FIG. 1a

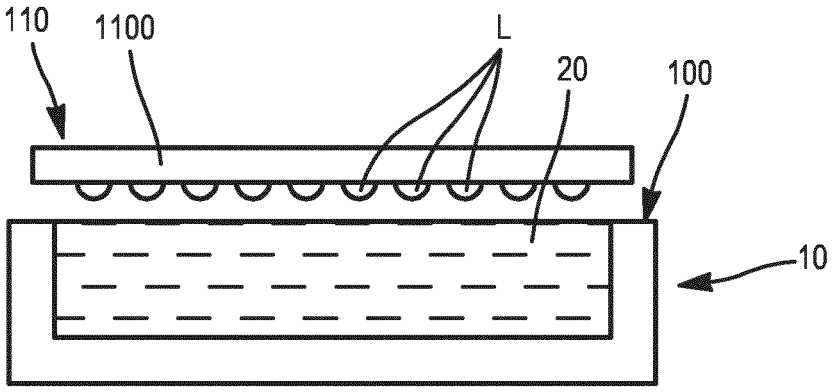



FIG. 1b

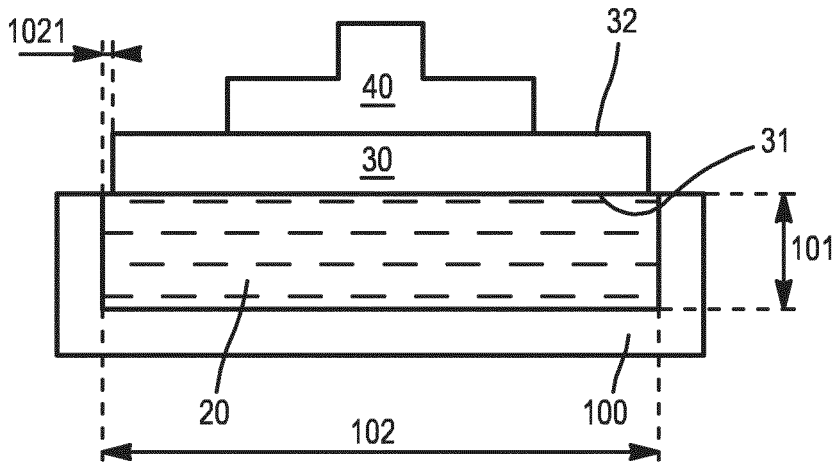


FIG. 1c

Liquid Si / substrate capacitance

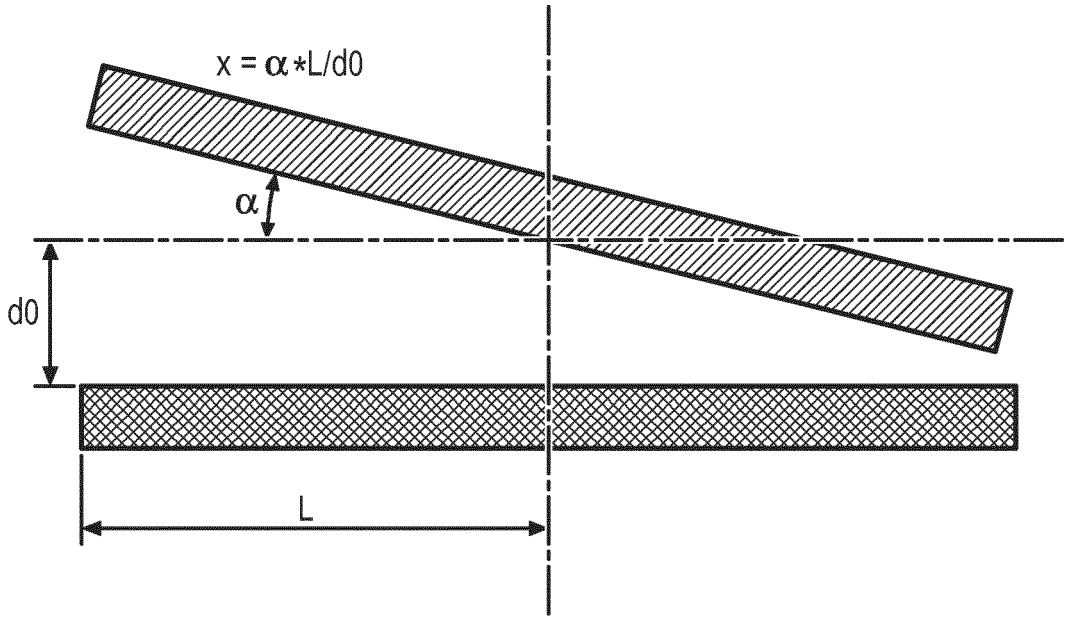
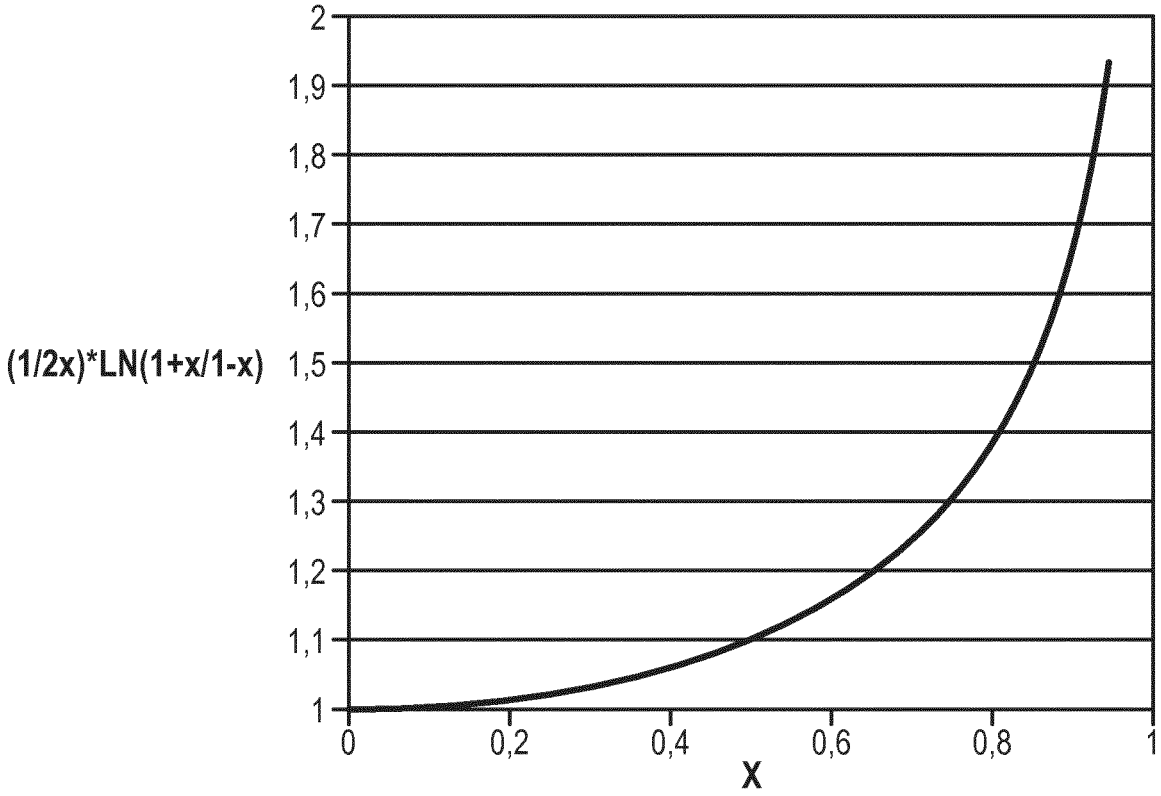



FIG. 1d

Variation capacitance as a function of X



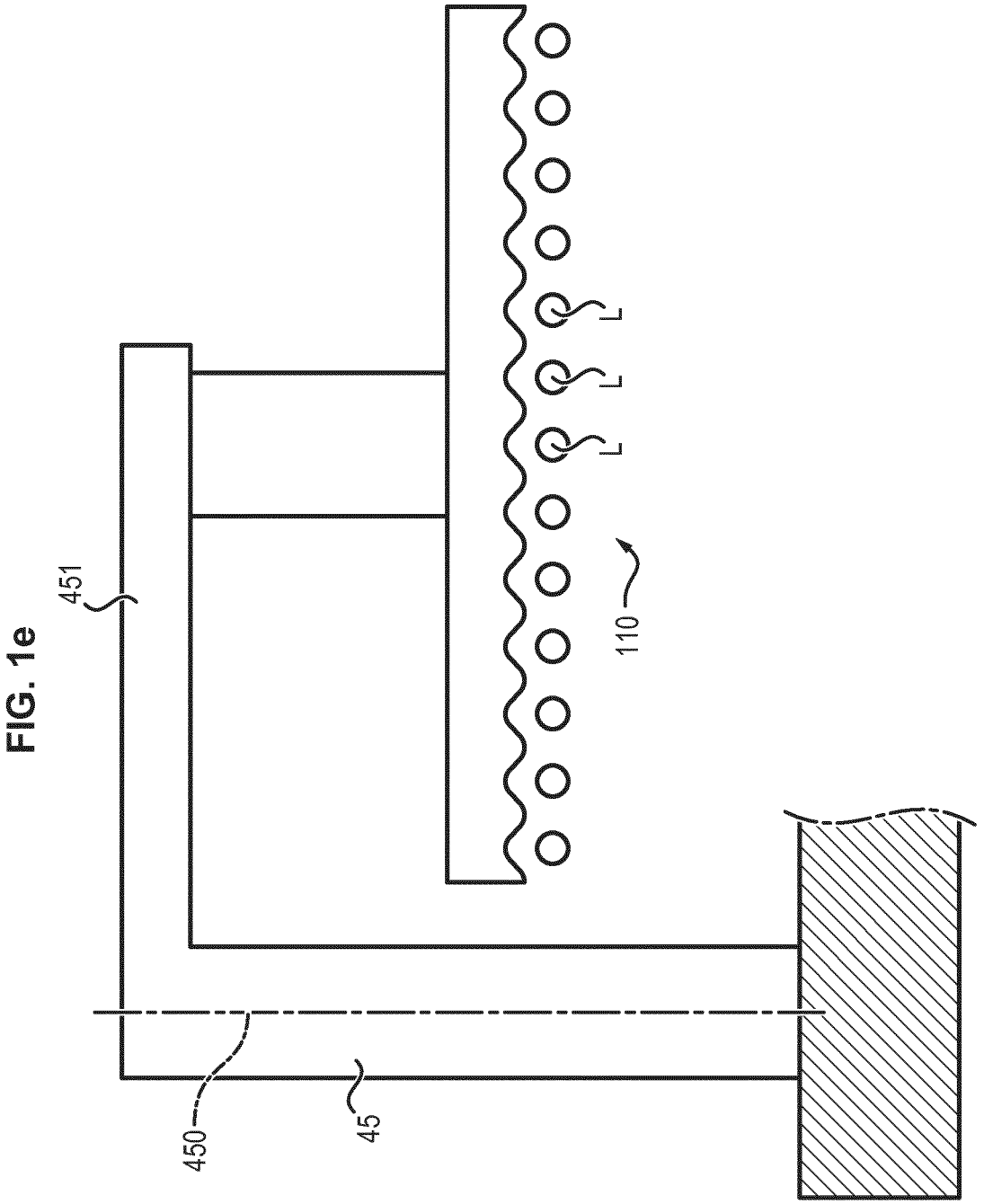



FIG. 1e

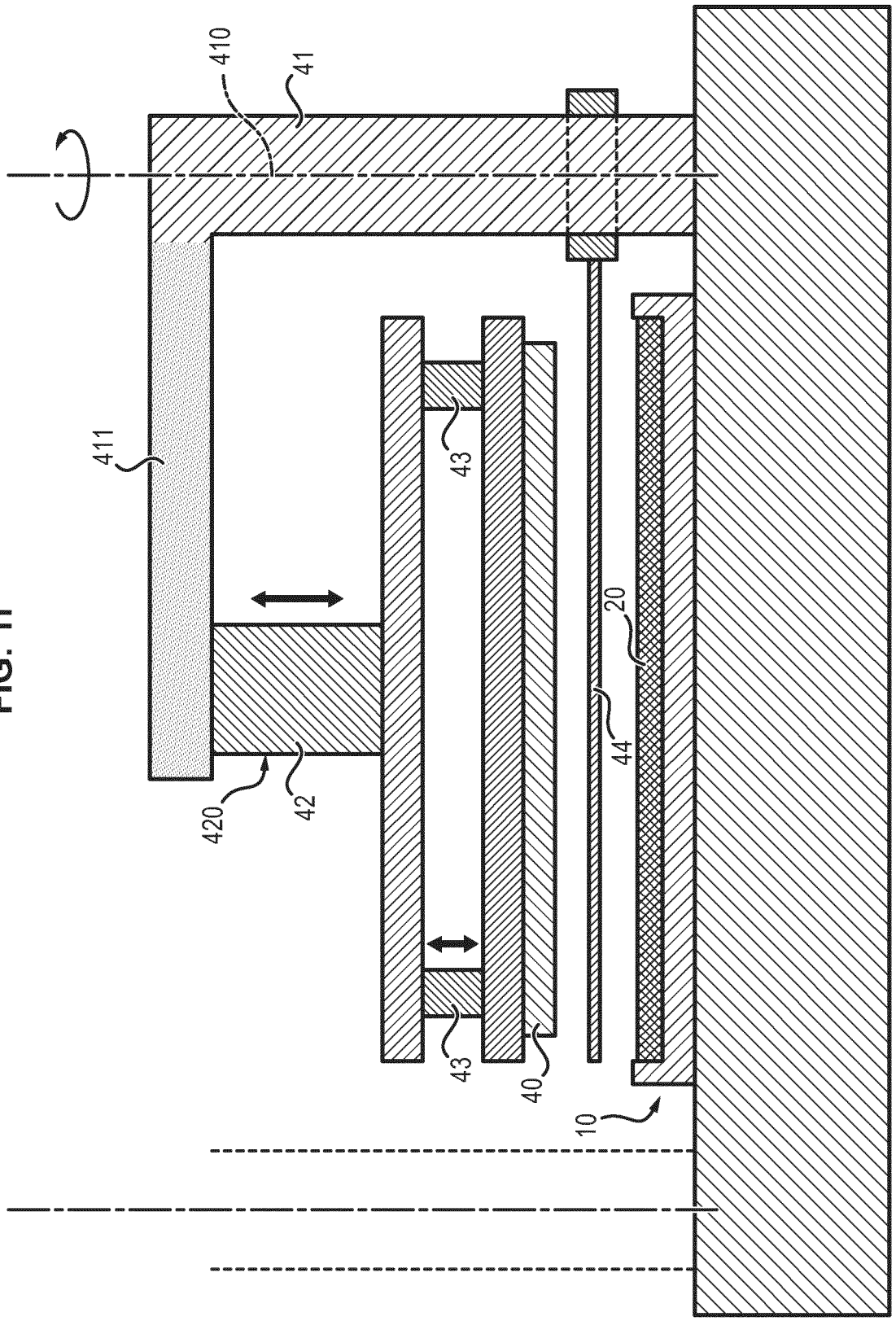



FIG. 1f

FIG. 2

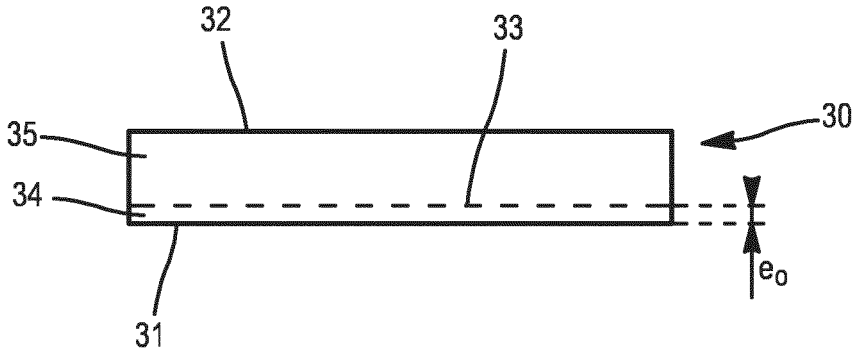



FIG. 3

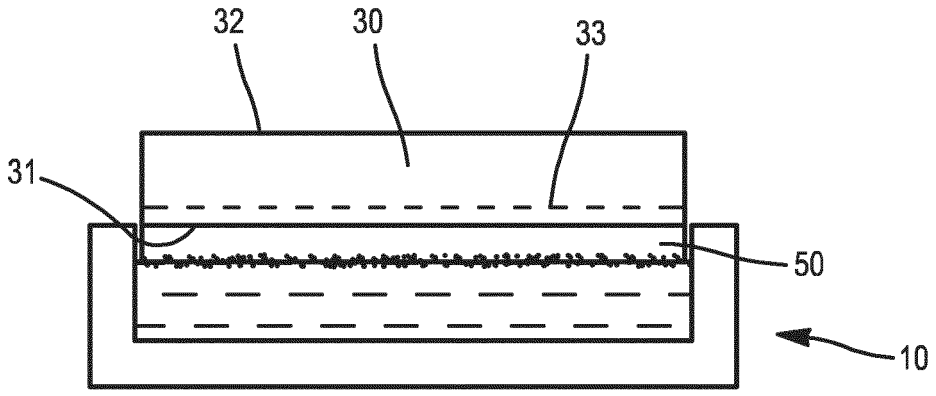


FIG. 4

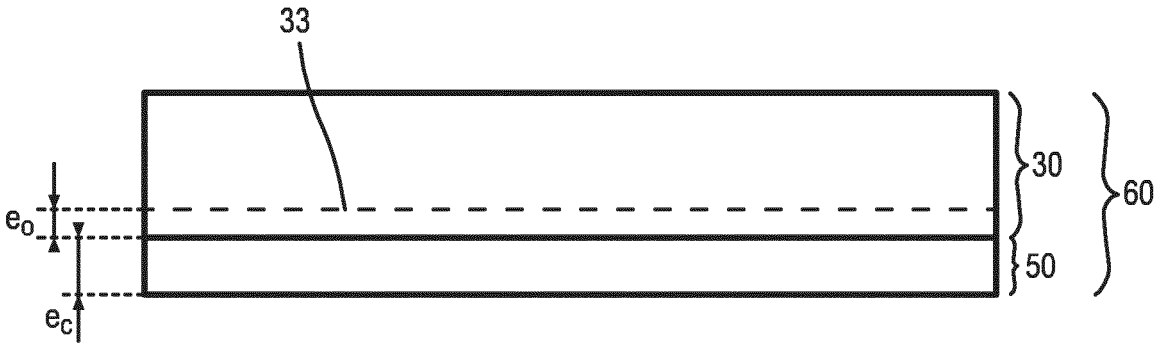



FIG. 5

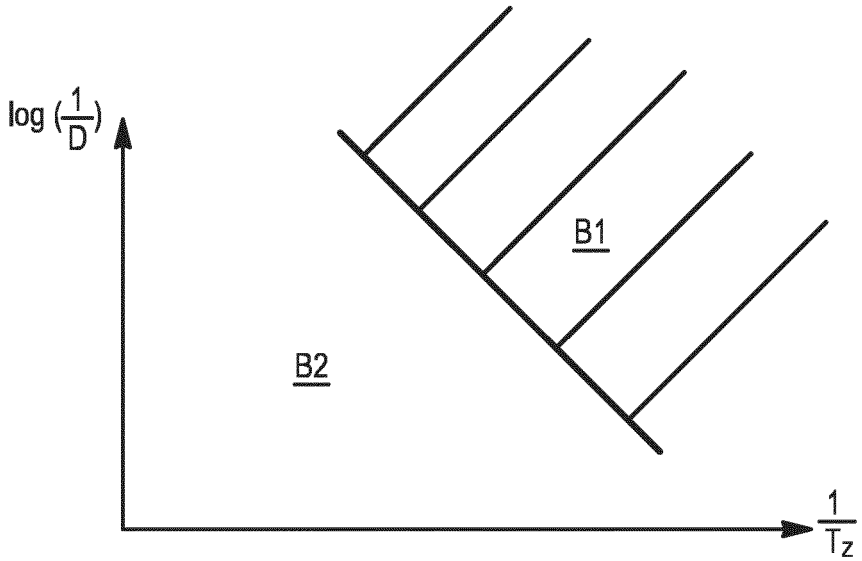


FIG. 6

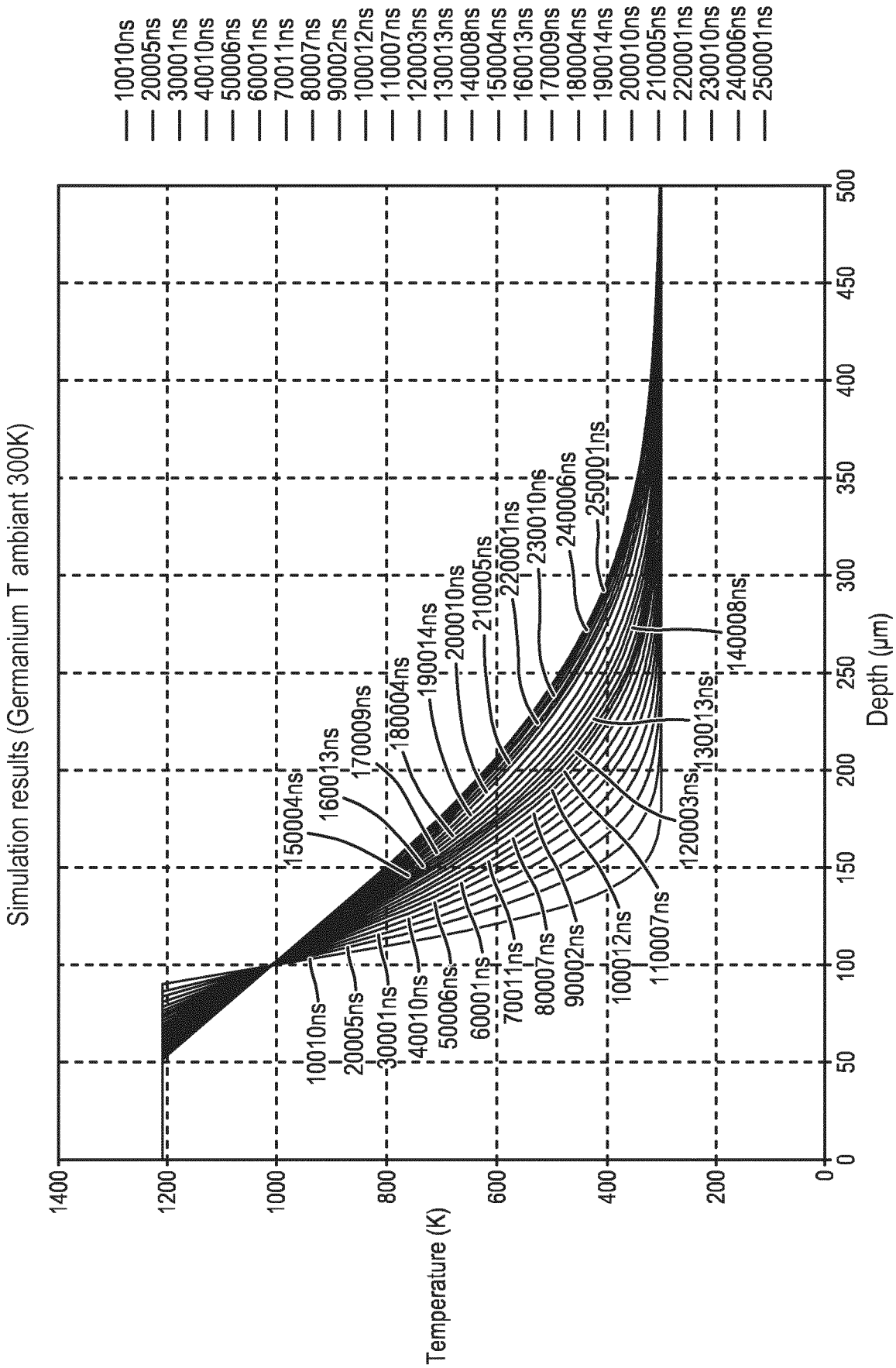

Simulation results (Germanium T ambiant 300K)
Temperature (K)
Depth (µm)
10010ns
20005ns
30001ns
40010ns
50006ns
60001ns
70011ns
80007ns
90002ns
100012ns
110007ns
120003ns
130013ns
140008ns
150004ns
160013ns
170009ns
180004ns
190014ns
200010ns
210005ns
220001ns
230010ns
240006ns
250001ns

FIG. 7

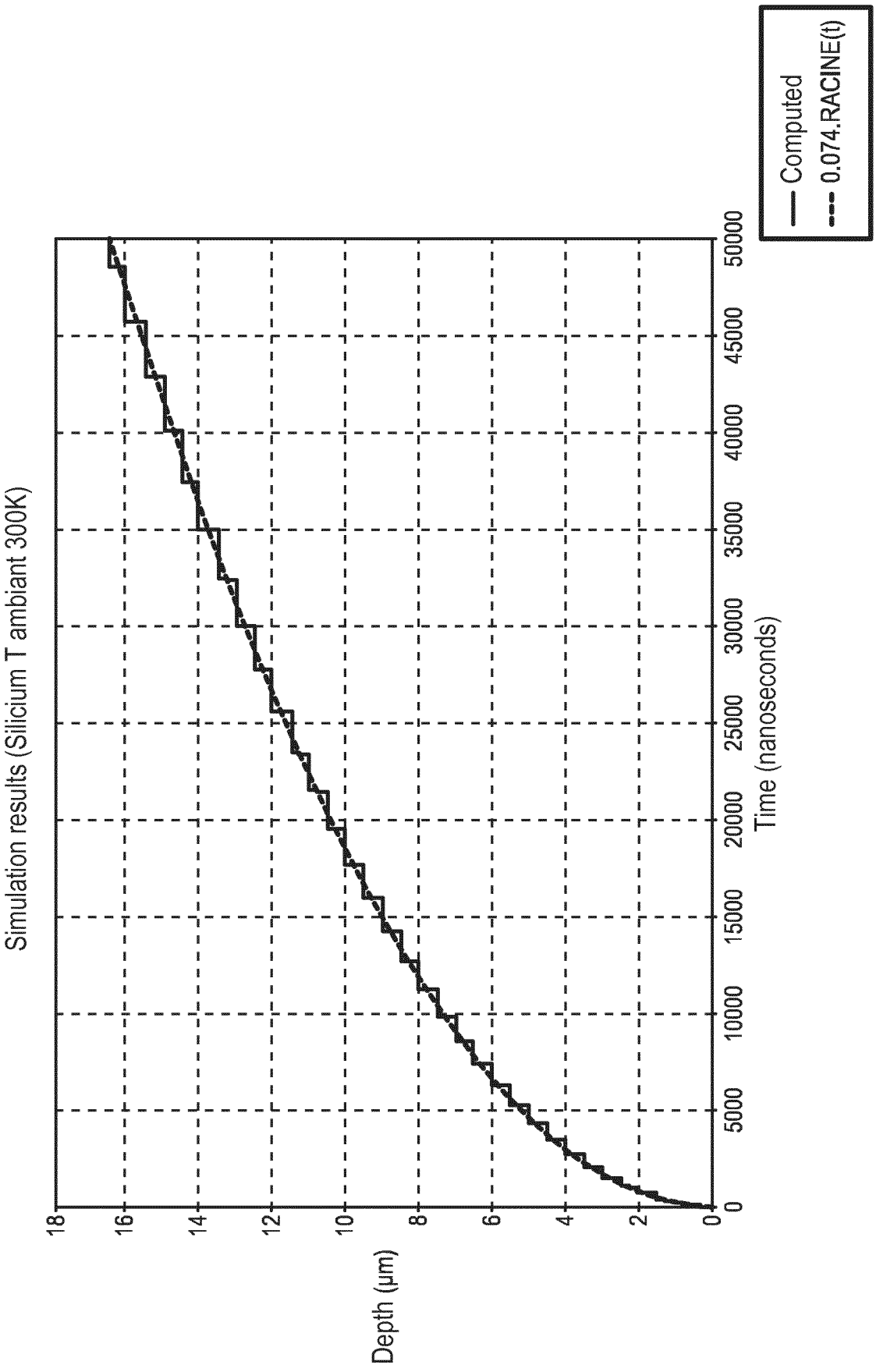
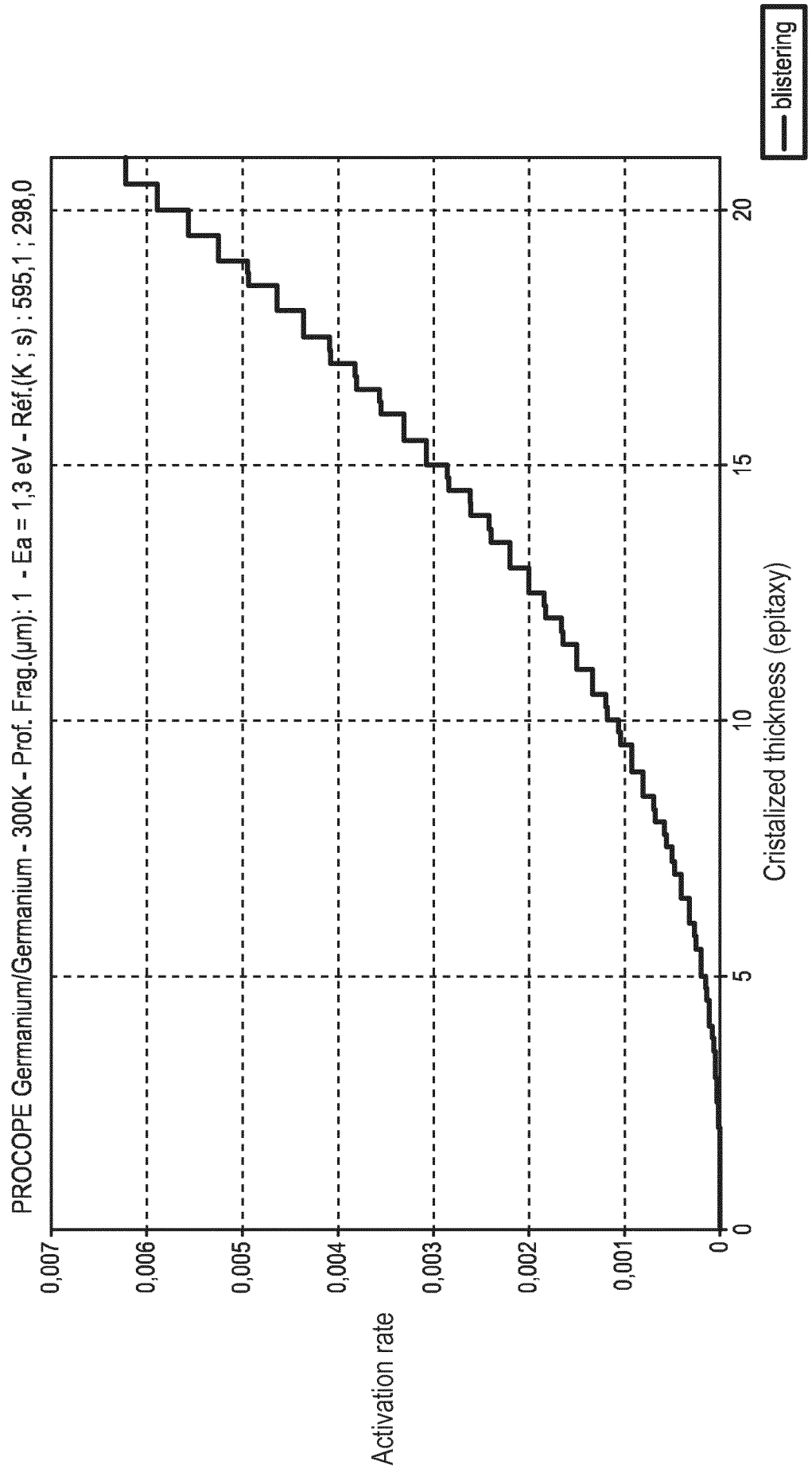

Simulation results (Silicium T ambiant 300K)
Depth (µm)
Time (nanoseconds)
0
2
4
6
8
10
12
14
16
18
0
5000
10000
15000
20000
25000
30000
35000
40000
45000
50000
Computed
0.074.RACINE(t)

FIG. 8


Germanium - T ambiant = 300K
PROCOPE Germanium/Germanium - 300K - Prof. Frag.(µm): 1 - Ea = 1,3 eV - Réf.(K ; s) : 595,1 ; 298,0
blistering
Activation rate
0,007
0,006
0,005
0,004
0,003
0,002
0,001
0
0
5
10
15
20
Cristalized thickness (epitaxy)

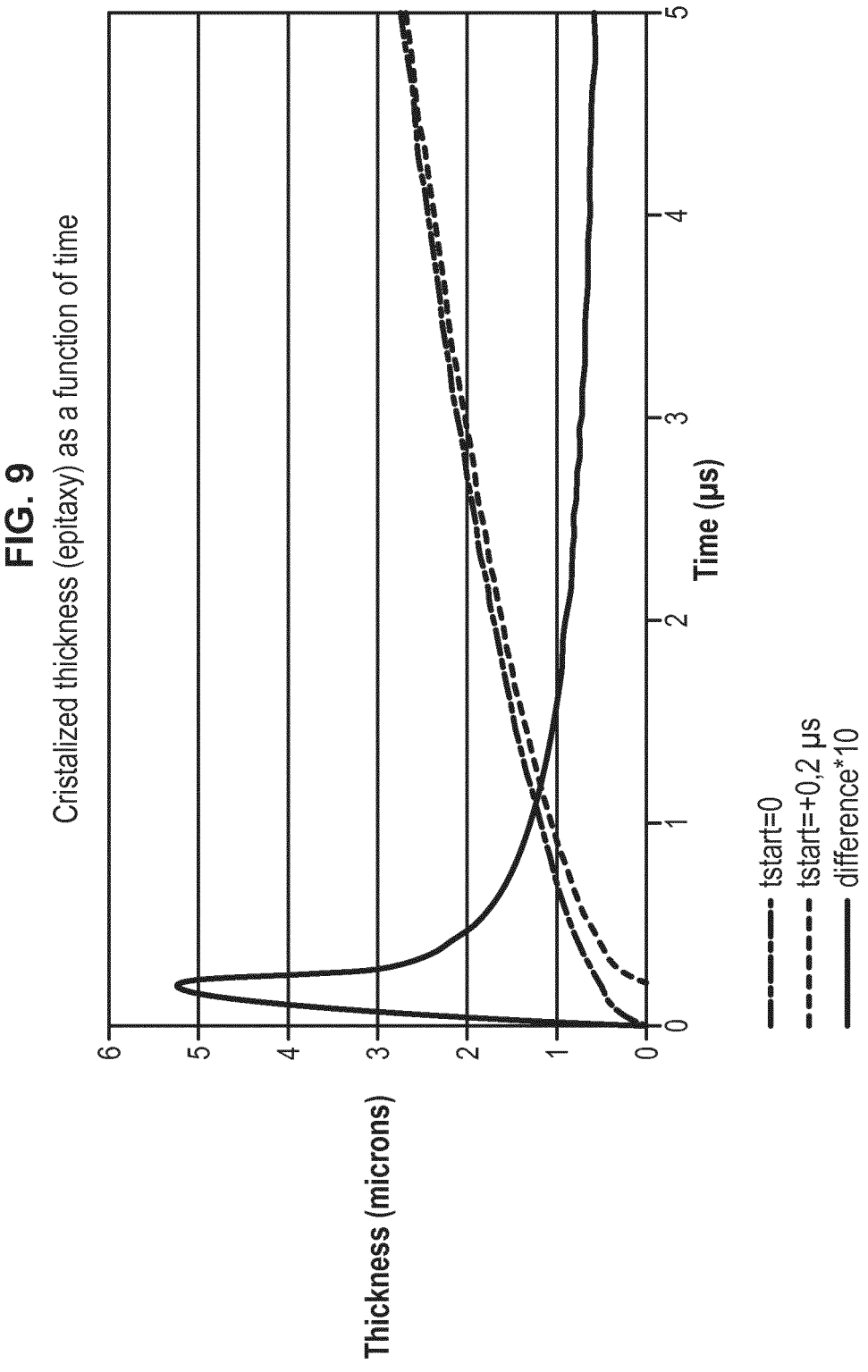

Cristalized thickness (epitaxy) as a function of time
Thickness (microns)
Time (µs)
0
1
2
3
4
5
6
tstart=0
tstart=+0,2 µs
difference*10

FIG. 9

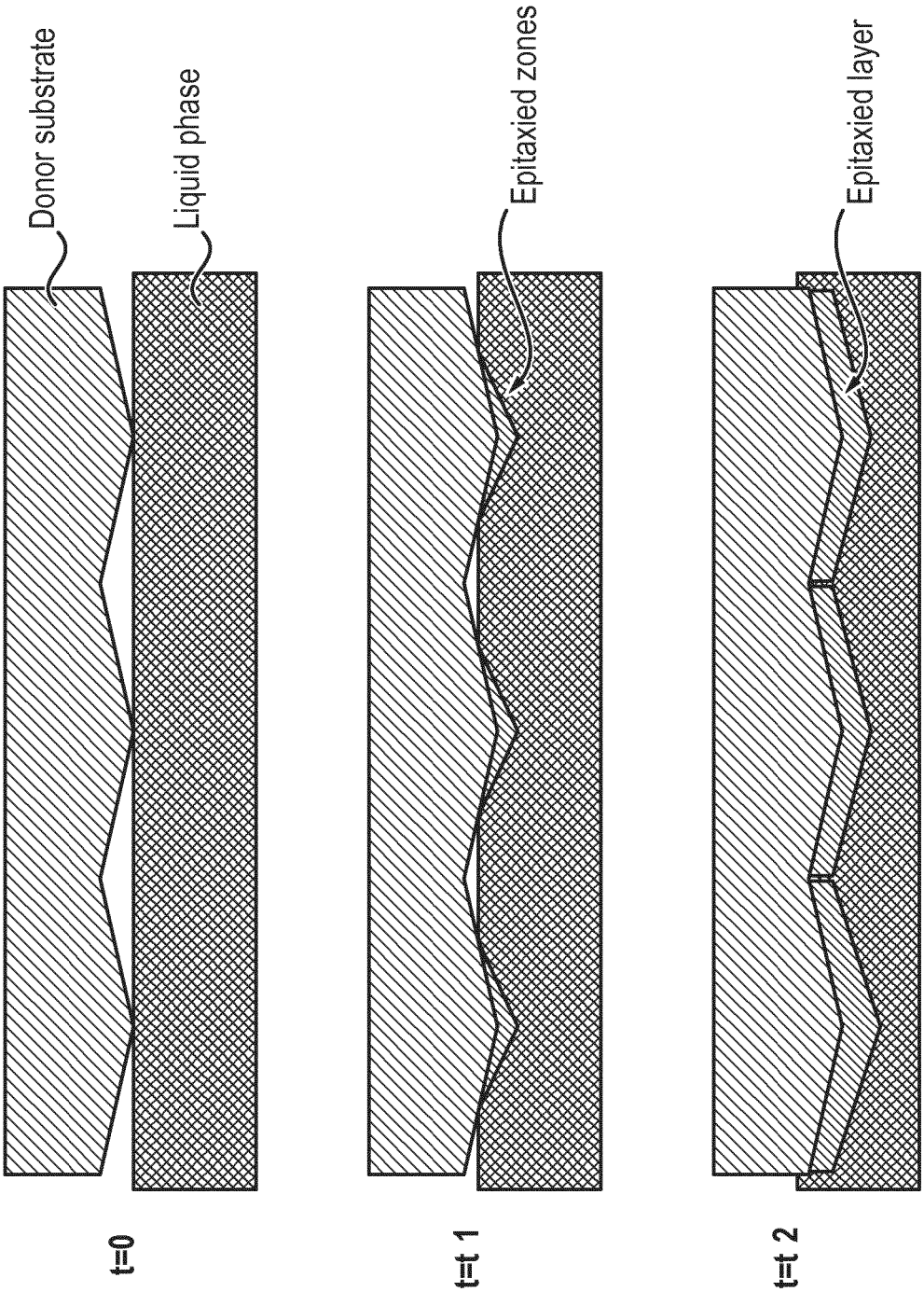
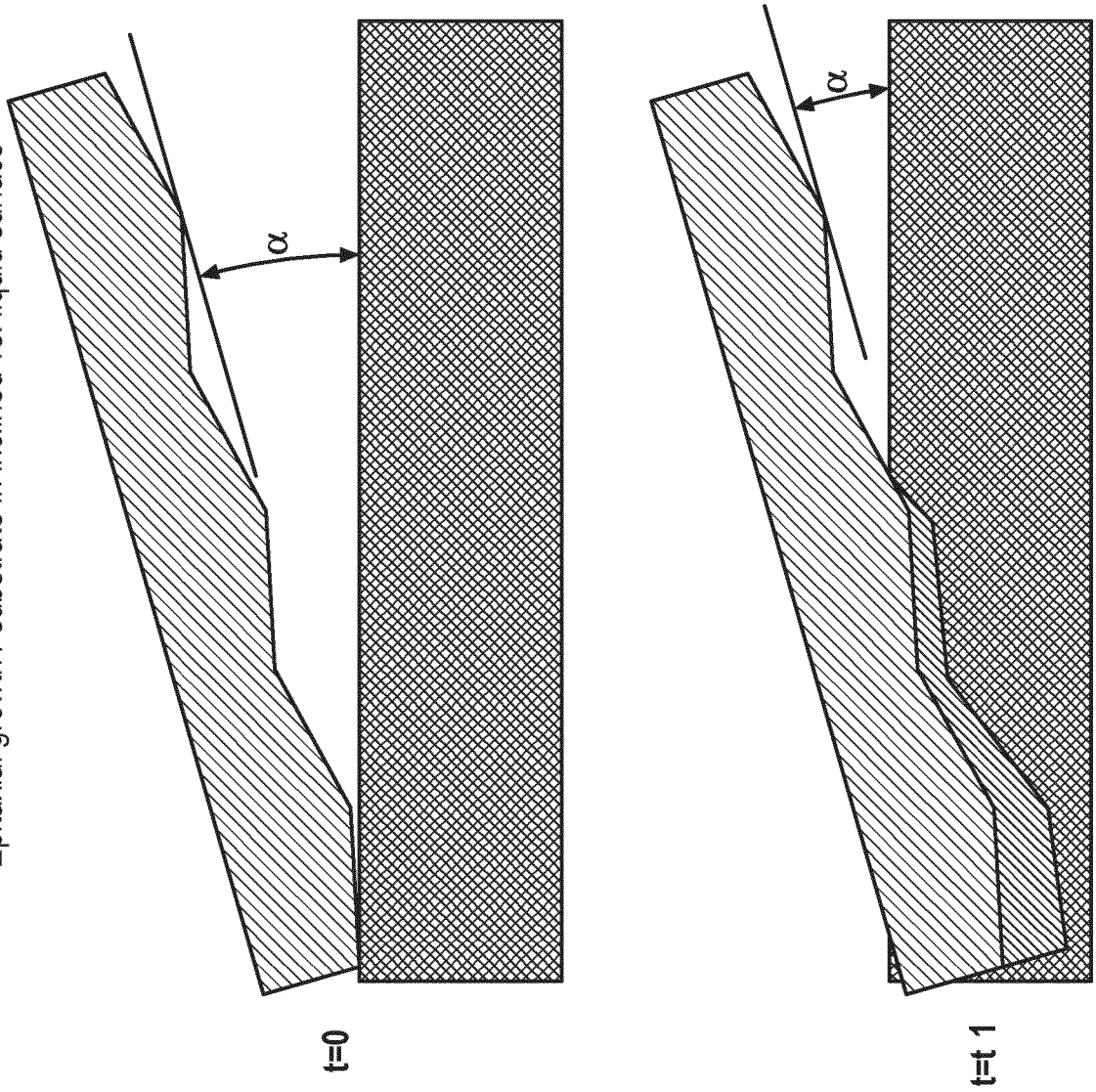



FIG. 10

Epitaxial growth / substrate in parallel to liquid surface

FIG. 11

Epitaxial growth / substrate in inclined vs. liquid surface



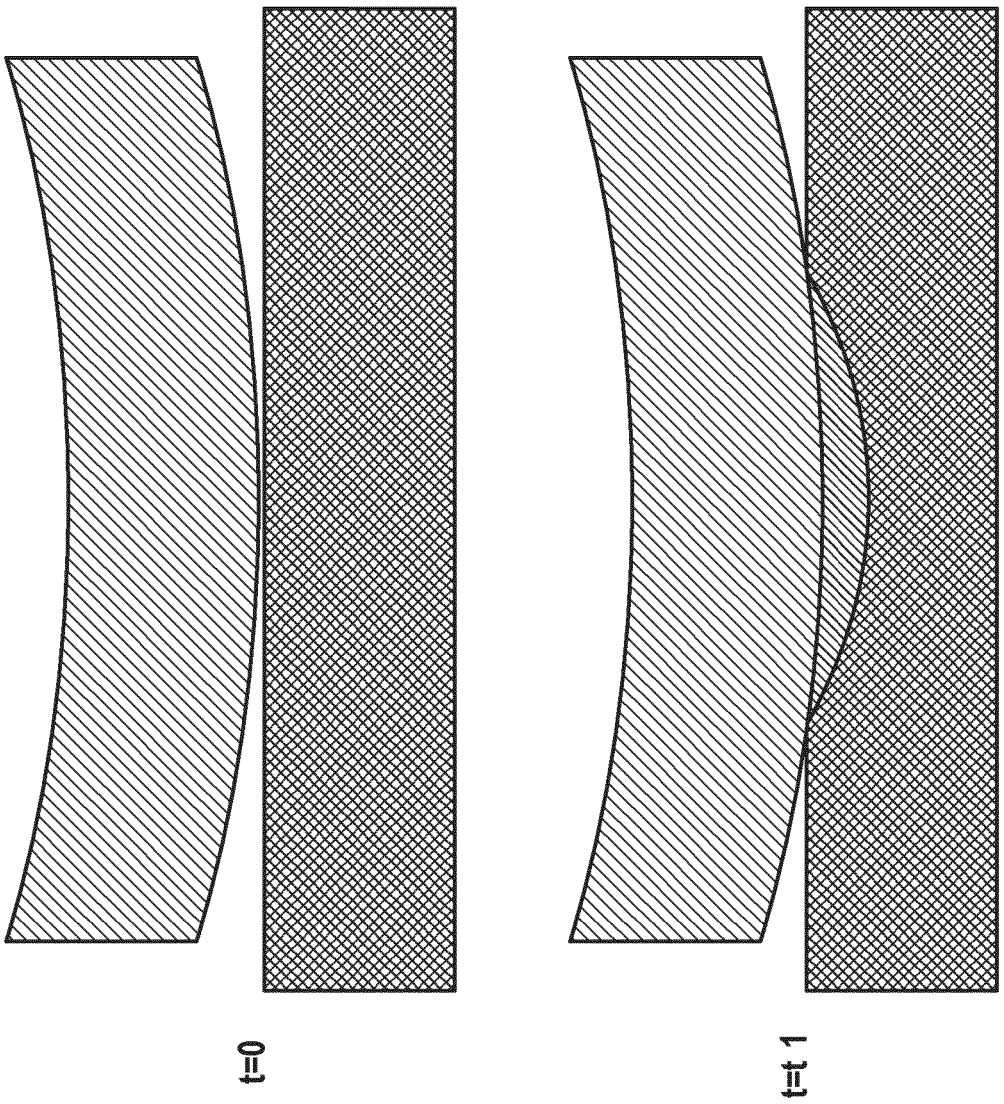



FIG. 12
Epitaxial growth / projecting surface

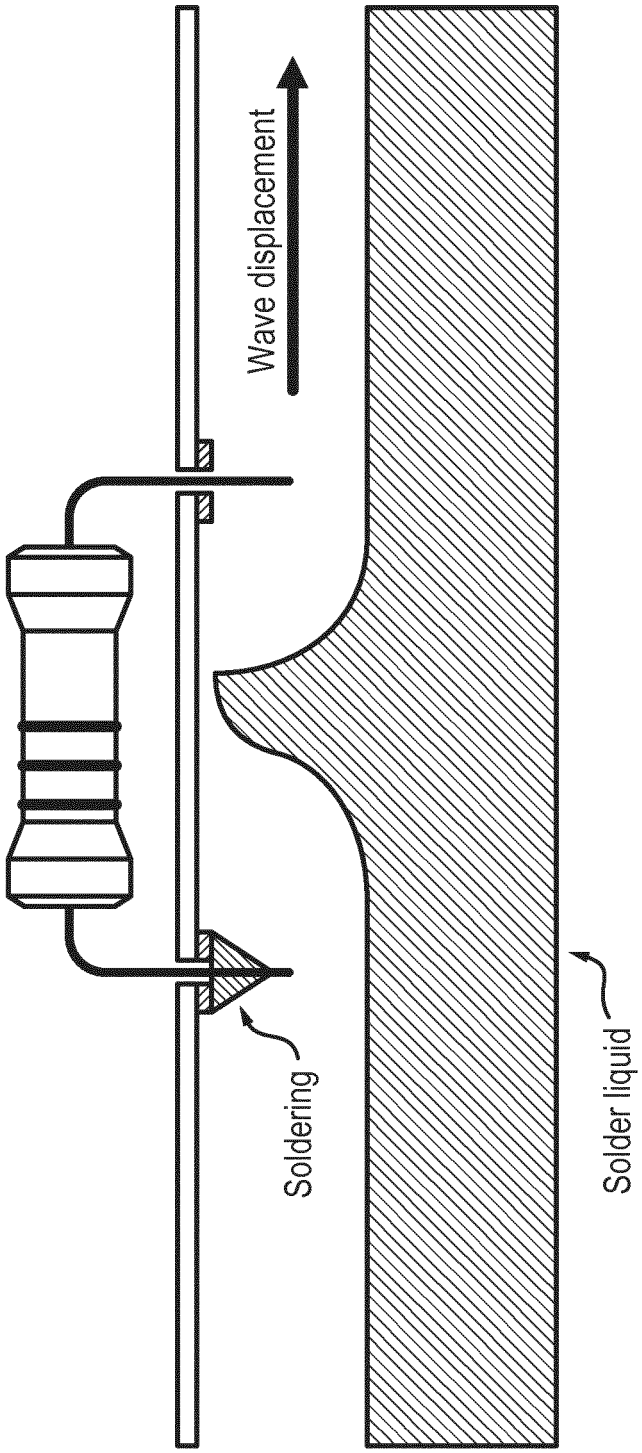



FIG. 13
Principle of wave soldering