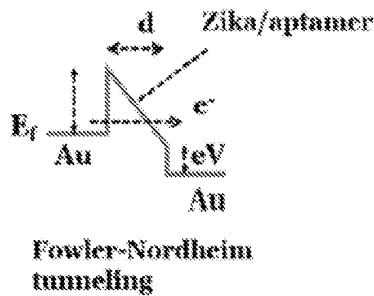


FIG. 10a

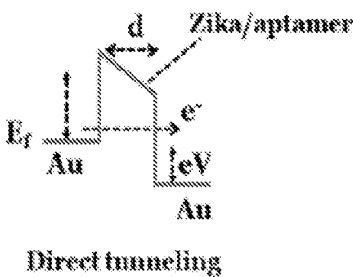


FIG. 10b

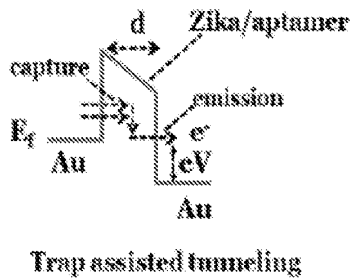


FIG. 10c

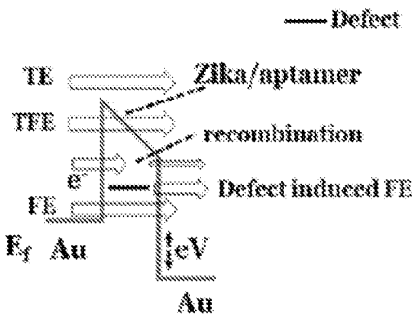


FIG. 10d

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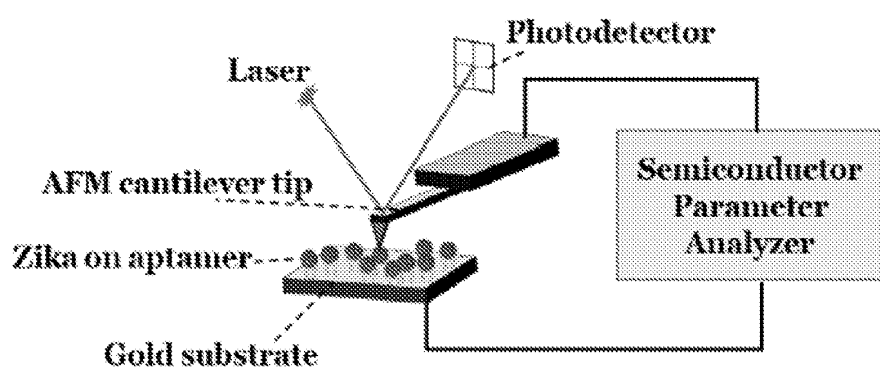


FIG. 11

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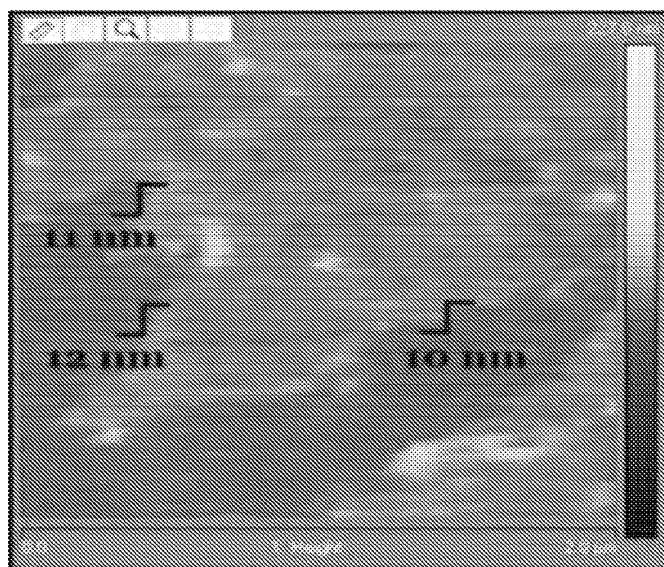


FIG. 12a

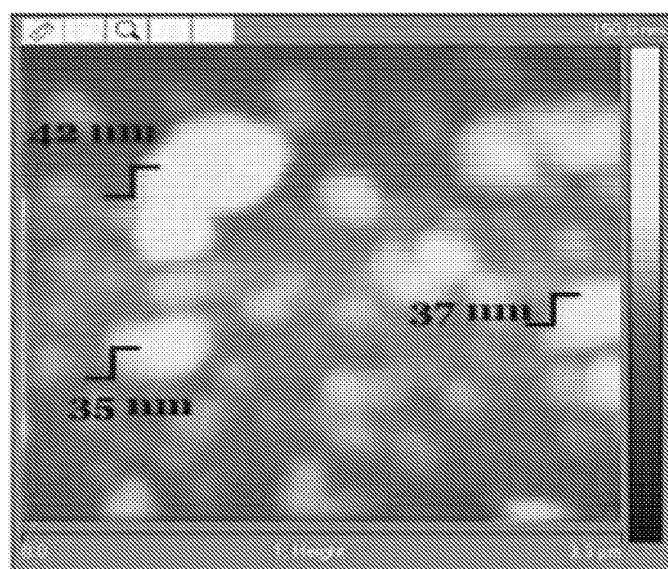


FIG. 12b

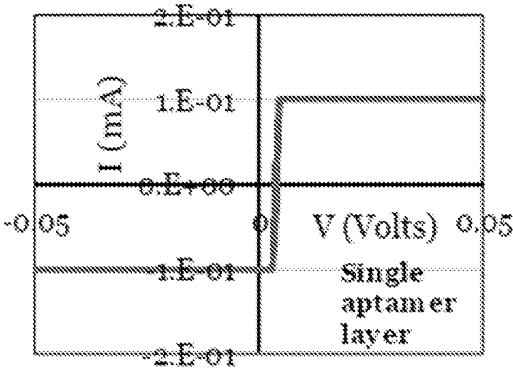


FIG. 13a

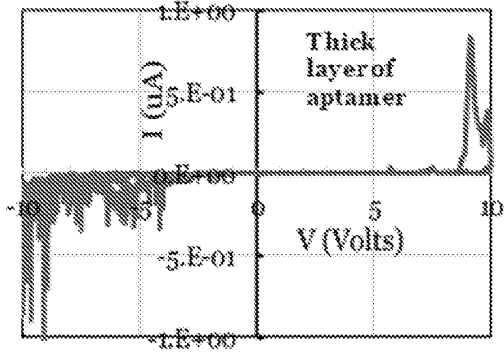


FIG. 13b

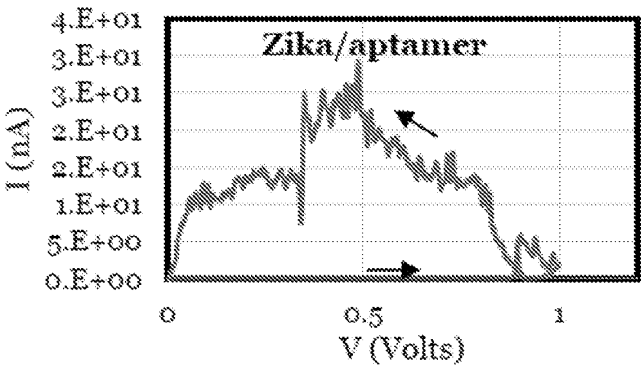


FIG. 13c

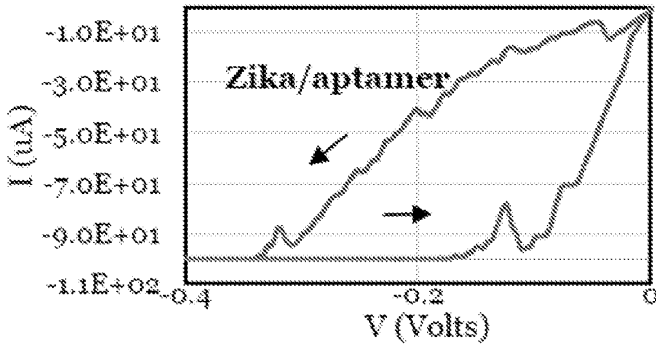


FIG. 13d

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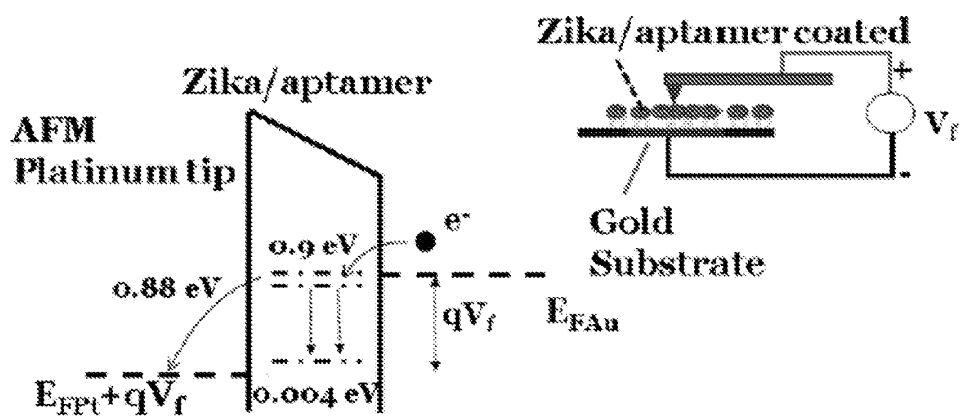


FIG. 14a

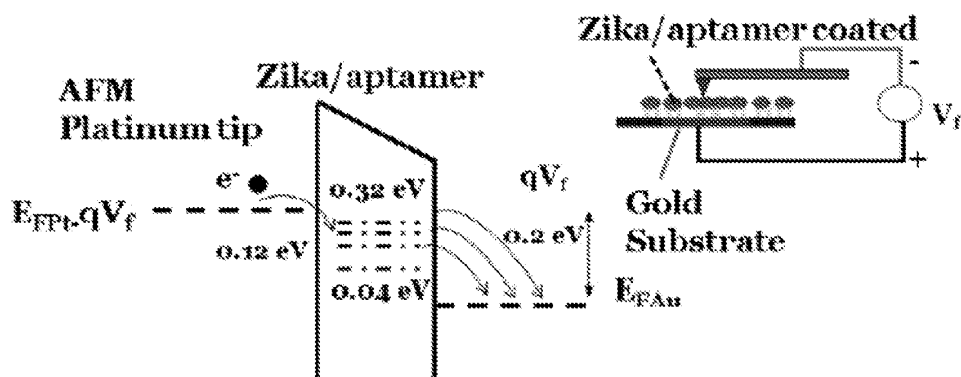


FIG. 14b

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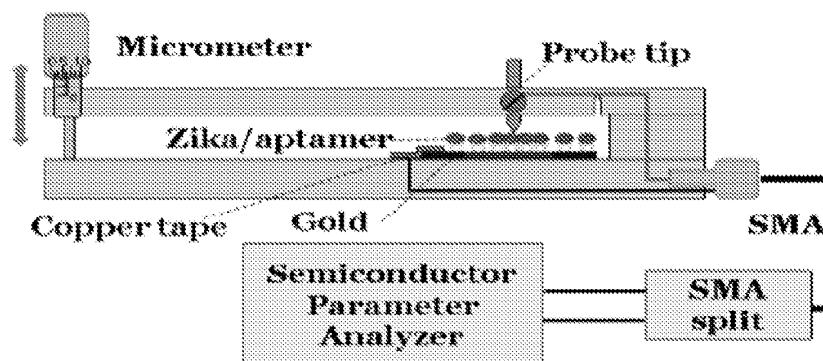


FIG. 15a

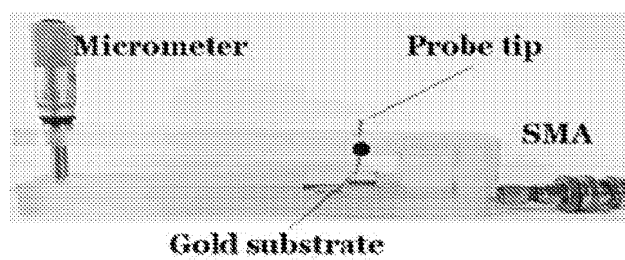


FIG. 15b

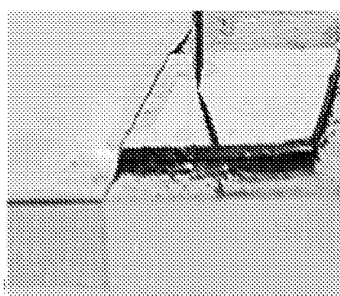


FIG. 15c

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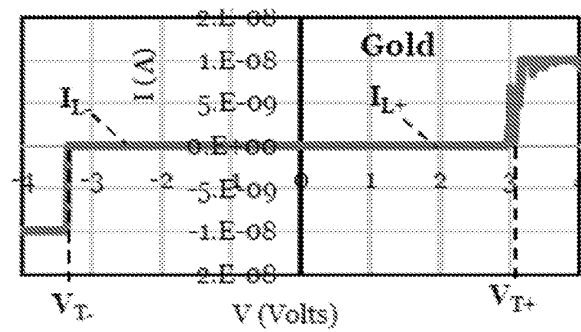


FIG. 16a

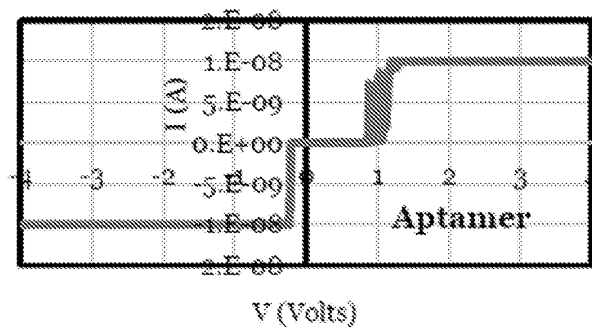


FIG. 16b

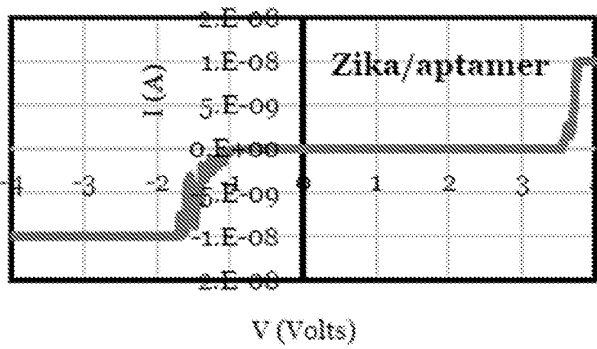


FIG. 16c

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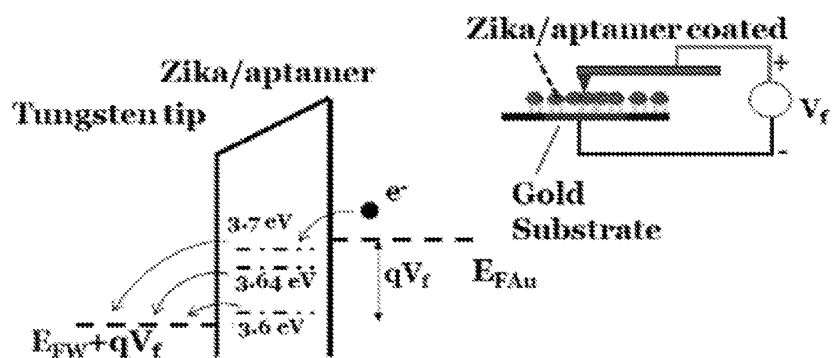


FIG. 17a

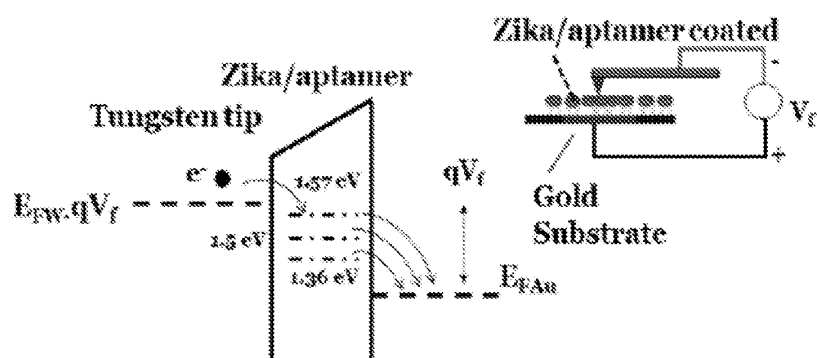


FIG. 17b

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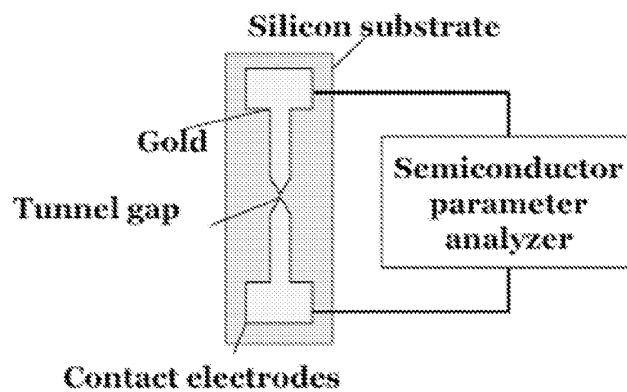


FIG. 18a

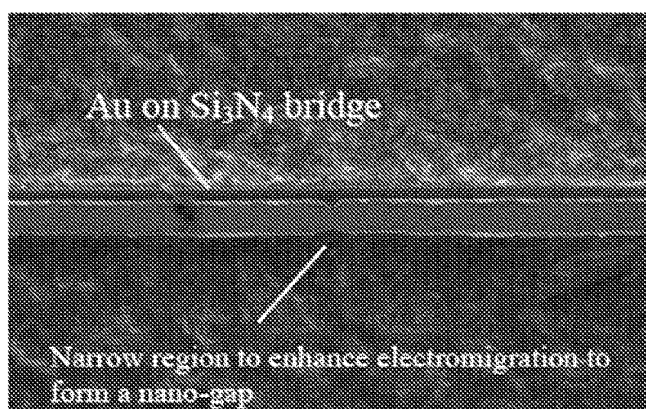


FIG. 18b

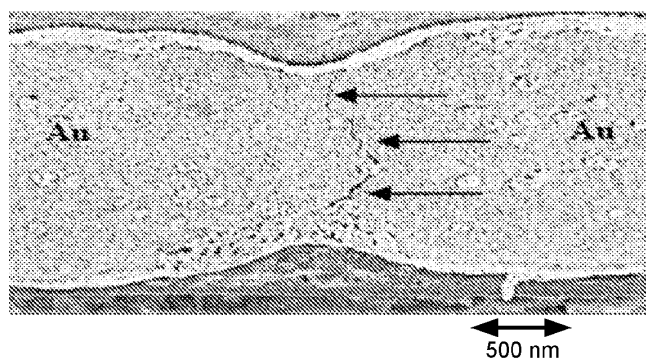


FIG. 18c

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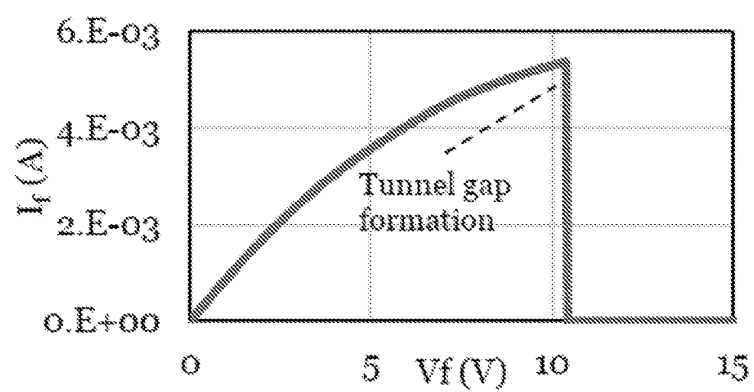


FIG. 19

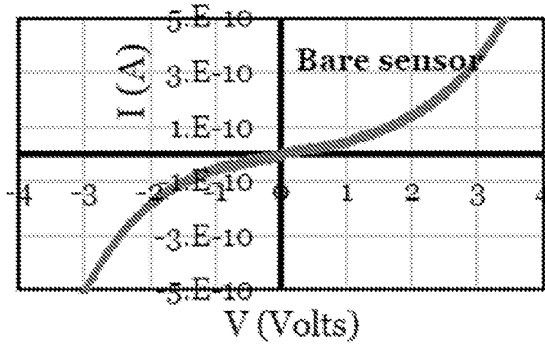


FIG. 20a

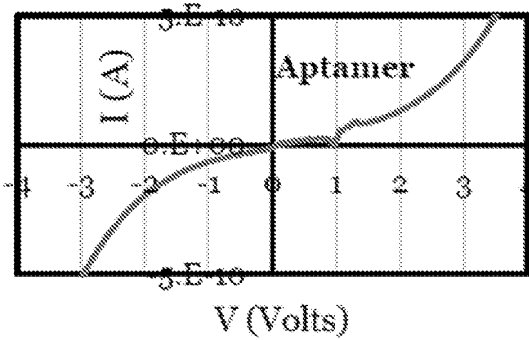


FIG. 20b

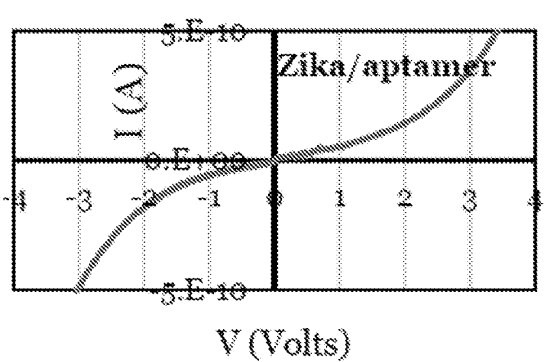


FIG. 20c

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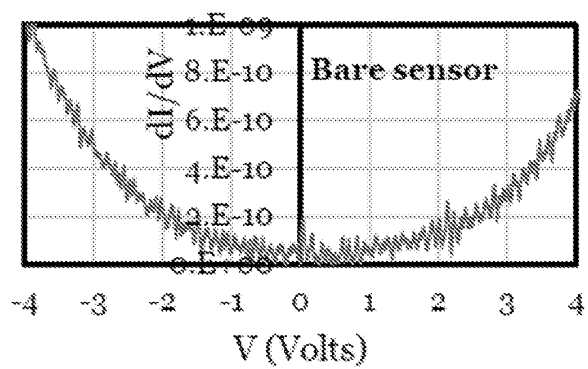


FIG. 21a

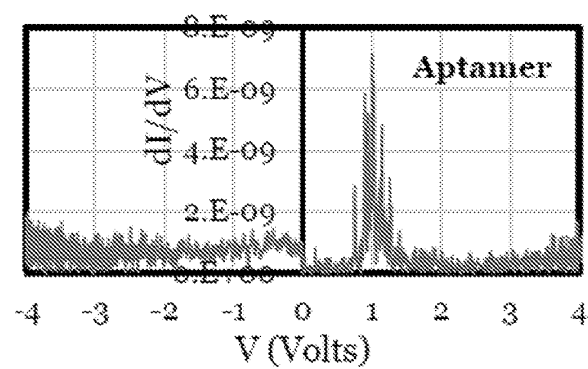


FIG. 21b

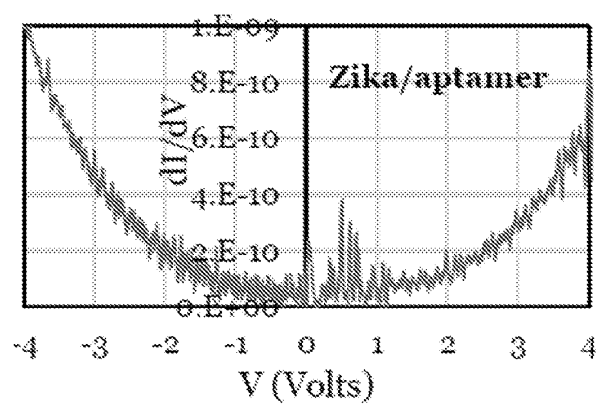


FIG. 21c

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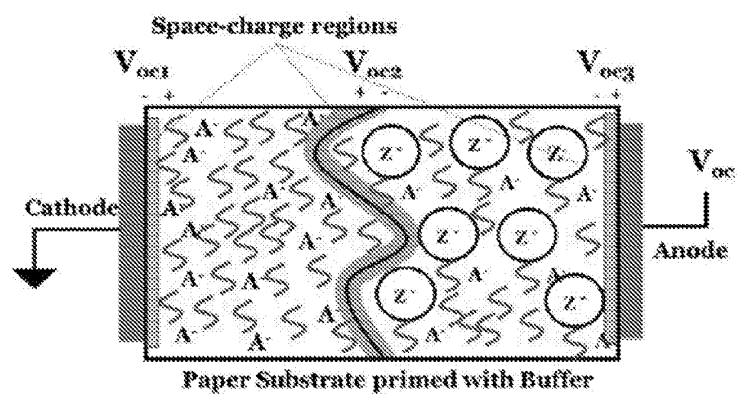


FIG. 22a

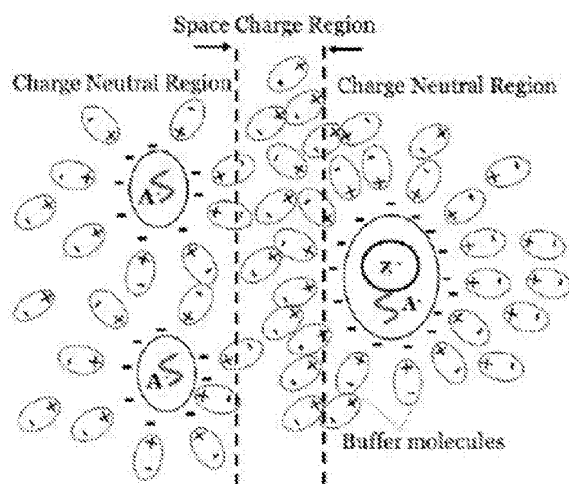


FIG. 22b

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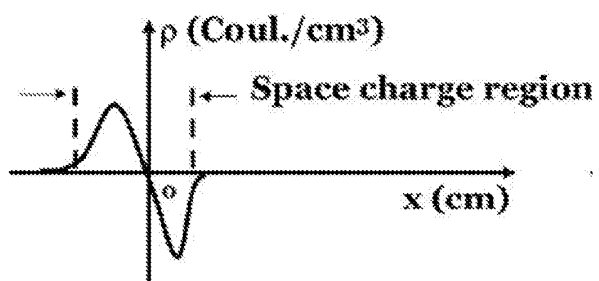


FIG. 22c

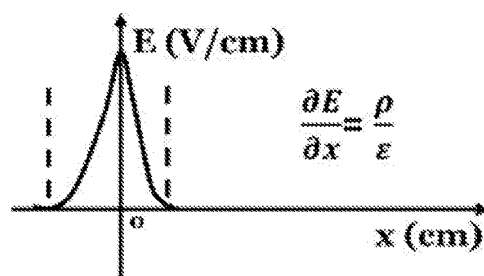


FIG. 22d

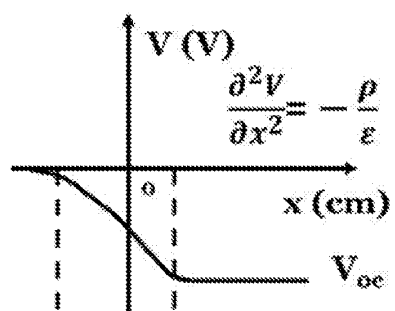


FIG. 22e

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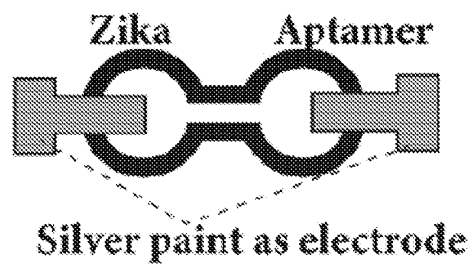


FIG. 23a

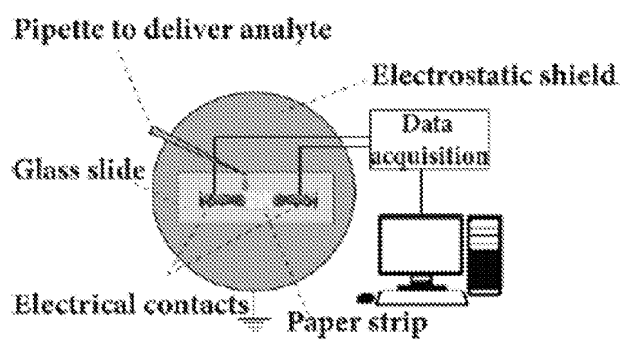


FIG. 23b

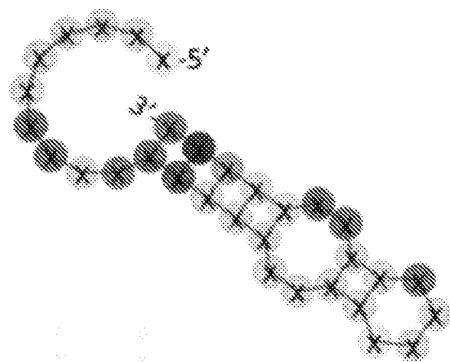


FIG. 23c

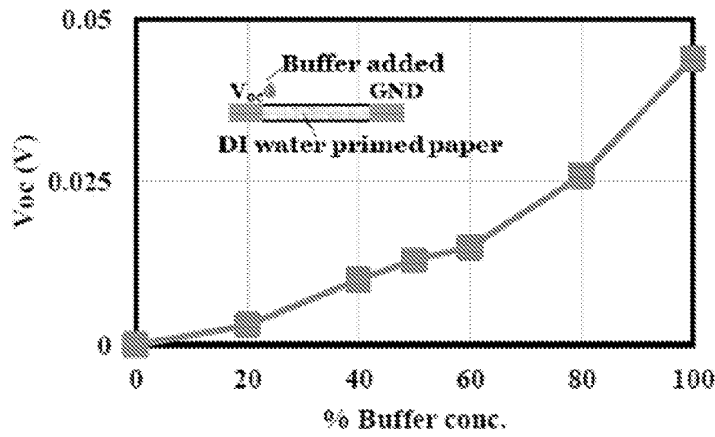


FIG. 24

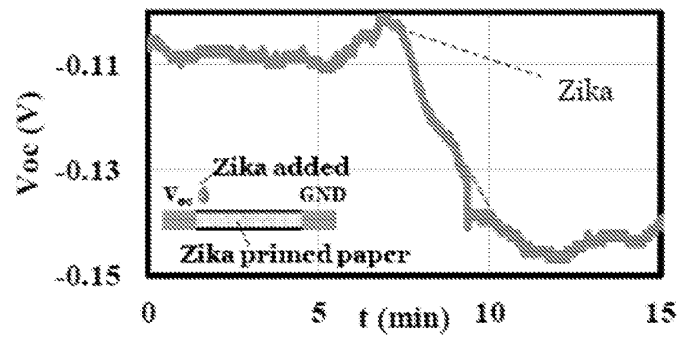


FIG. 25a

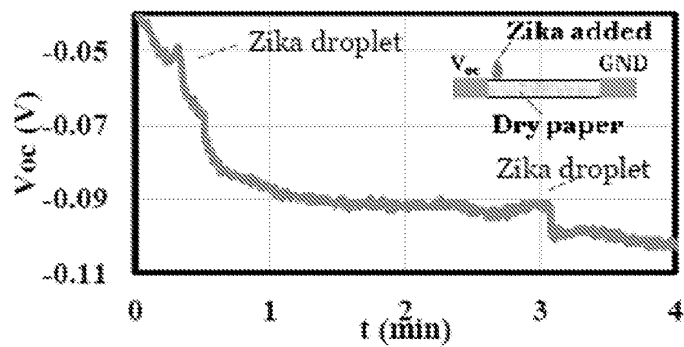


FIG. 25b

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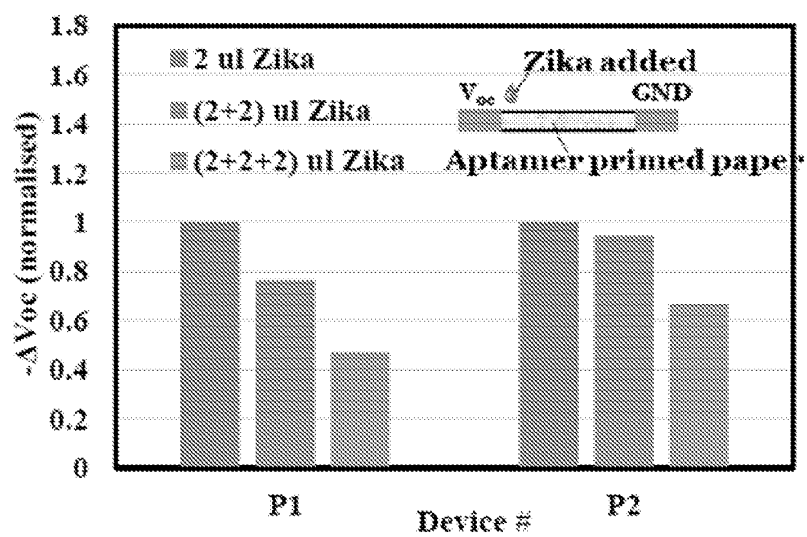


FIG. 26



FIG. 27a

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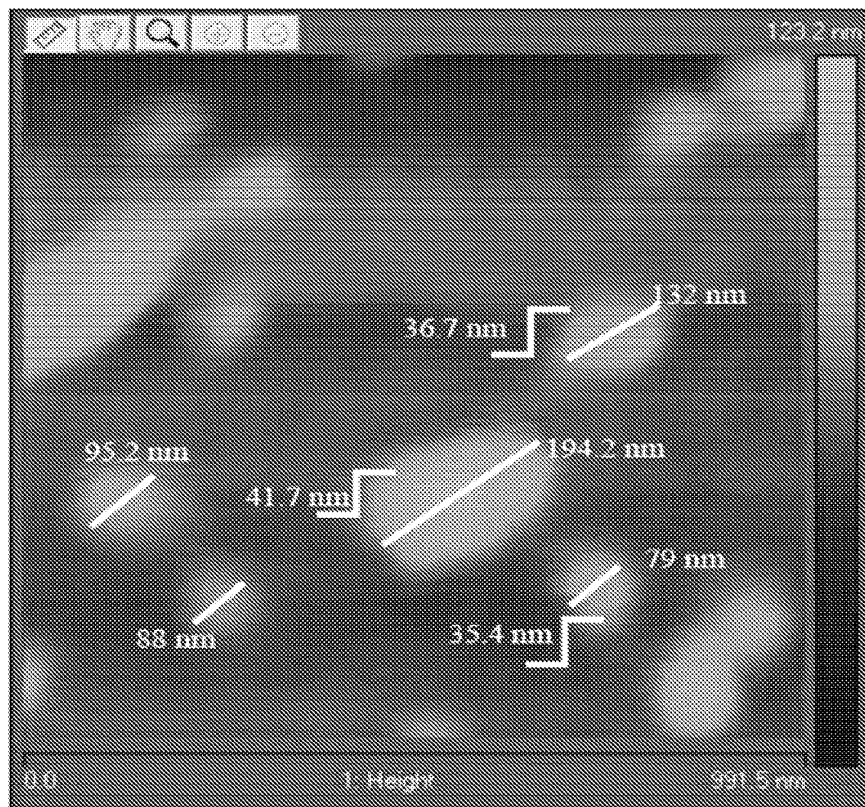


FIG. 27b

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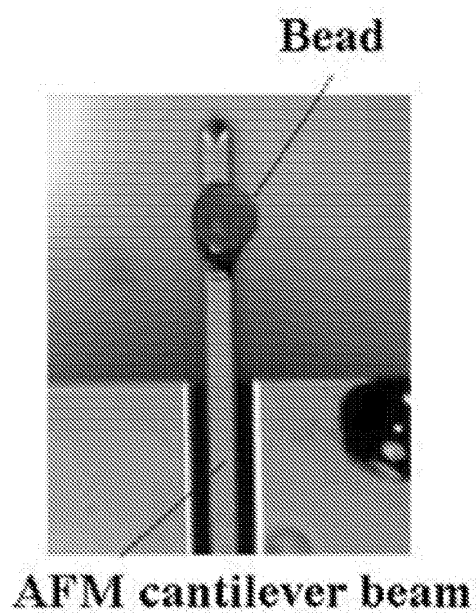


FIG. 27c

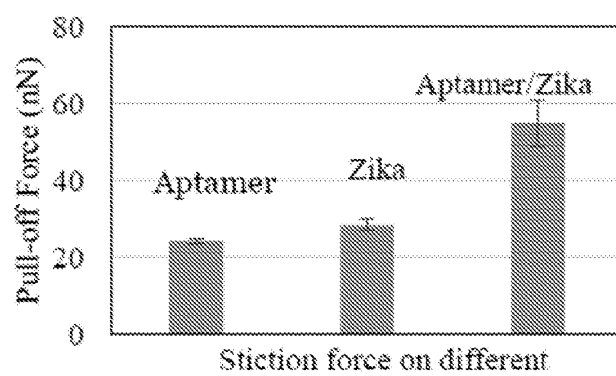


FIG. 27d

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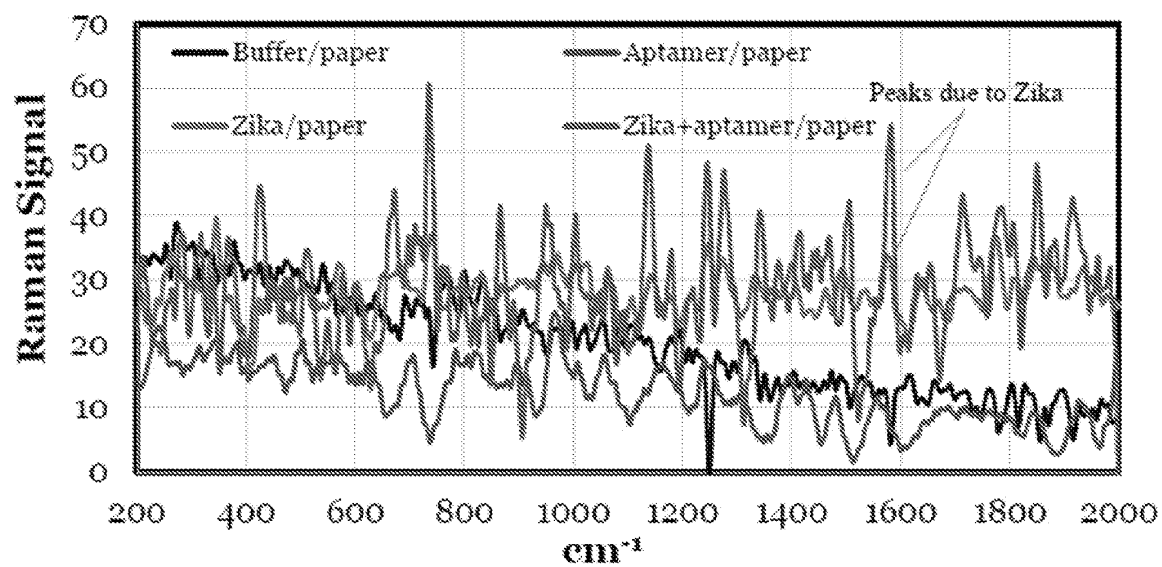


FIG. 28

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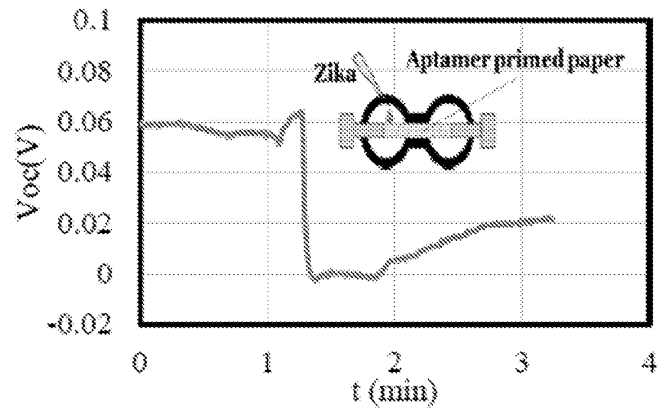


FIG. 29a

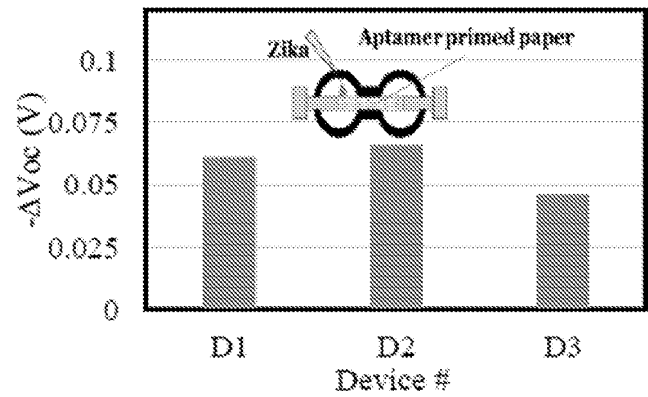


FIG. 29b

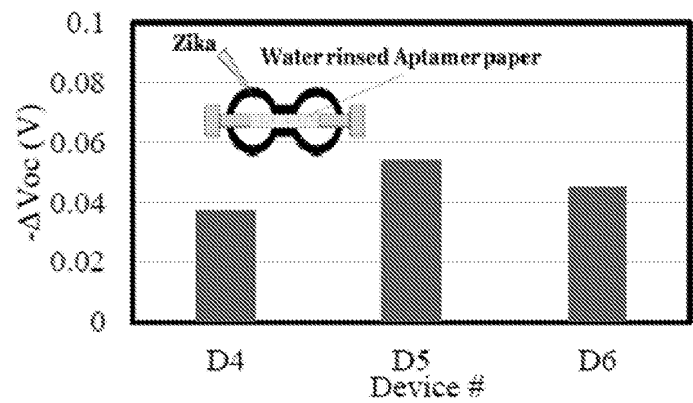


FIG. 29c

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FIG. 30a

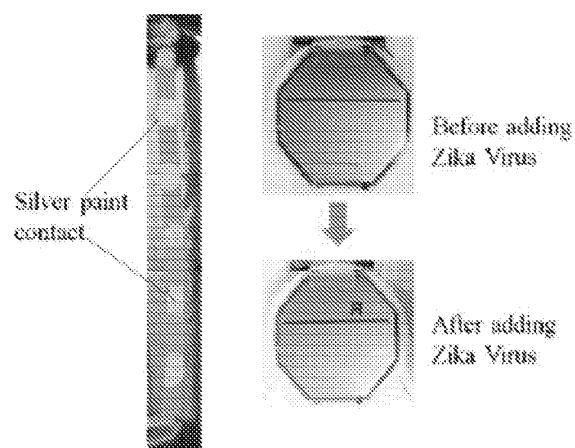


FIG. 30b

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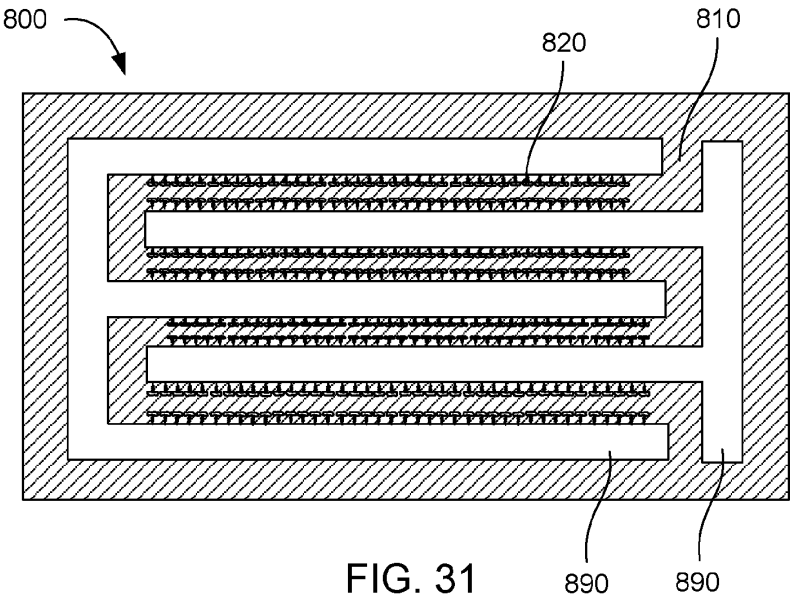


FIG. 31

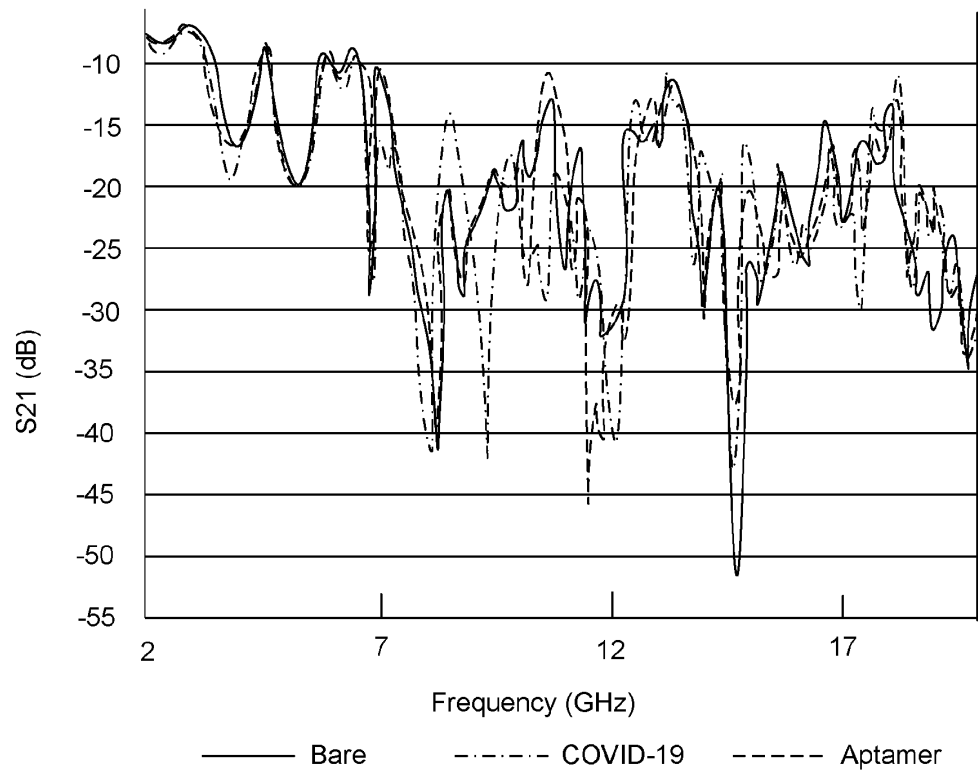


FIG. 32