

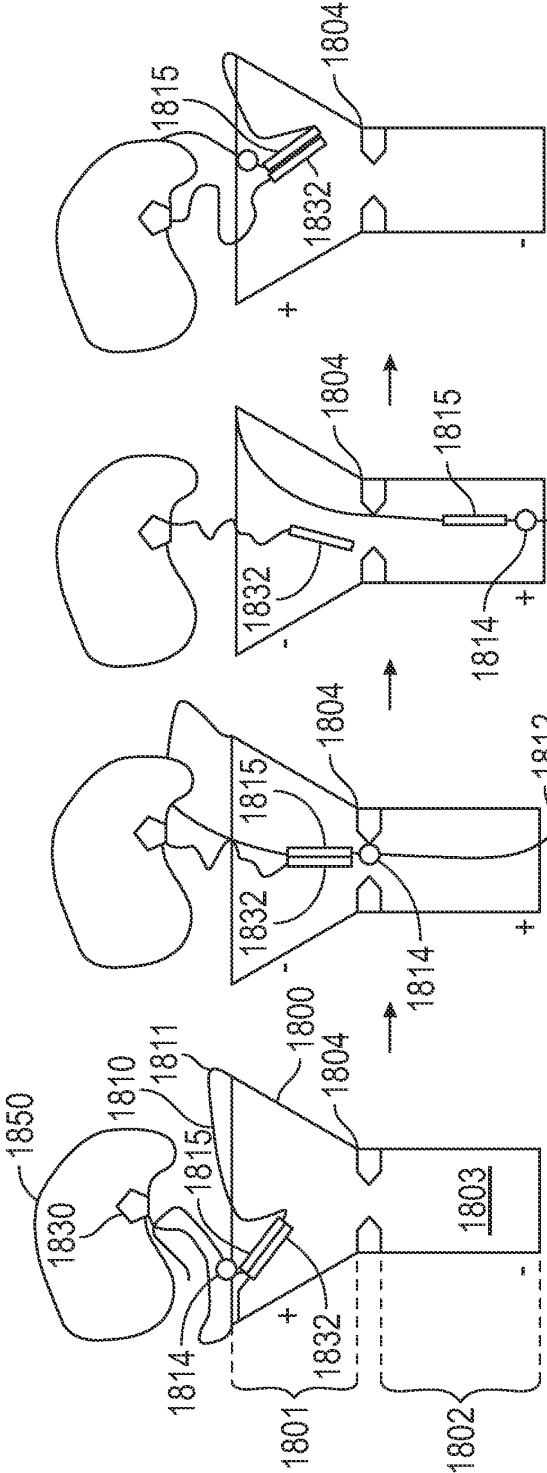


FIG. 1A

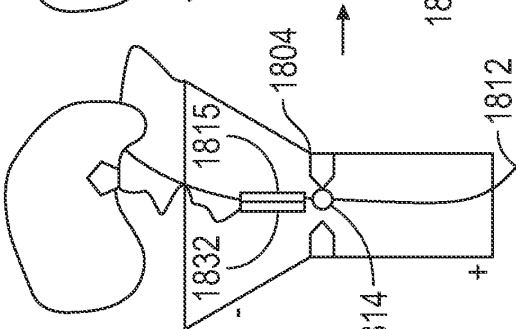


FIG. 1B

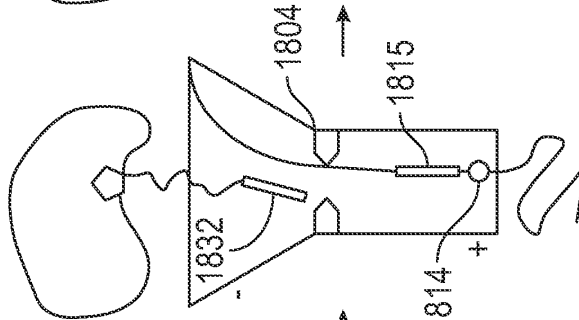


FIG. 1C

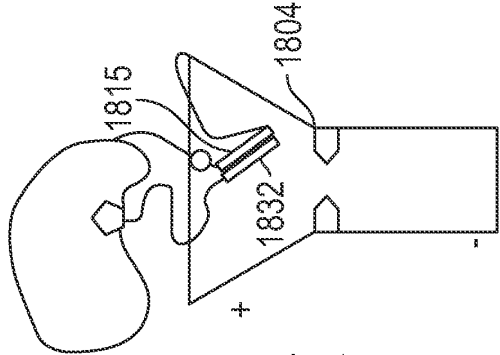


FIG. 1D

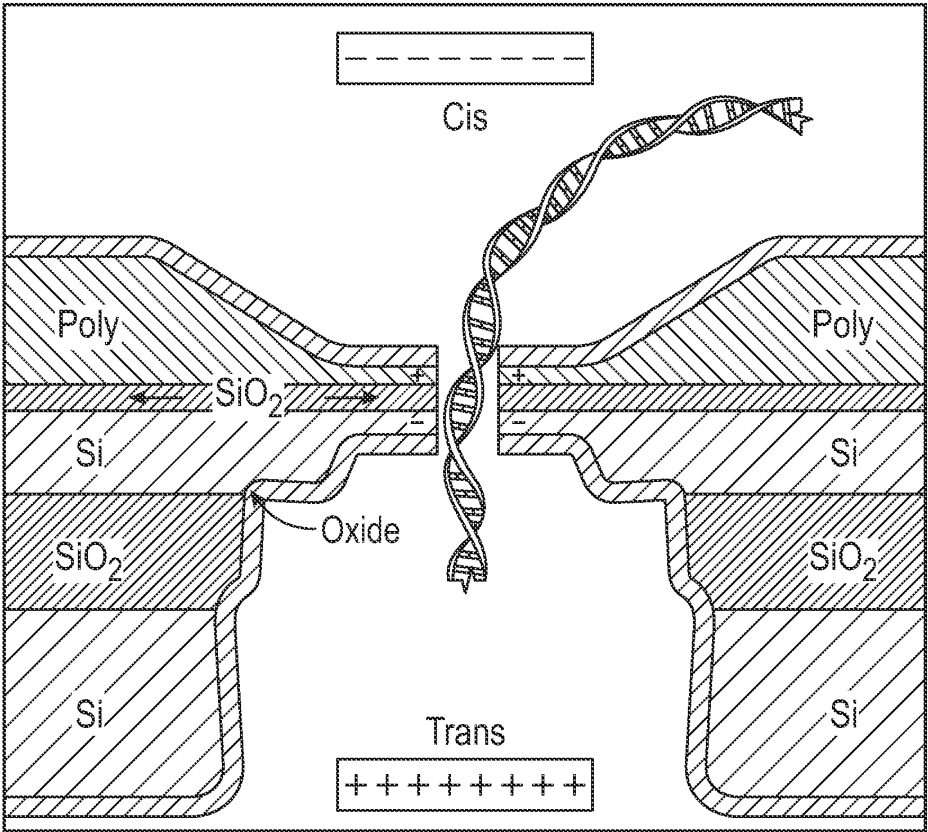


FIG. 1E

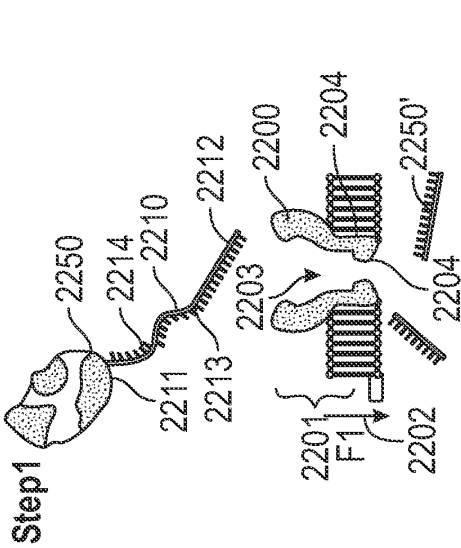


FIG. 2A

Step4

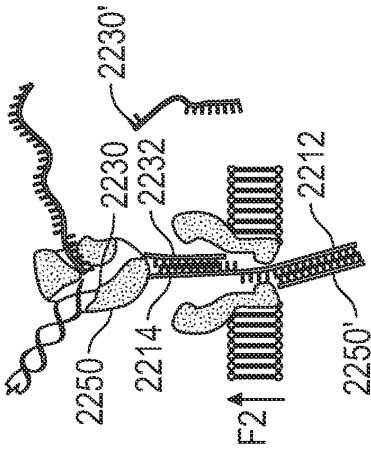


FIG. 2D

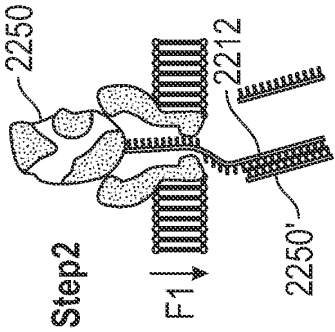


FIG. 2B

Step5

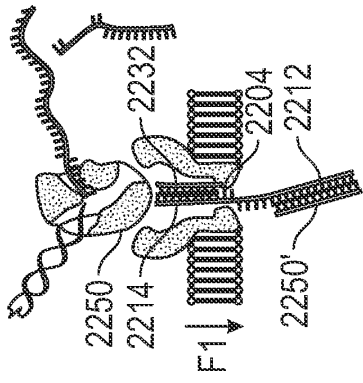


FIG. 2E

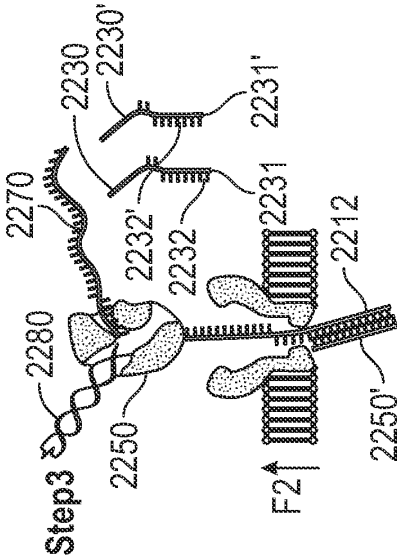


FIG. 2C

Step6

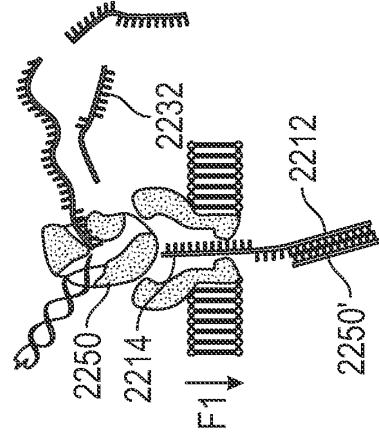
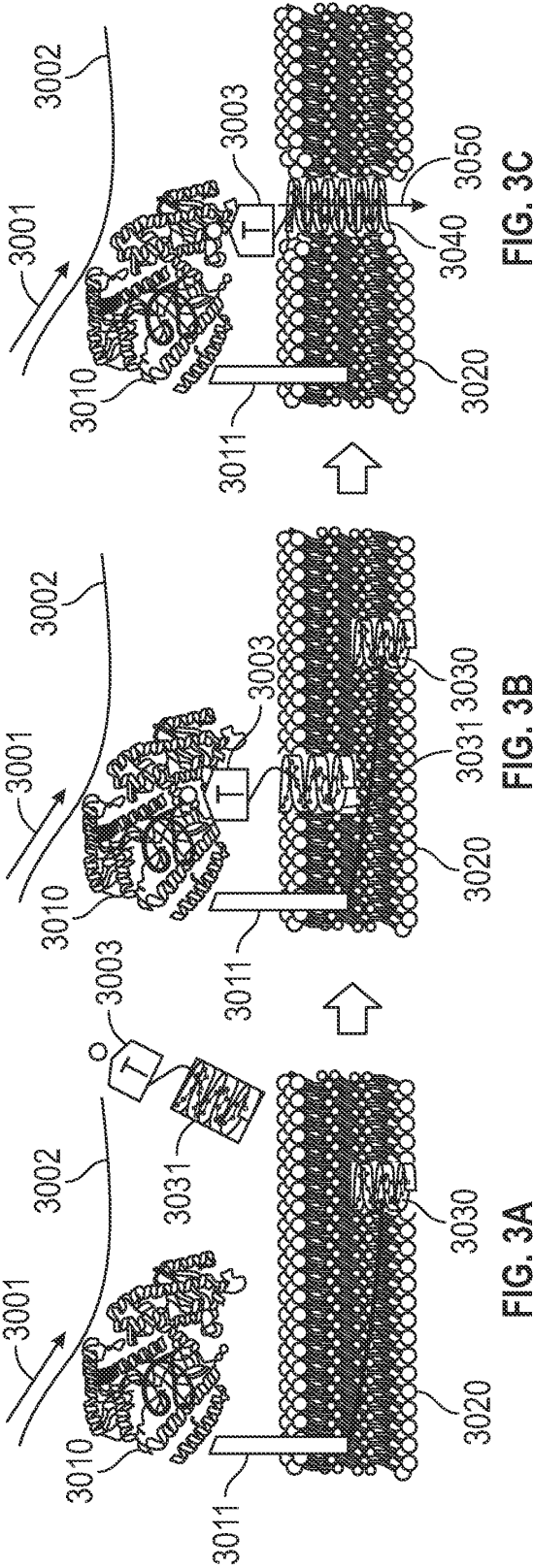


FIG. 2F



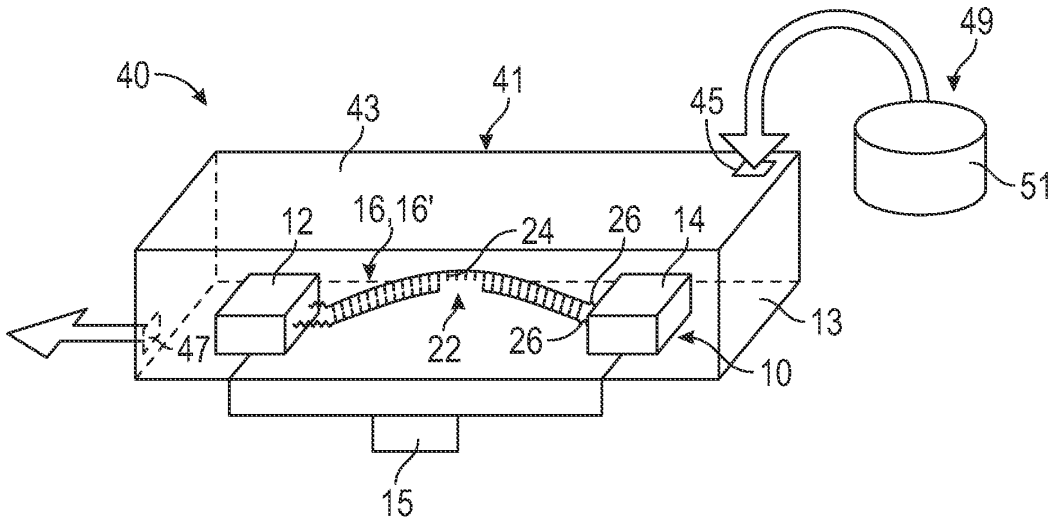


FIG. 4

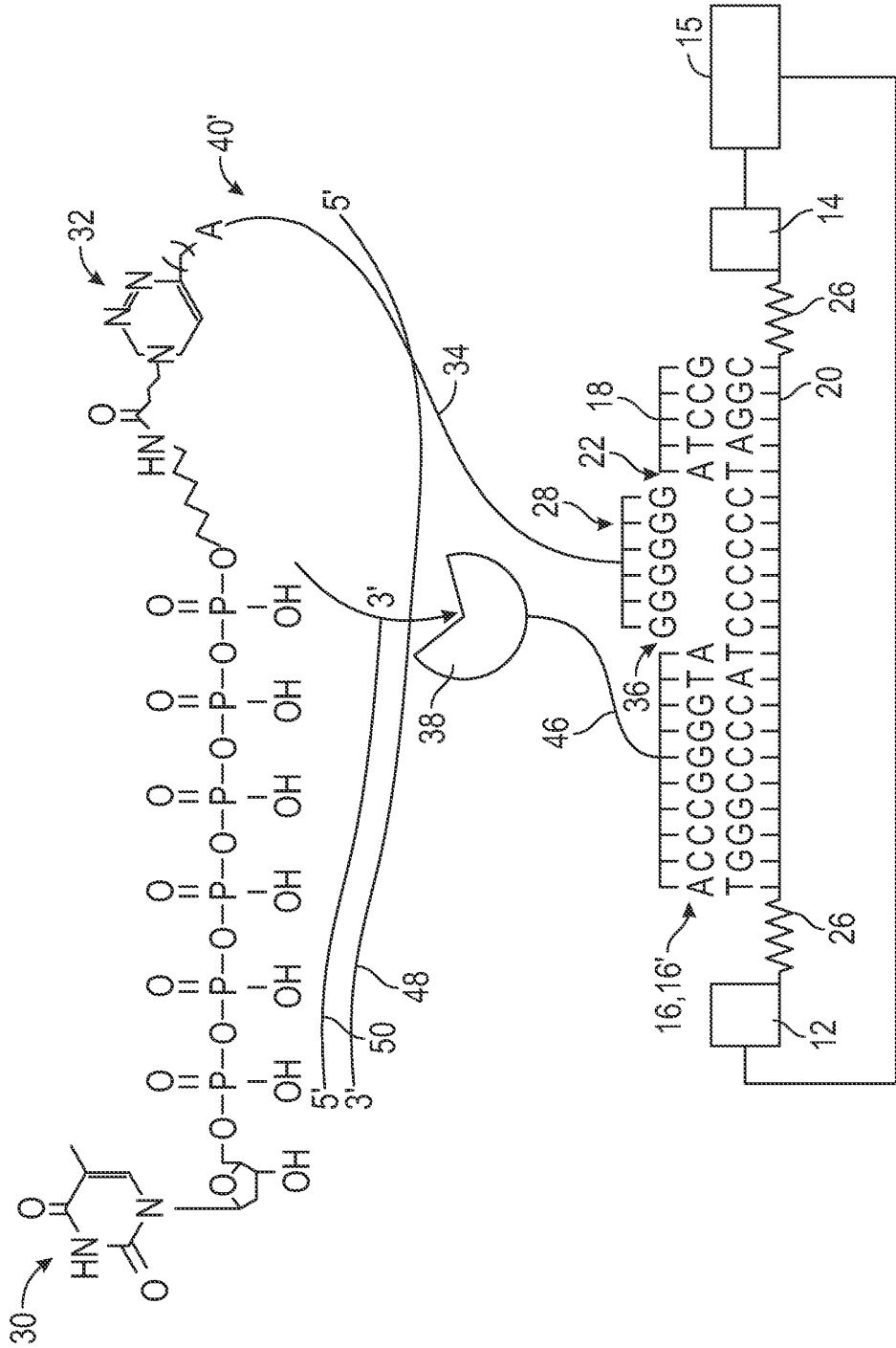


FIG. 5

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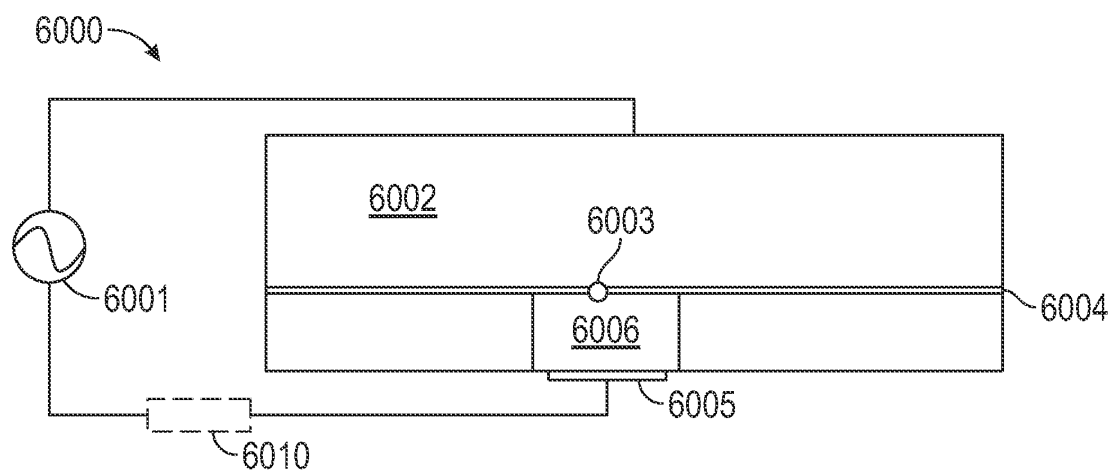


FIG. 6

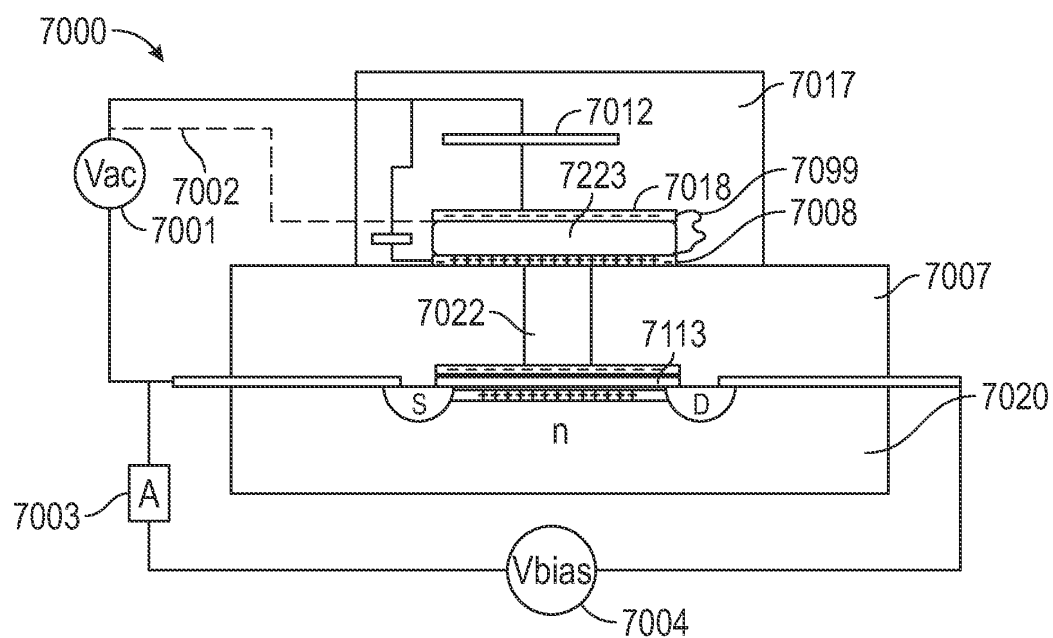


FIG. 7

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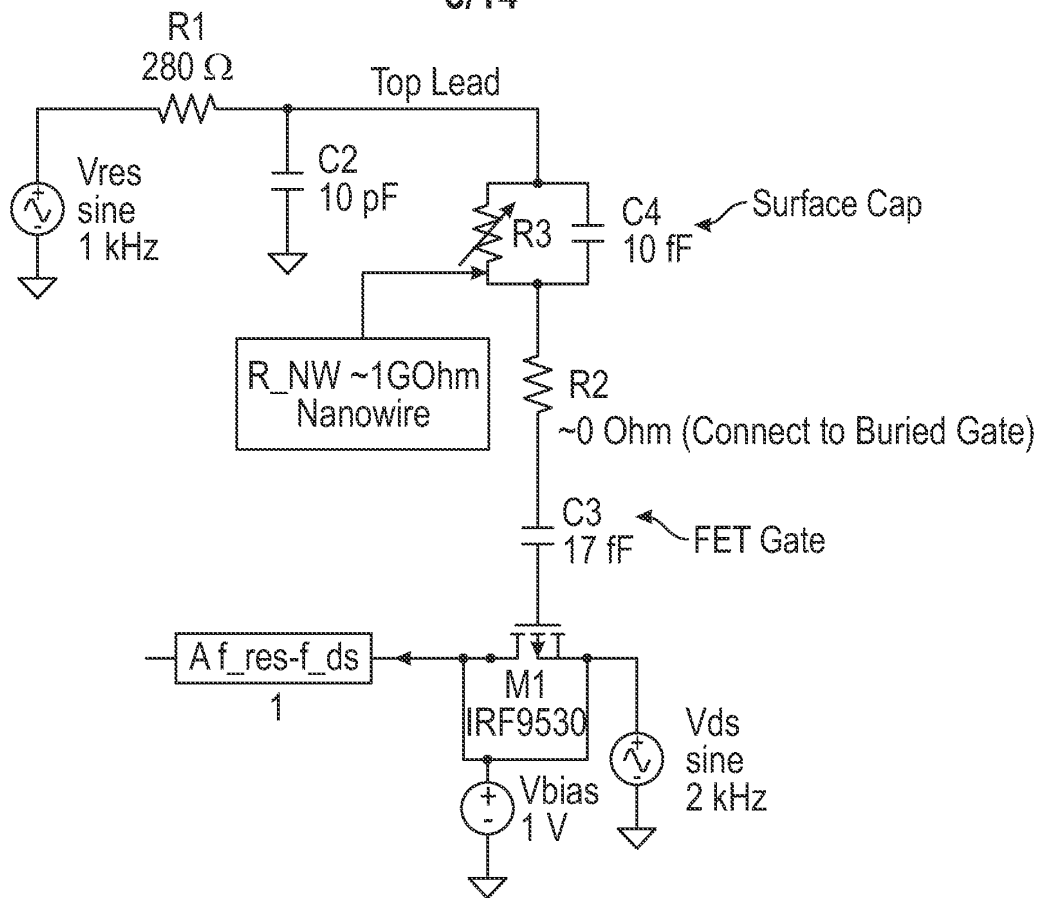


FIG. 8

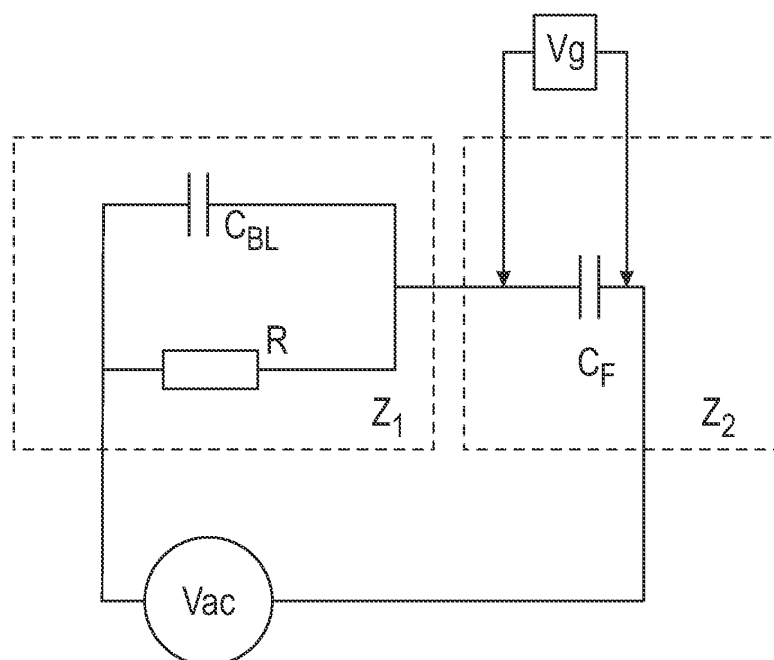


FIG. 9

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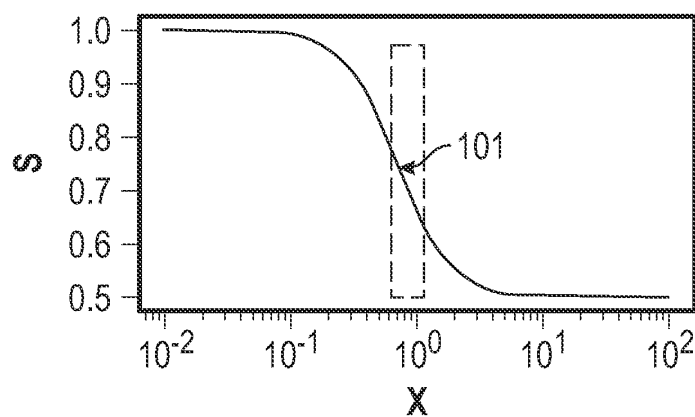
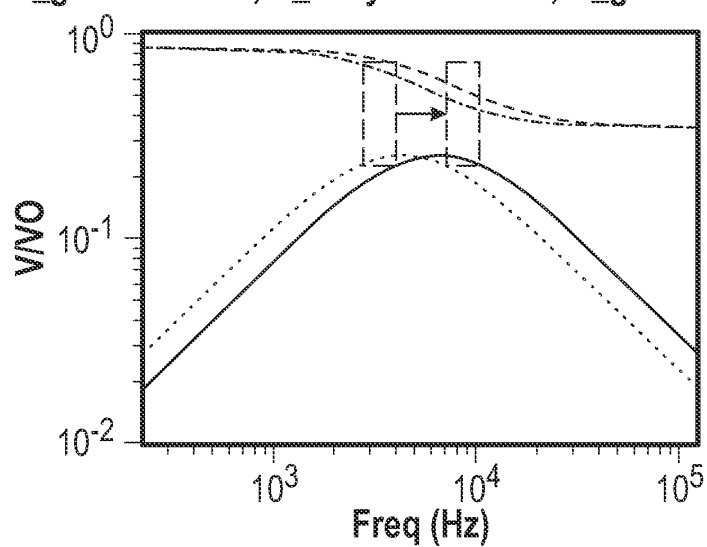


FIG. 10

$A_{\text{gate}}=1.0 \text{ um}^2$, $A_{\text{bilayer}}=1.0 \text{ um}^2$, $C_{\text{gate}}=17 \text{ ff/um}^2$



---- $\text{Re}(V_g/V_O)$, $R_{\text{pore}}=1.0 \text{ GOhm}$, $C_{\text{lead}}=10.0 \text{ pF}$
 — $\text{Im}(V_g/V_O)$, $R_{\text{pore}}=1.0 \text{ GOhm}$, $C_{\text{lead}}=10.0 \text{ pF}$
 $\text{Re}(V_g/V_O)$, $R_{\text{pore}}=1.5 \text{ GOhm}$, $C_{\text{lead}}=10.0 \text{ pF}$
 - · - · $\text{Im}(V_g/V_O)$, $R_{\text{pore}}=1.5 \text{ GOhm}$, $C_{\text{lead}}=10.0 \text{ pF}$

FIG. 11A

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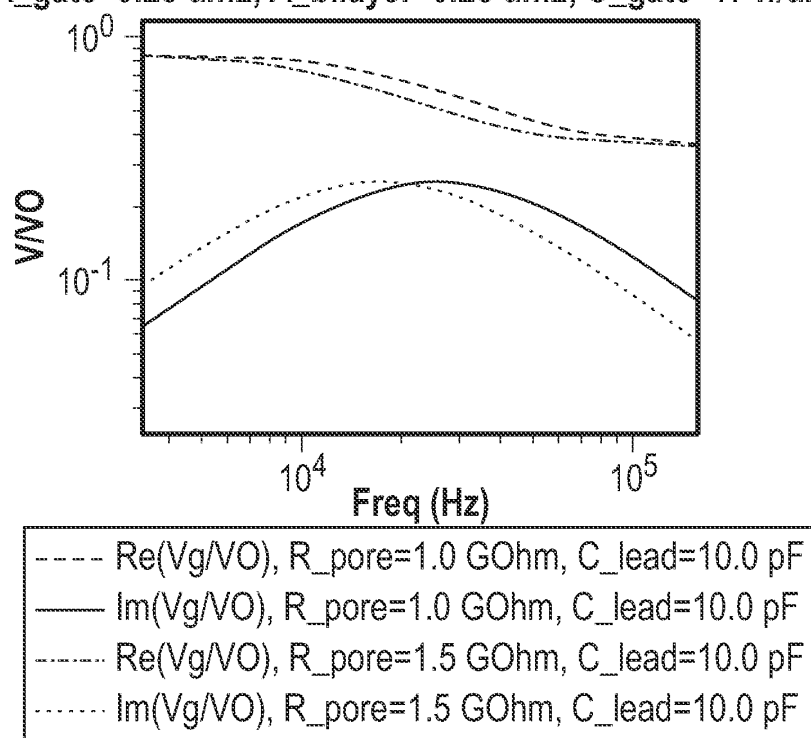
A_{gate}=0.25 μm^2 , A_{bilayer}=0.25 μm^2 , C_{gate}=17 ff/ μm^2 

FIG. 11B

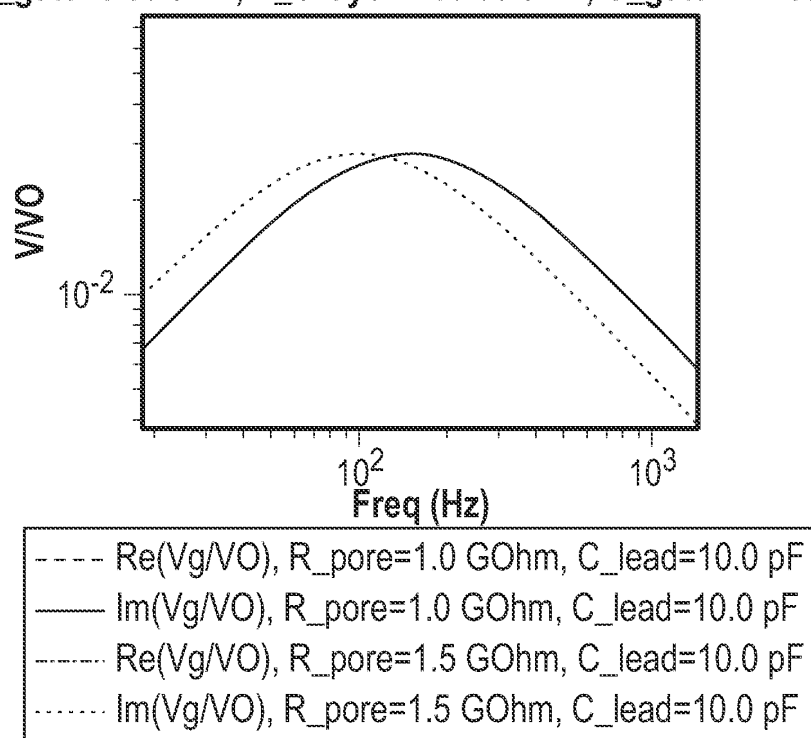
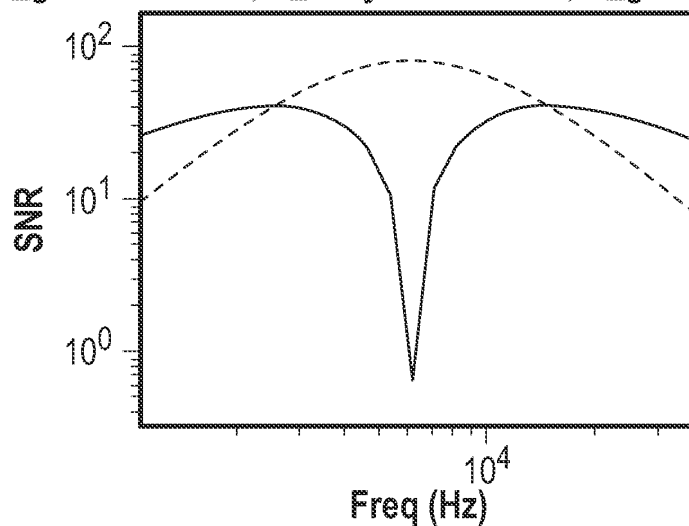
A_{gate}=3.50 μm^2 , A_{bilayer}=100.00 μm^2 , C_{gate}=17 ff/ μm^2 

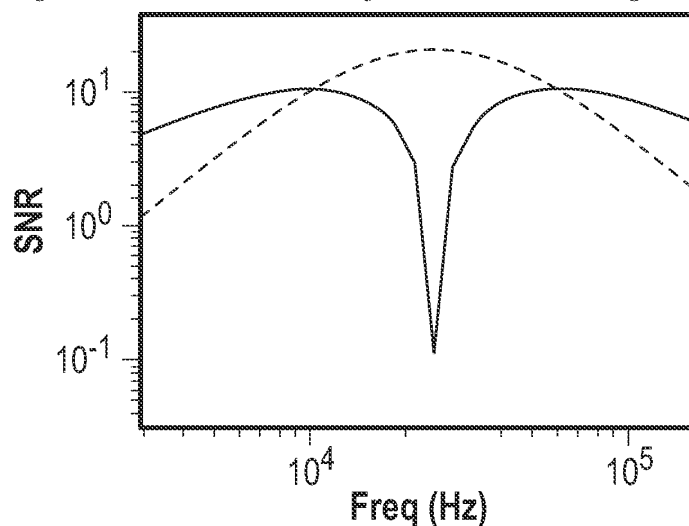
FIG. 11C

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 $A_{\text{gate}}=1.00 \text{ } \mu\text{m}^2$, $A_{\text{bilayer}}=1.00 \text{ } \mu\text{m}^2$, $C_{\text{gate}}=17 \text{ fF}/\mu\text{m}^2$ 

--- $\text{Re}(d(V_g/V_O)/dR)$, $R_{\text{pore}}=1.0 \text{ G}\Omega$, $C_{\text{lead}}=10.0 \text{ pF}$
— $\text{Im}(d(V_g/V_O)/dR)$, $R_{\text{pore}}=1.0 \text{ G}\Omega$, $C_{\text{lead}}=10.0 \text{ pF}$

FIG. 12A

 $A_{\text{gate}}=0.25 \text{ } \mu\text{m}^2$, $A_{\text{bilayer}}=0.25 \text{ } \mu\text{m}^2$, $C_{\text{gate}}=17 \text{ fF}/\mu\text{m}^2$ 

--- $\text{Re}(d(V_g/V_O)/dR)$, $R_{\text{pore}}=1.0 \text{ G}\Omega$, $C_{\text{lead}}=10.0 \text{ pF}$
— $\text{Im}(d(V_g/V_O)/dR)$, $R_{\text{pore}}=1.0 \text{ G}\Omega$, $C_{\text{lead}}=10.0 \text{ pF}$

FIG. 12B

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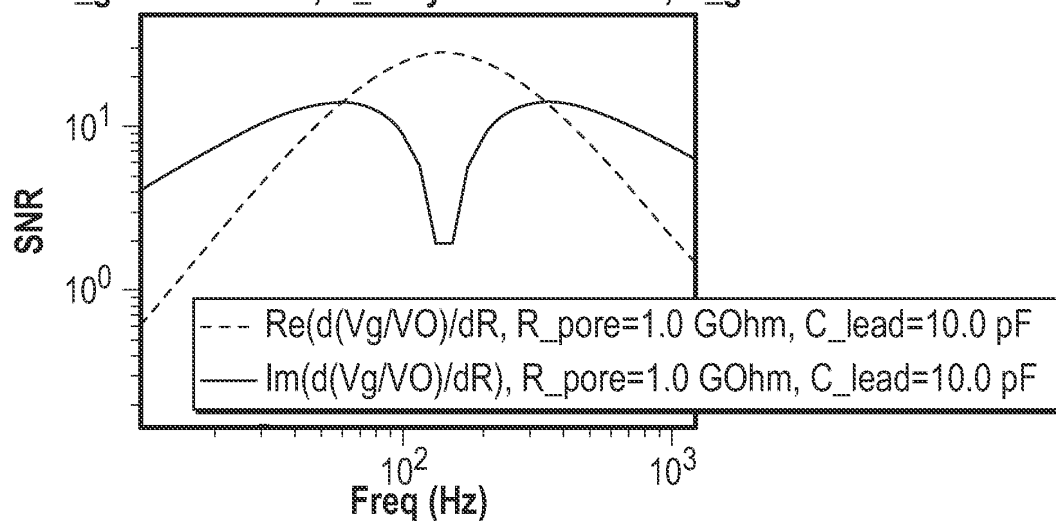
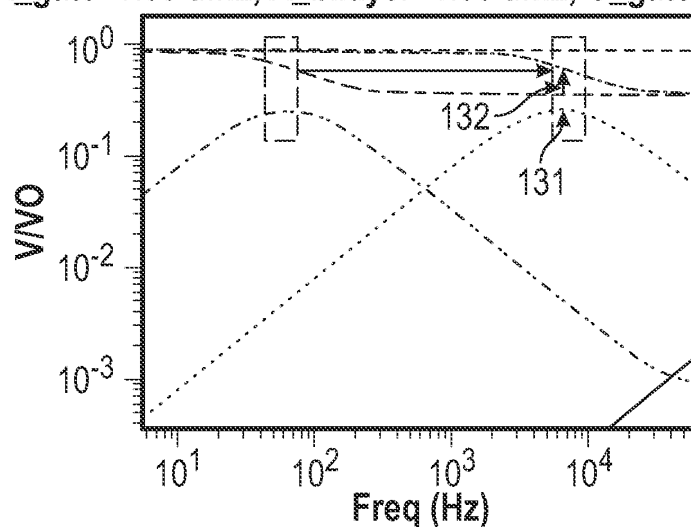
A_gate=3.50 μm^2 , A_bilayer=100.00 μm^2 , C_gate=17 ff/ μm^2 

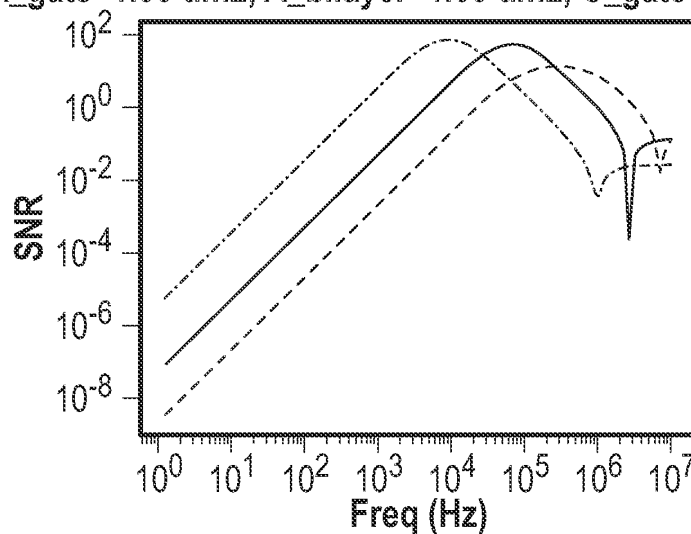
FIG. 12C

A_gate=1.00 μm^2 , A_bilayer=1.00 μm^2 , C_gate=17 ff/ μm^2 

---- $\text{Re}(V_g/V_O)$, $R_{\text{pore}}=0.0 \text{ G}\Omega$, $C_{\text{lead}}=10.0 \text{ pF}$
 — $\text{Im}(V_g/V_O)$, $R_{\text{pore}}=0.0 \text{ G}\Omega$, $C_{\text{lead}}=10.0 \text{ pF}$
 - - - $\text{Re}(V_g/V_O)$, $R_{\text{pore}}=1.0 \text{ G}\Omega$, $C_{\text{lead}}=10.0 \text{ pF}$
 . . . $\text{Im}(V_g/V_O)$, $R_{\text{pore}}=1.0 \text{ G}\Omega$, $C_{\text{lead}}=10.0 \text{ pF}$
 - - - $\text{Re}(V_g/V_O)$, $R_{\text{pore}}=100.0 \text{ G}\Omega$, $C_{\text{lead}}=10.0 \text{ pF}$
 . . . $\text{Im}(V_g/V_O)$, $R_{\text{pore}}=100.0 \text{ G}\Omega$, $C_{\text{lead}}=10.0 \text{ pF}$

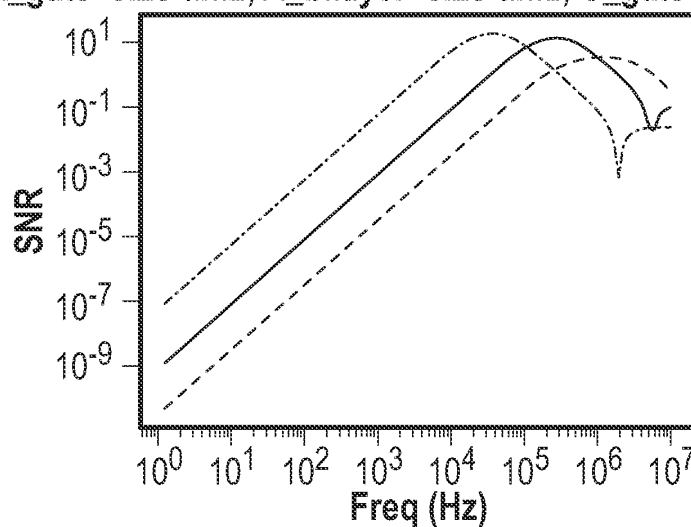
FIG. 13

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A_{gate}=1.00 μm^2 , A_{bilayer}=1.00 μm^2 , C_{gate}=17 ff/ μm^2 ,

--- $\text{Re}(d(V_g/V_O)/dR)$, $R_{\text{wire}}=0.0$ GOhm, $C_{\text{lead}}=10.0$ pF
 — $\text{Re}(d(V_g/V_O)/dR)$, $R_{\text{wire}}=0.1$ GOhm, $C_{\text{lead}}=10.0$ pF
 -.- $\text{Re}(d(V_g/V_O)/dR)$, $R_{\text{wire}}=1.0$ GOhm, $C_{\text{lead}}=10.0$ pF

FIG. 14A

A_{gate}=0.25 μm^2 , A_{bilayer}=0.25 μm^2 , C_{gate}=17 ff/ μm^2 ,

--- $\text{Re}(d(V_g/V_O)/dR)$, $R_{\text{wire}}=0.0$ GOhm, $C_{\text{lead}}=10.0$ pF
 — $\text{Re}(d(V_g/V_O)/dR)$, $R_{\text{wire}}=0.1$ GOhm, $C_{\text{lead}}=10.0$ pF
 -.- $\text{Re}(d(V_g/V_O)/dR)$, $R_{\text{wire}}=1.0$ GOhm, $C_{\text{lead}}=10.0$ pF

FIG. 14B

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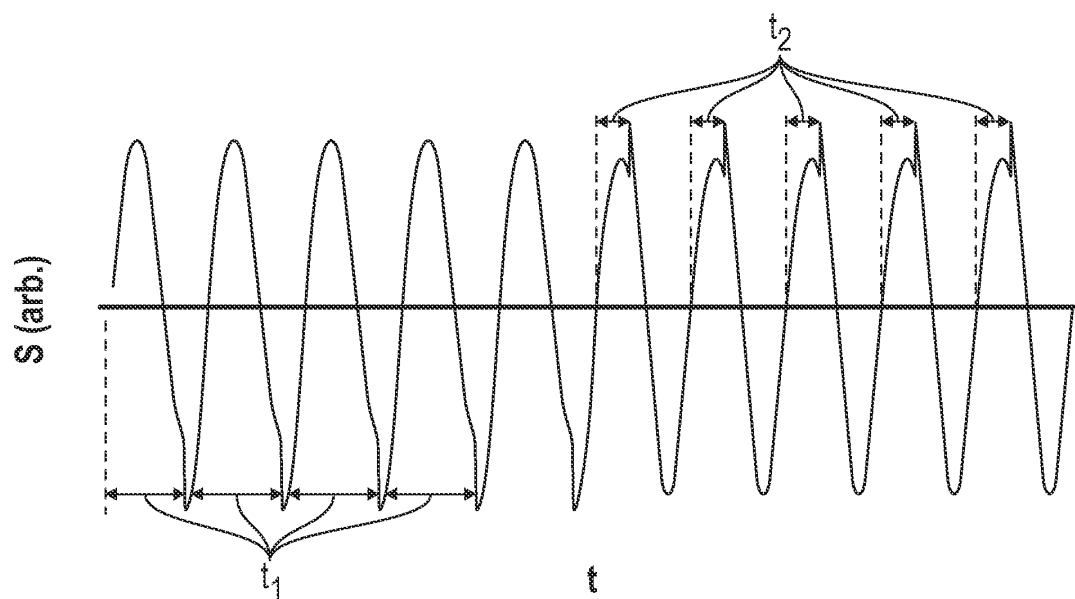


FIG. 15A

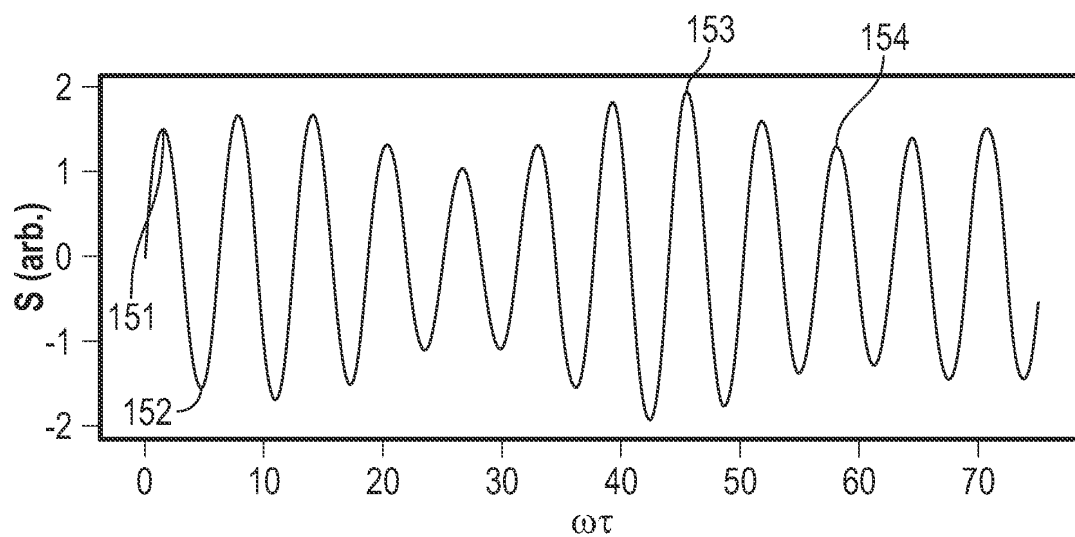


FIG. 15B