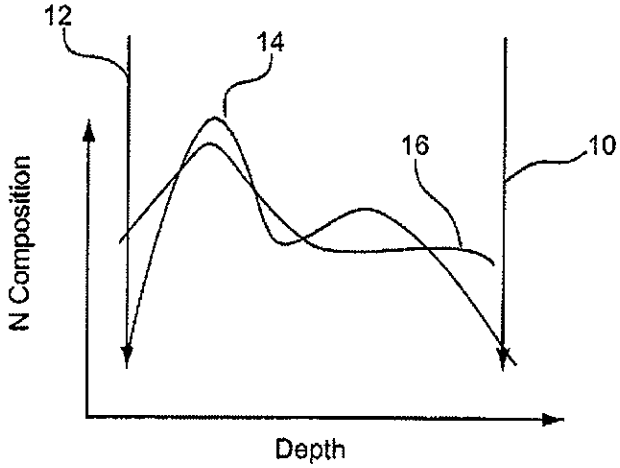

12
14
16
10
N Composition
Depth

Fig.1

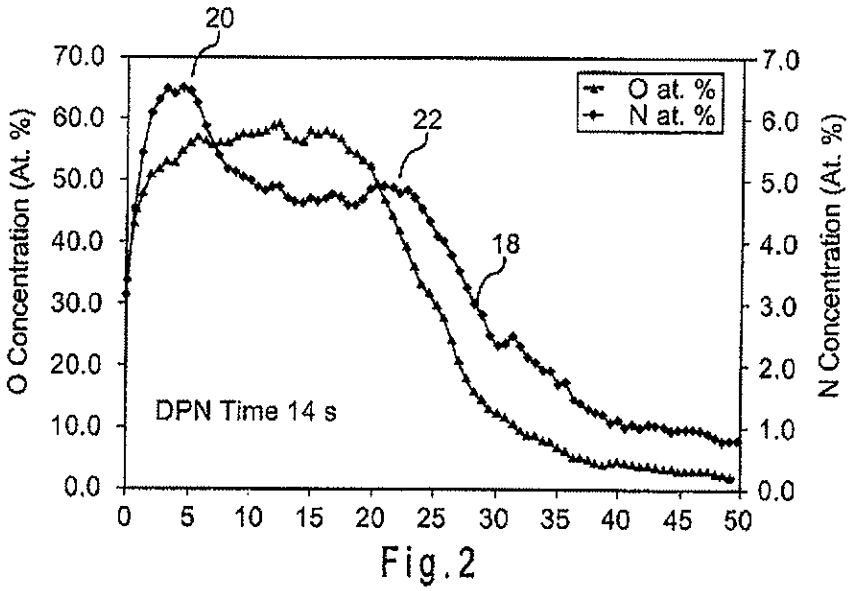

20
22
18
O at. %
N at. %
DPN Time 14 s
O Concentration (At. %)
N Concentration (At. %)
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
0
5
10
15
20
25
30
35
40
45
50

Fig.2

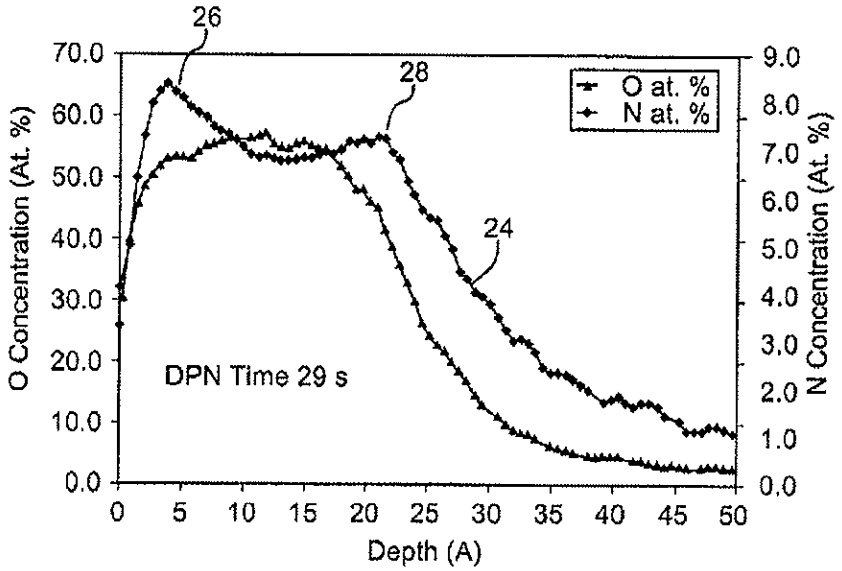

26
28
24
O at. %
N at. %
DPN Time 29 s
O Concentration (At. %)
N Concentration (At. %)
Depth (A)
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
0
5
10
15
20
25
30
35
40
45
50

Fig.3

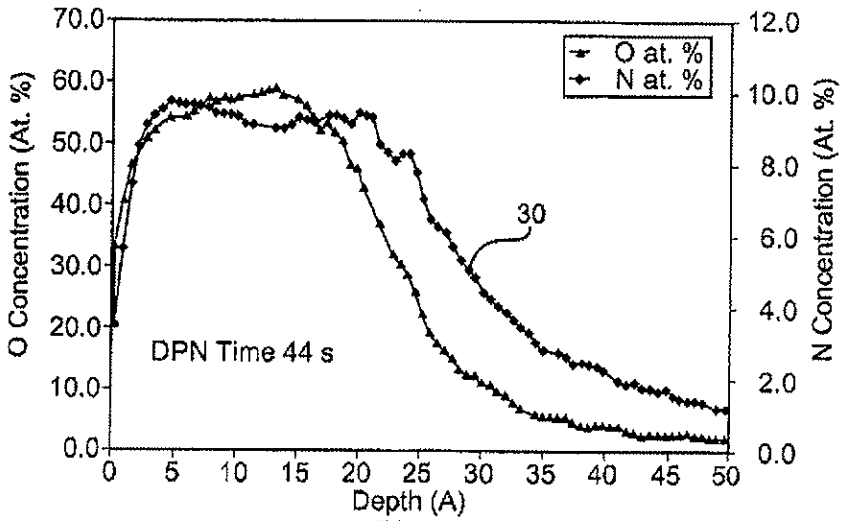

30
O at. %
N at. %
DPN Time 44 s
O Concentration (At. %)
N Concentration (At. %)
Depth (A)
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
5
10
15
20
25
30
35
40
45
50

Fig.4

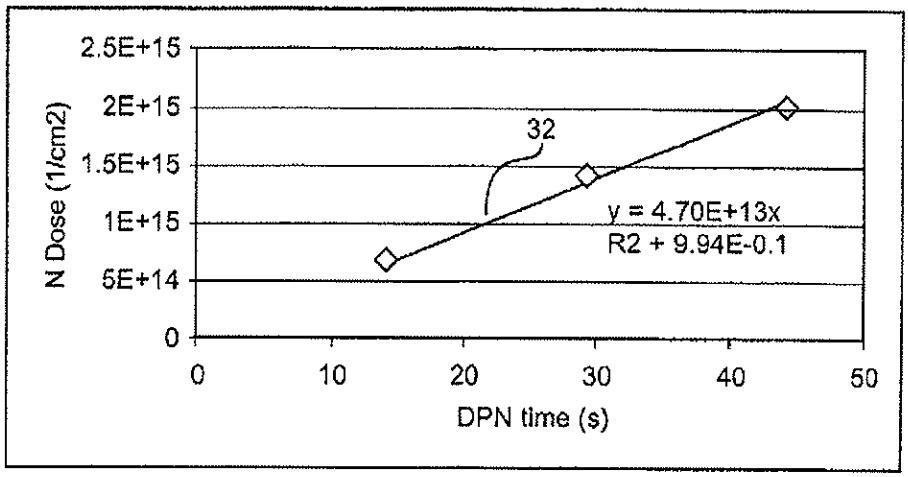

2.5E+15
2E+15
1.5E+15
1E+15
5E+14
0
N Dose (1/cm2)
32
y = 4.70E+13x
R2 + 9.94E-0.1
0
10
20
30
40
50
DPN time (s)

Fig.5

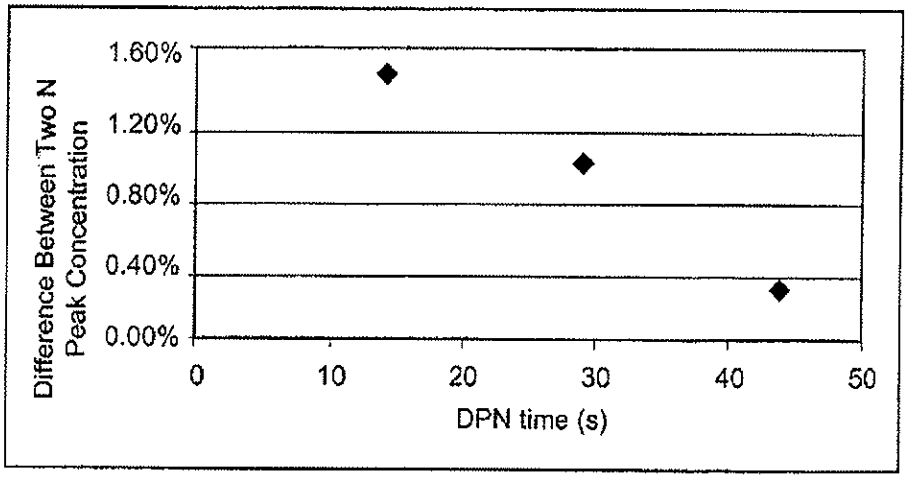

1.60%
1.20%
0.80%
0.40%
0.00%
Difference Between Two N Peak Concentration
0
10
20
30
40
50
DPN time (s)

Fig.6

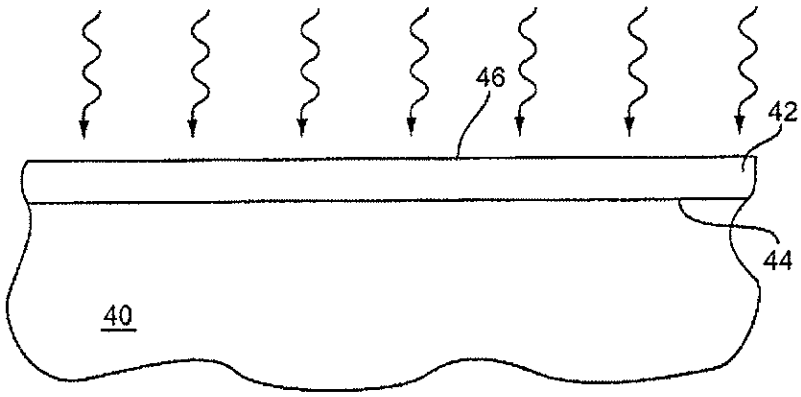



Fig.7

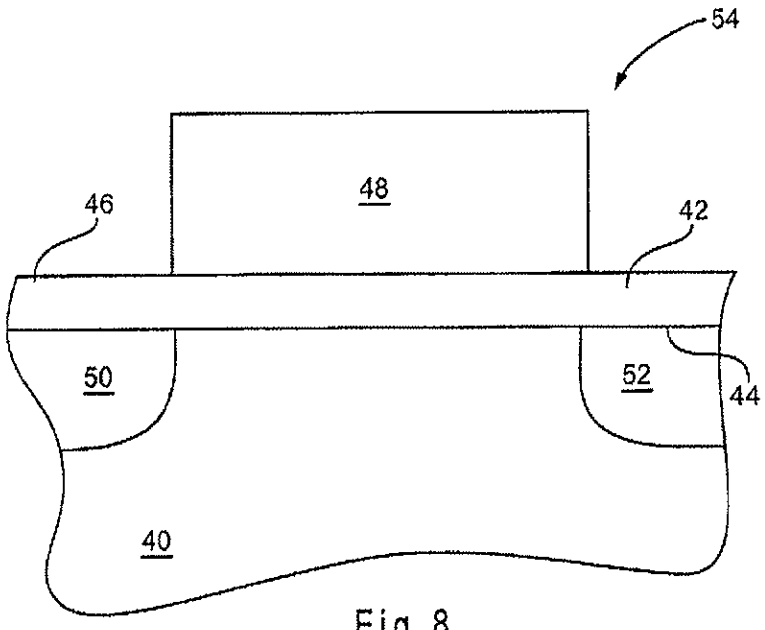



Fig.8