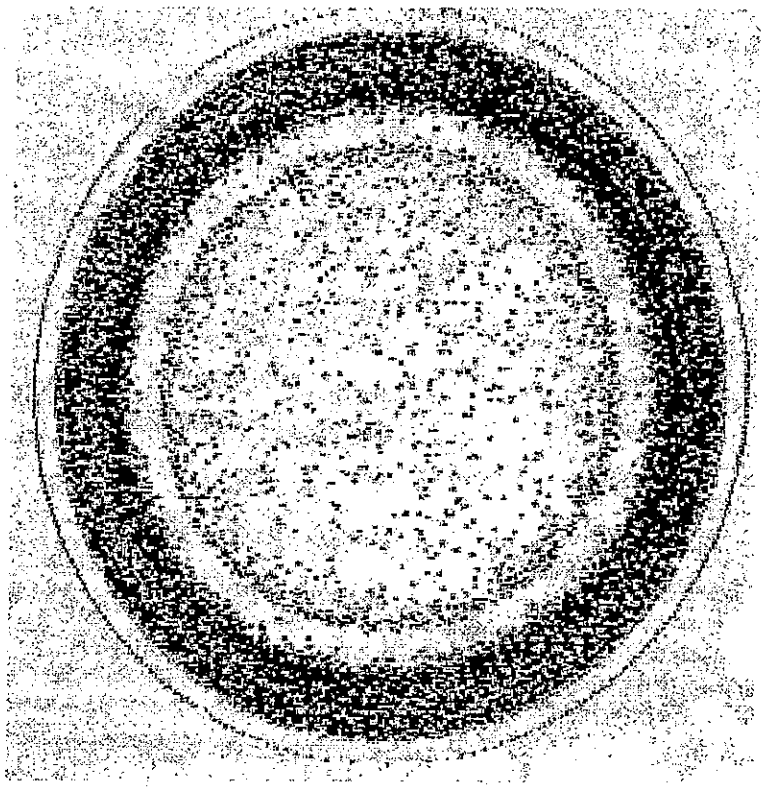


FIGURE 1

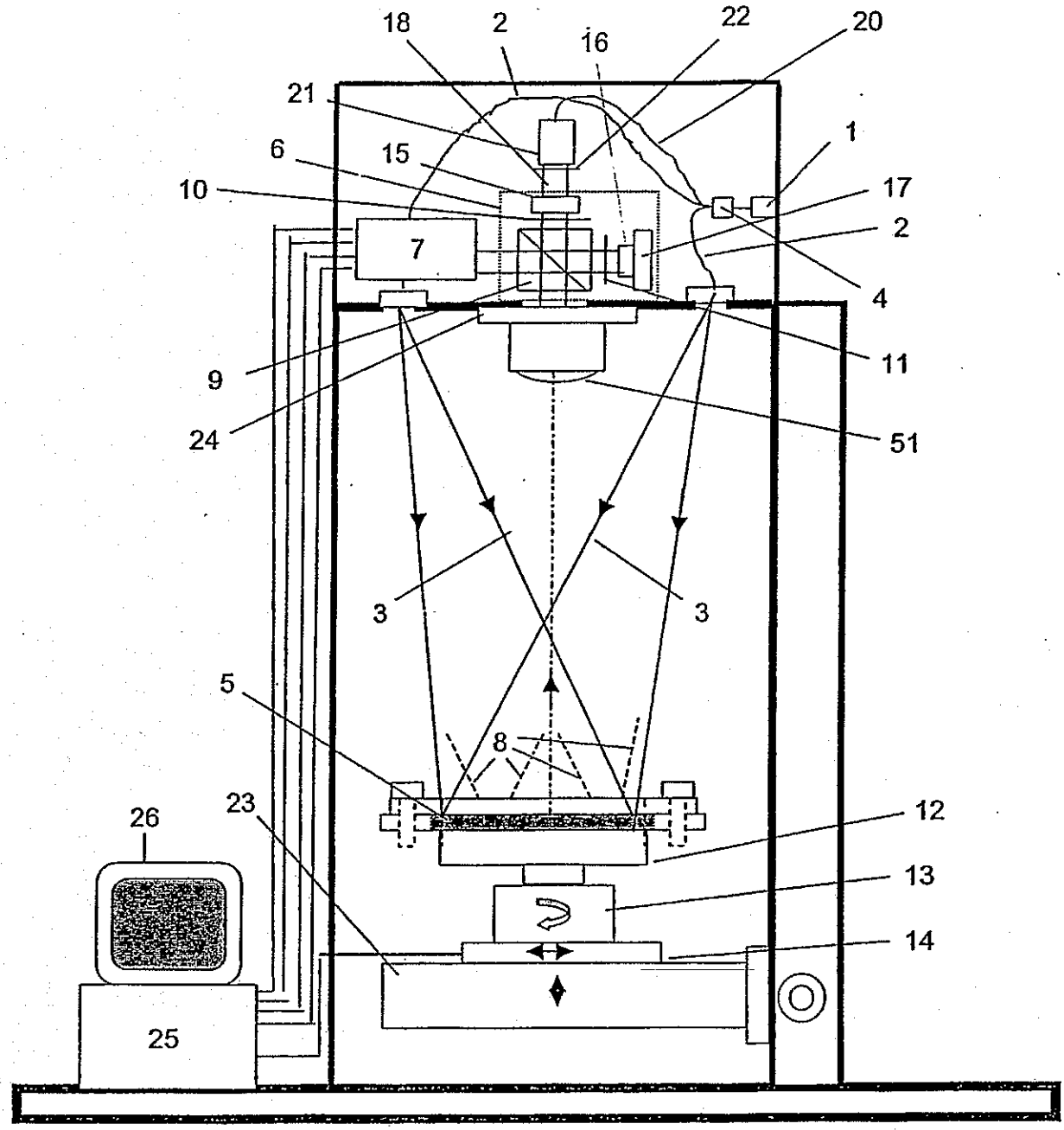


FIGURE 2

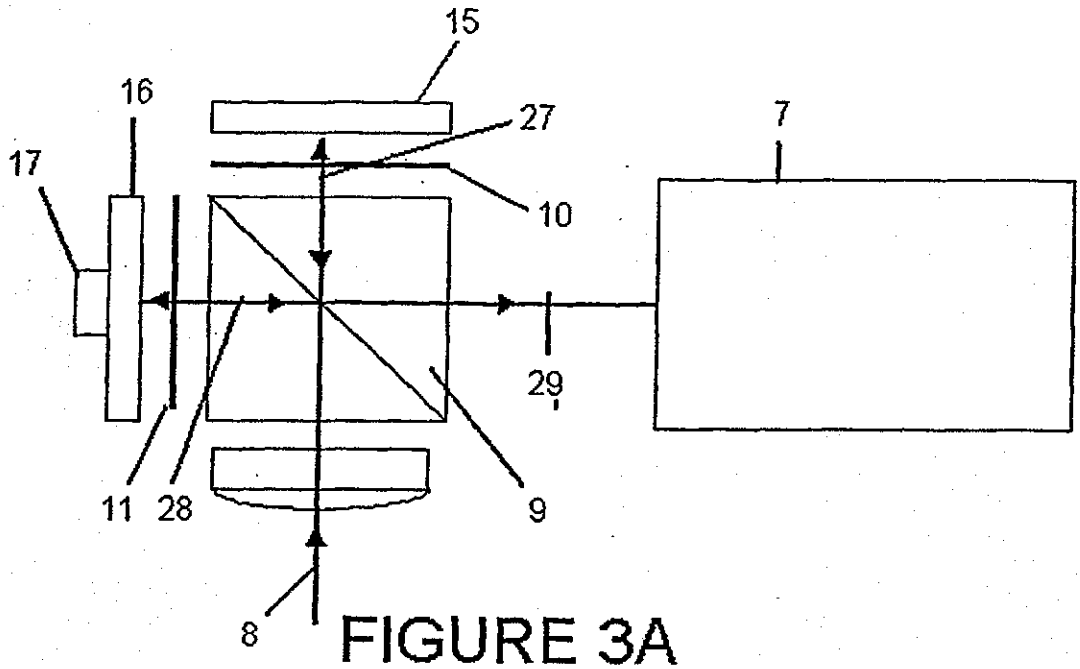


FIGURE 3A

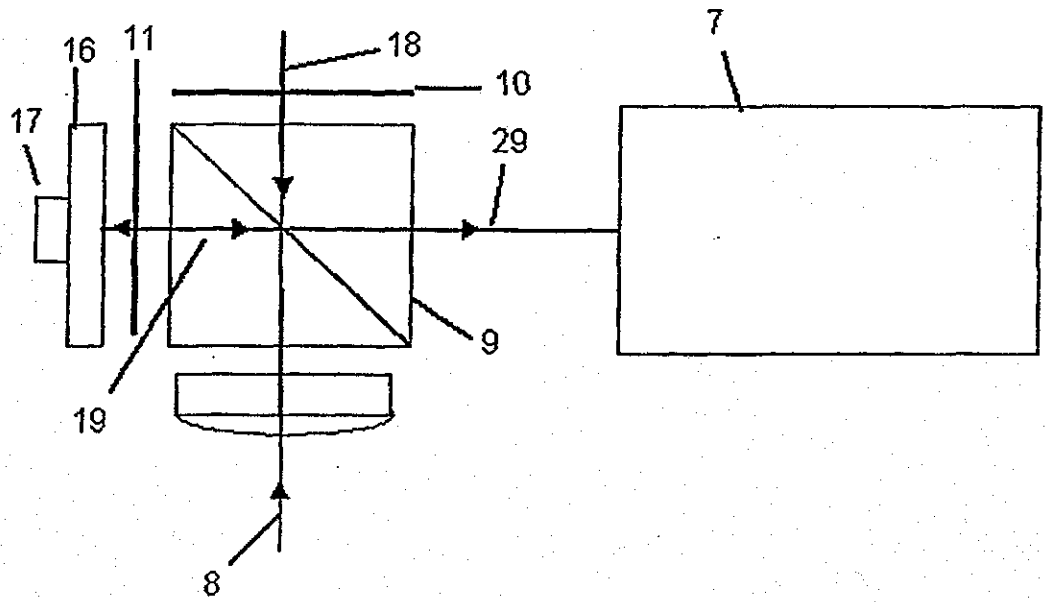


FIGURE 3B

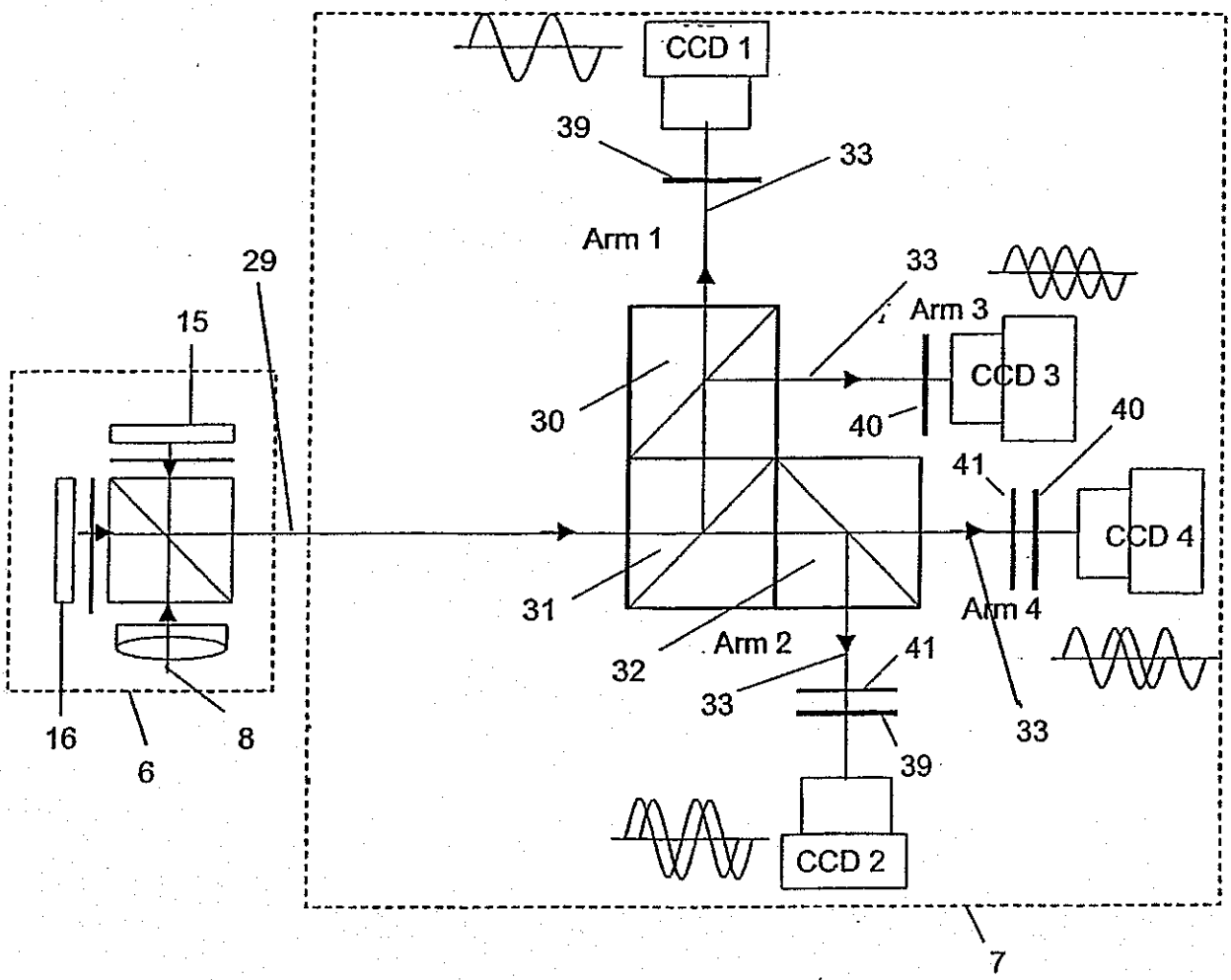

CCD 1
39
33
Arm 1
29
15
33
Arm 3
CCD 3
30
40
40
41
CCD 4
31
Arm 4
32
Arm 2
41
33
33
39
16
6
8
CCD 2
7

FIGURE 4

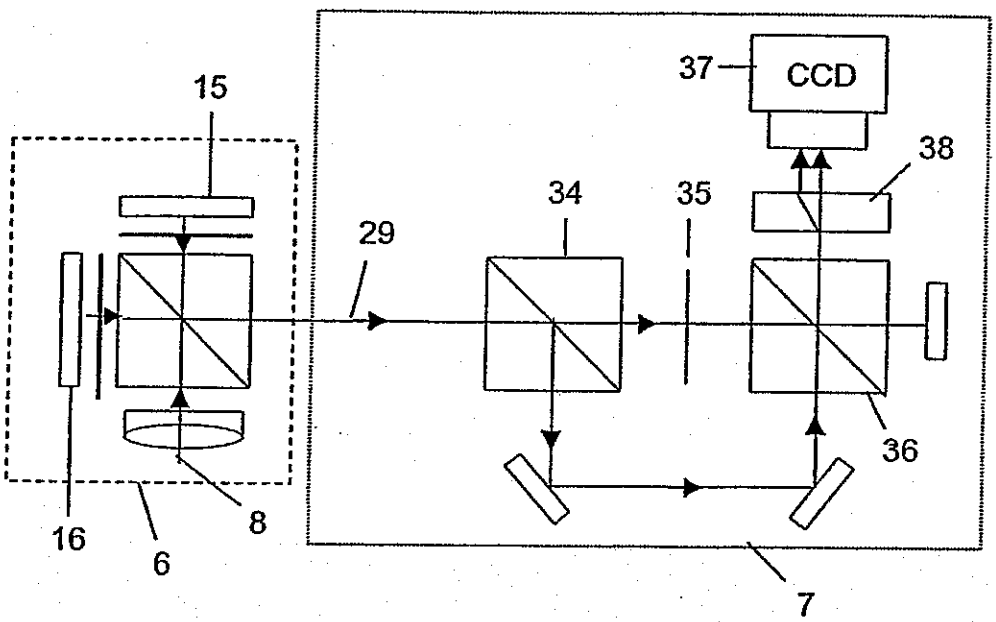


FIGURE 5

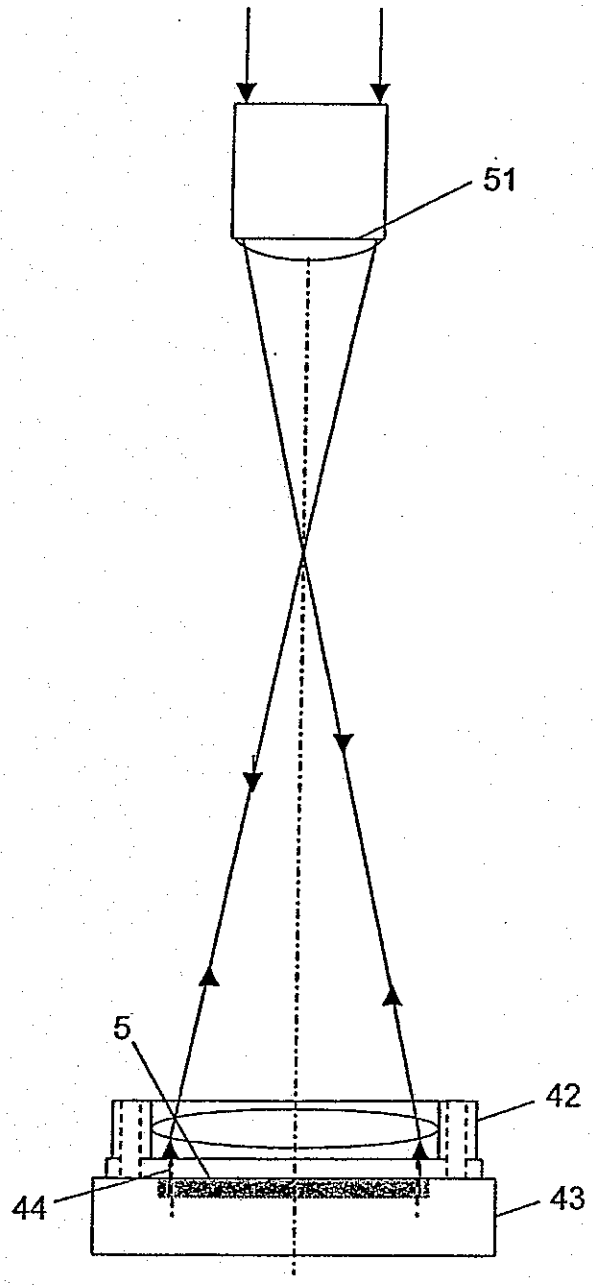


FIGURE 6

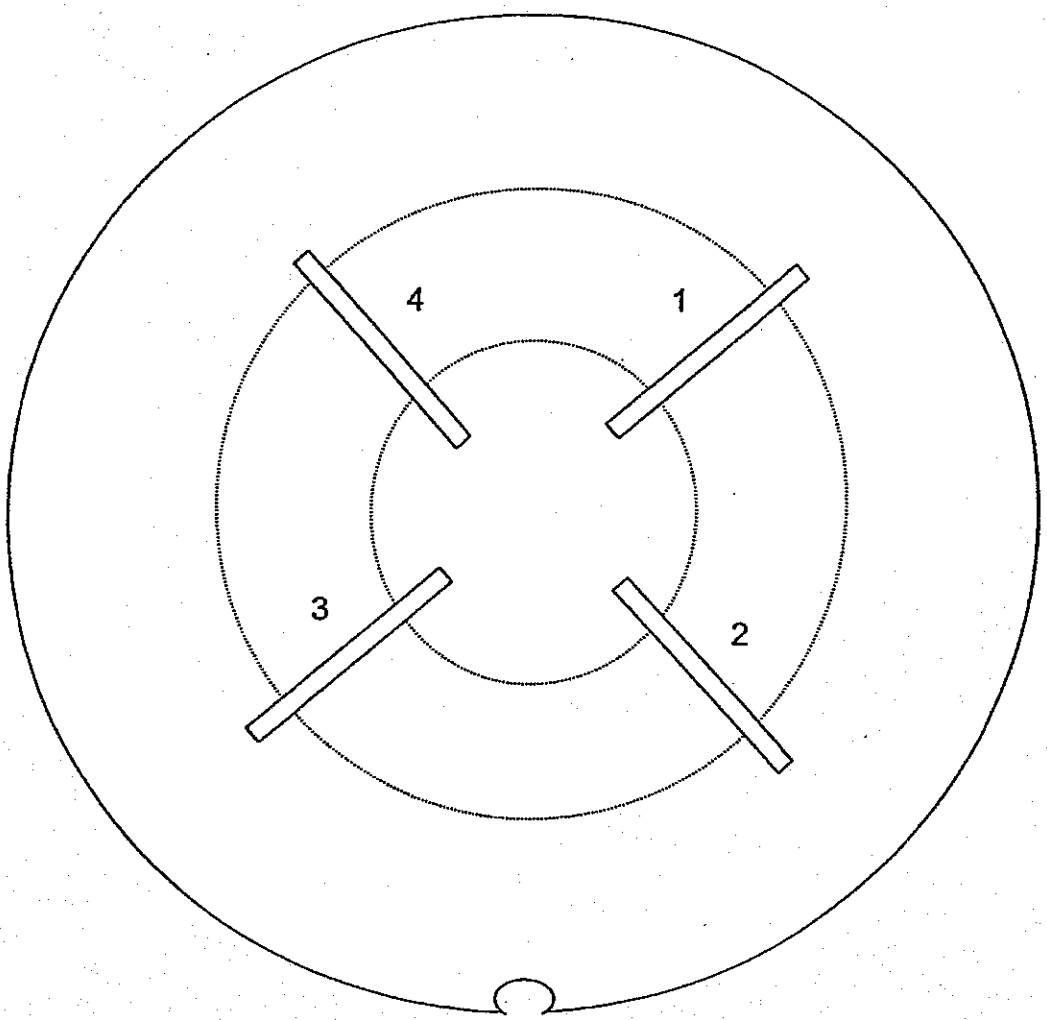


FIGURE 7

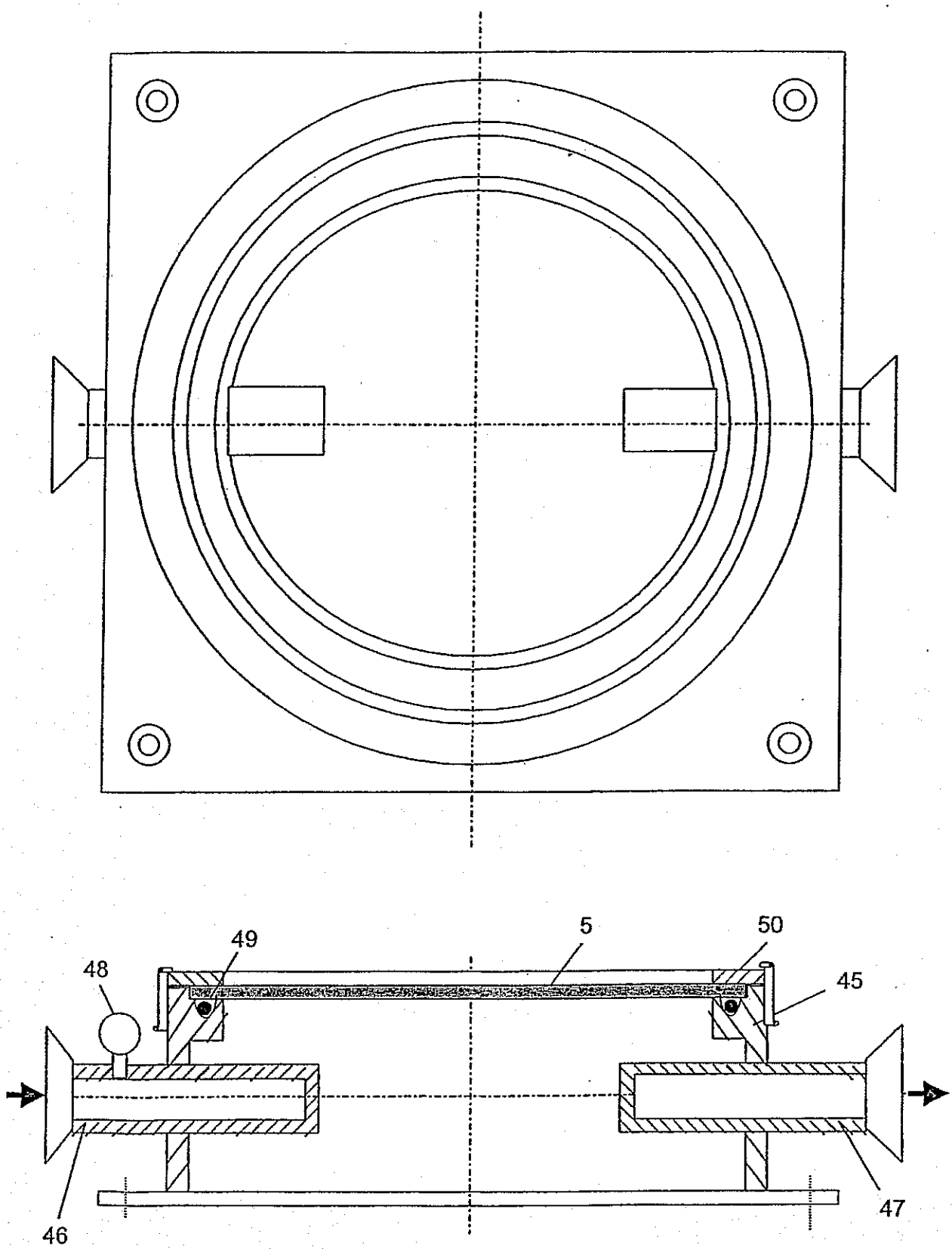


FIGURE 8

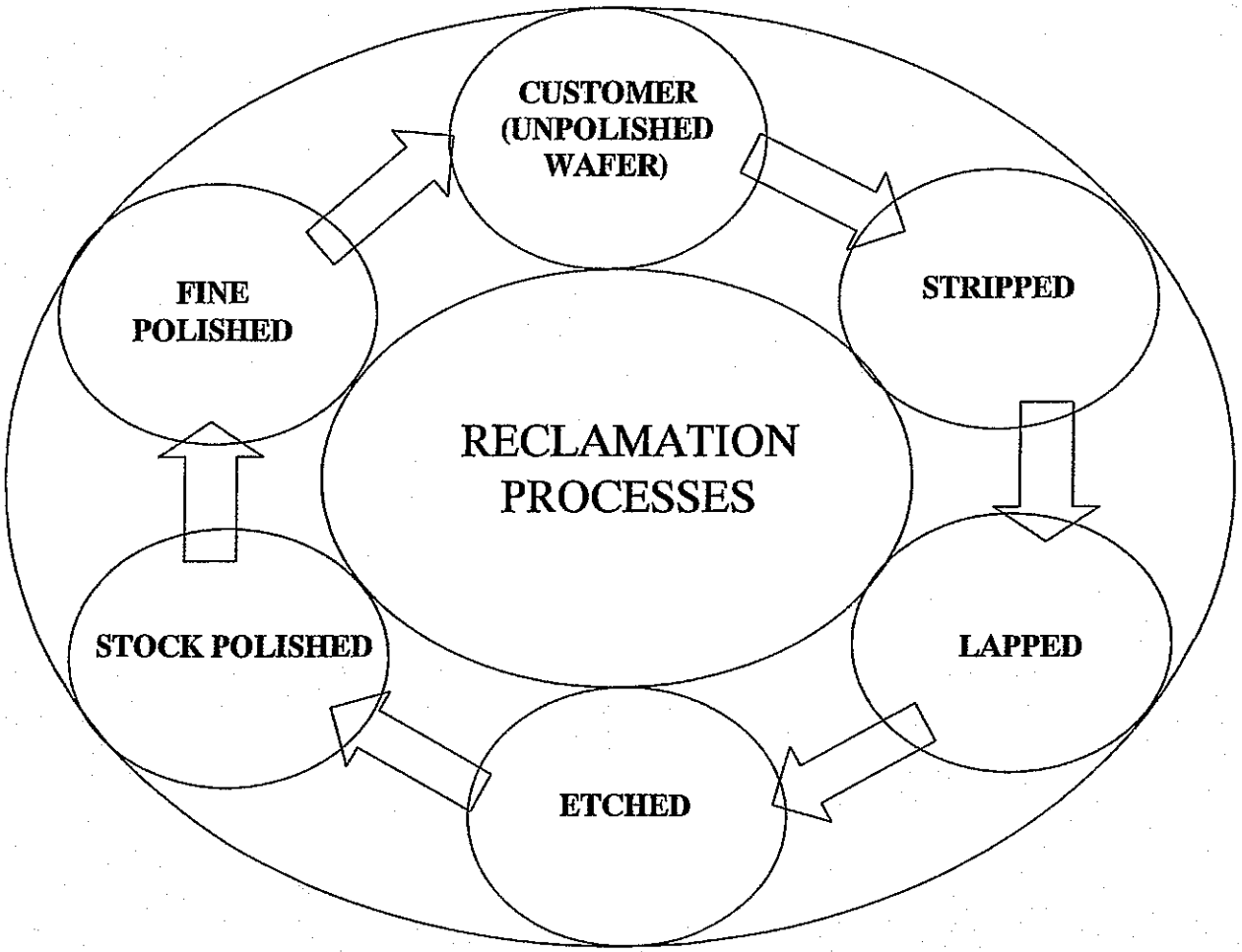

CUSTOMER (UNPOLISHED WAFER)
STRIPPED
LAPPED
ETCHED
STOCK POLISHED
FINE POLISHED
RECLAMATION PROCESSES

FIGURE 9

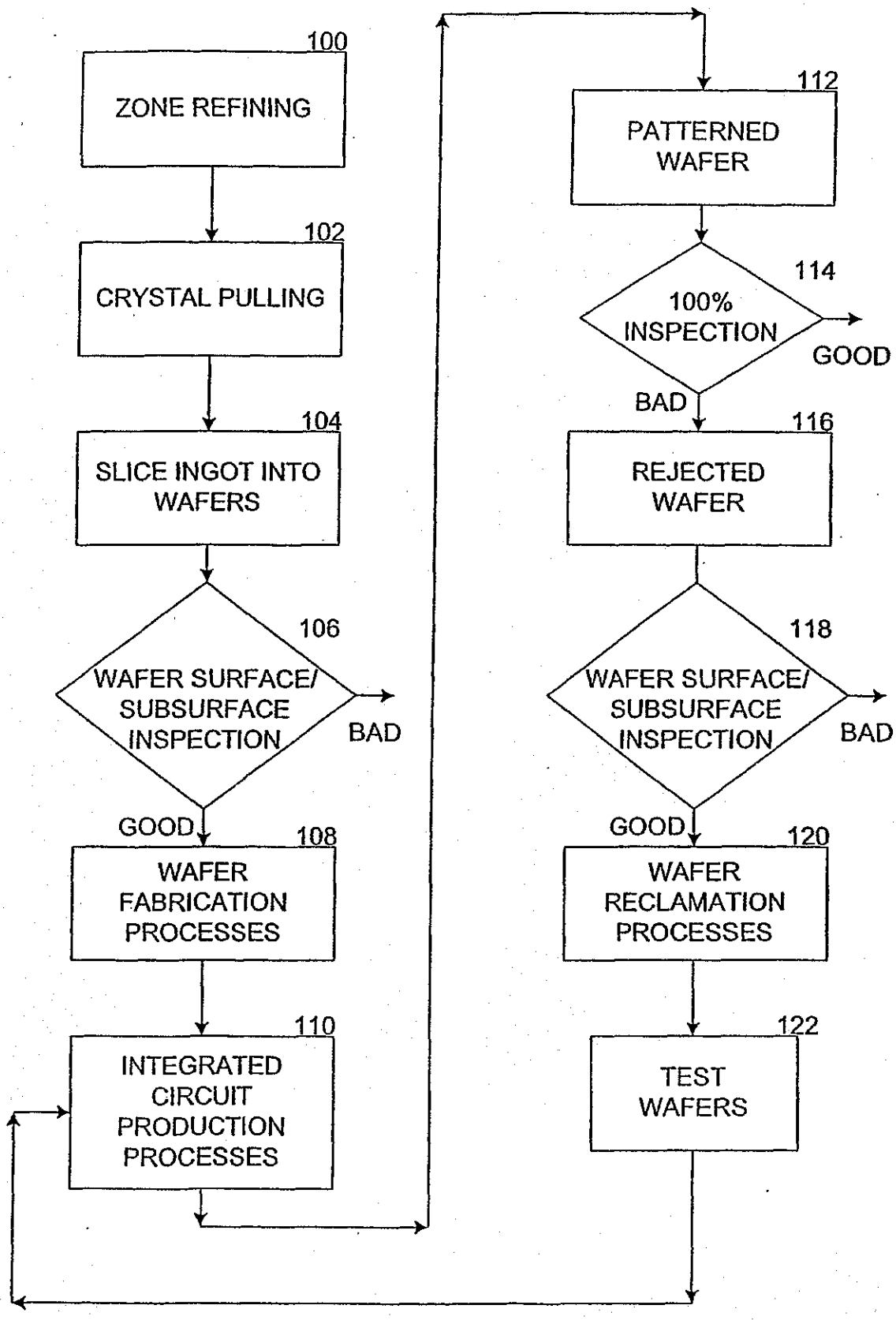

100
ZONE REFINING
102
CRYSTAL PULLING
104
SLICE INGOT INTO WAFERS
106
WAFER SURFACE/ SUBSURFACE INSPECTION
BAD
GOOD
108
WAFER FABRICATION PROCESSES
110
INTEGRATED CIRCUIT PRODUCTION PROCESSES
112
PATTERNED WAFER
114
100% INSPECTION
GOOD
BAD
116
REJECTED WAFER
118
WAFER SURFACE/ SUBSURFACE INSPECTION
BAD
GOOD
120
WAFER RECLAMATION PROCESSES
122
TEST WAFERS

FIGURE 10

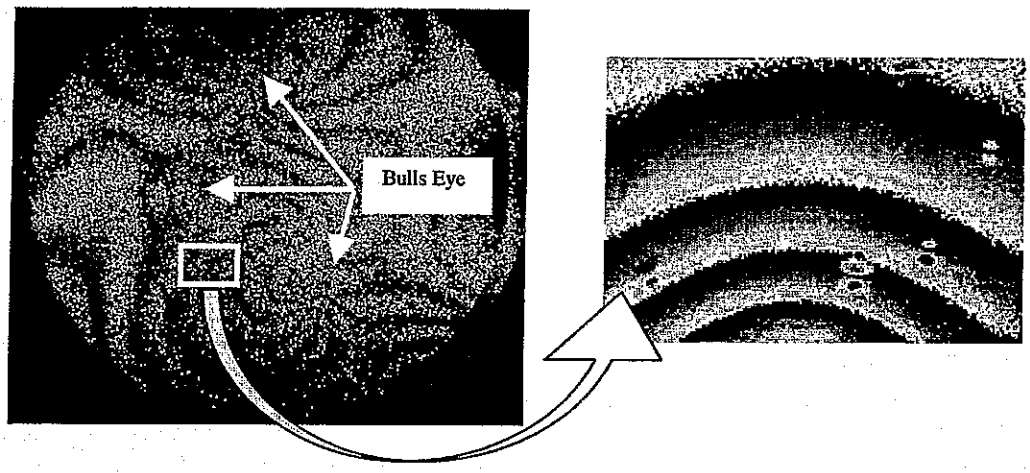
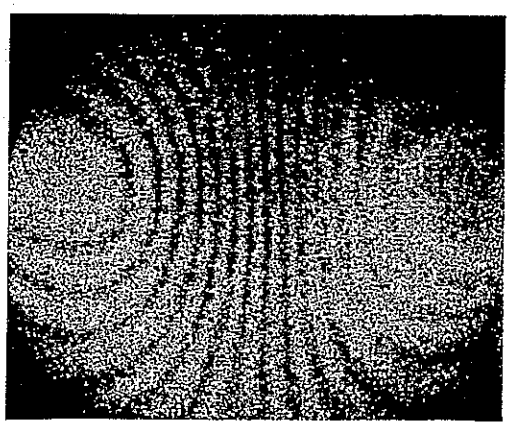


FIGURE 11A



(b)

FIGURE 11B

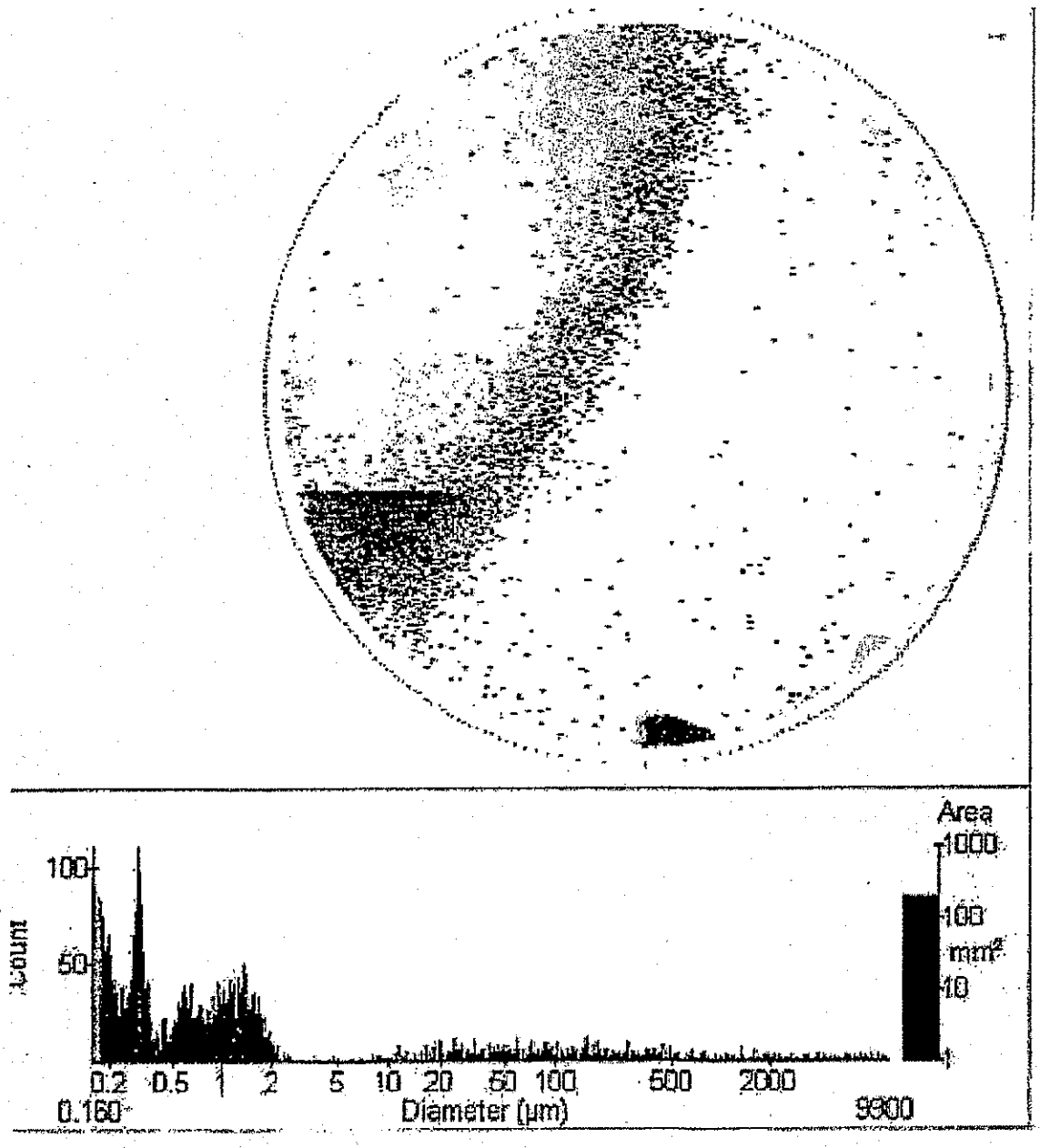

Area
1000
100
mm²
10
100
50
0.2 0.5 1 2 5 10 20 50 100 500 2000
0.160
Diameter (µm)
9900

FIGURE 12

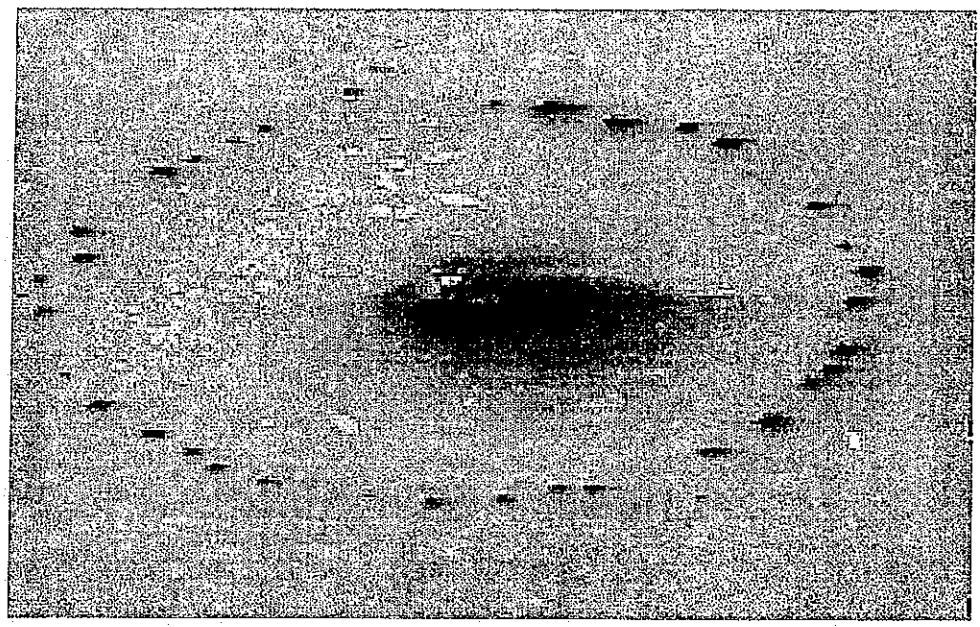


FIGURE 13A

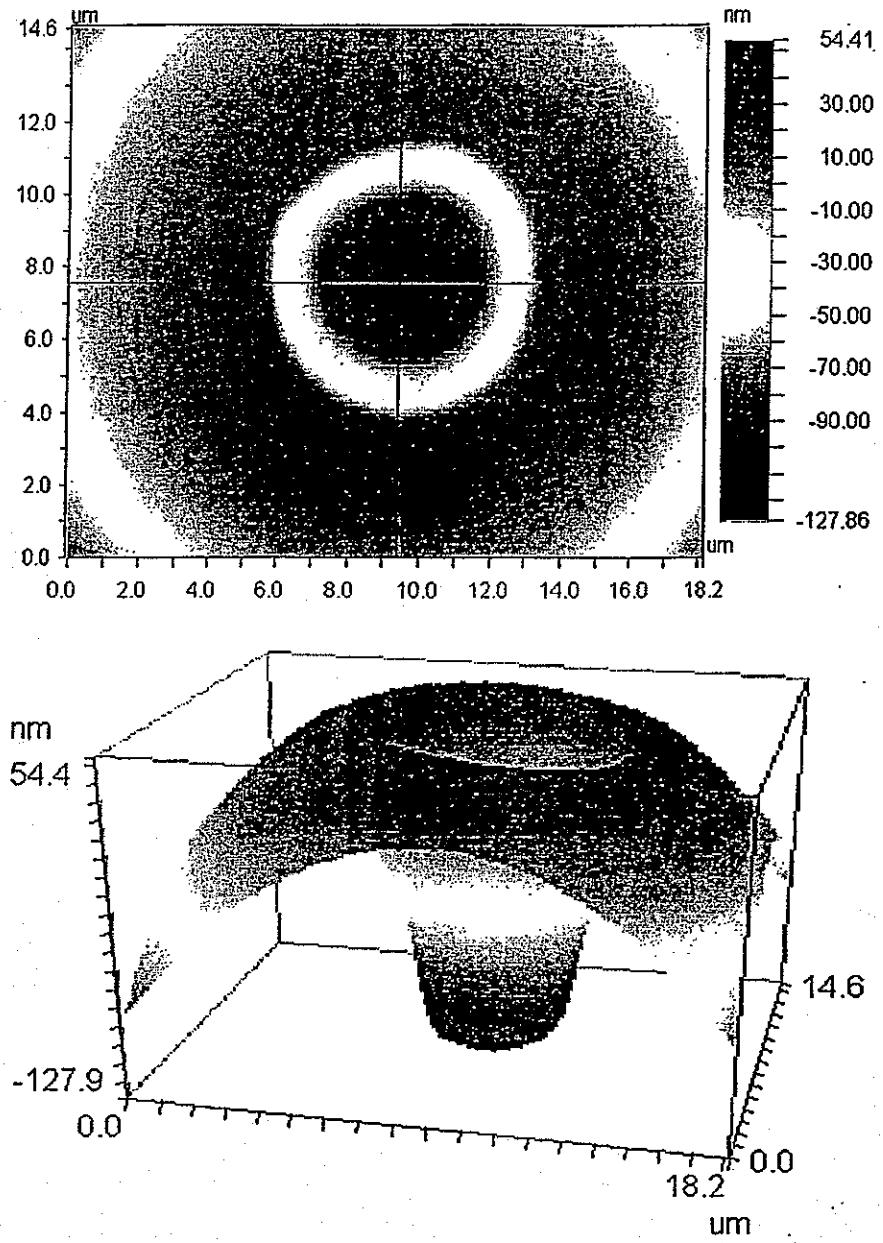
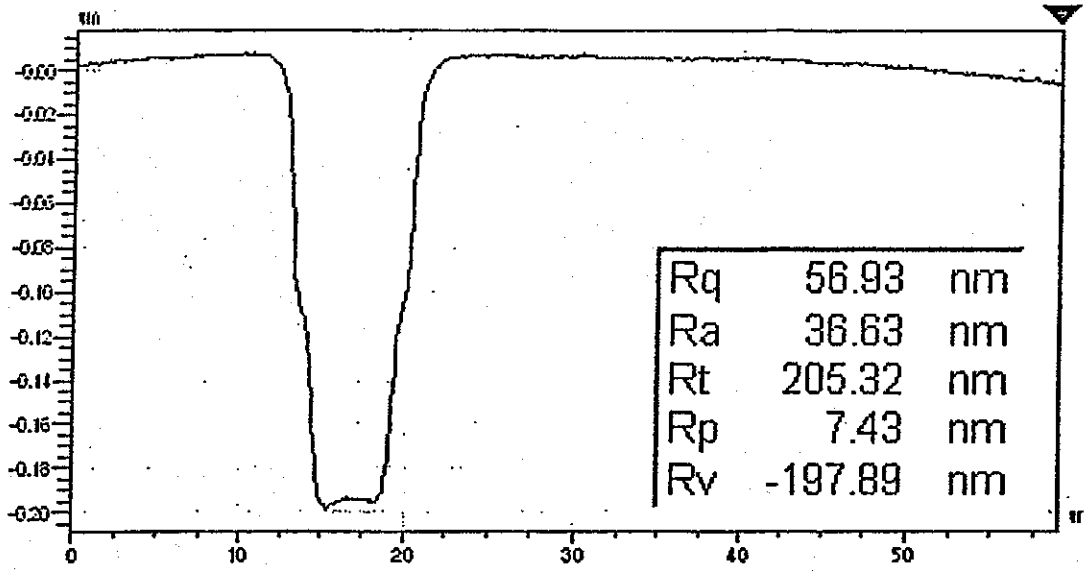

um
14.6
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.2
um
nm
54.41
30.00
10.00
-10.00
-30.00
-50.00
-70.00
-90.00
-127.86
nm
54.4
-127.9
0.0
14.6
0.0
18.2
um

FIGURE 13B

X PROFILE



Y PROFILE

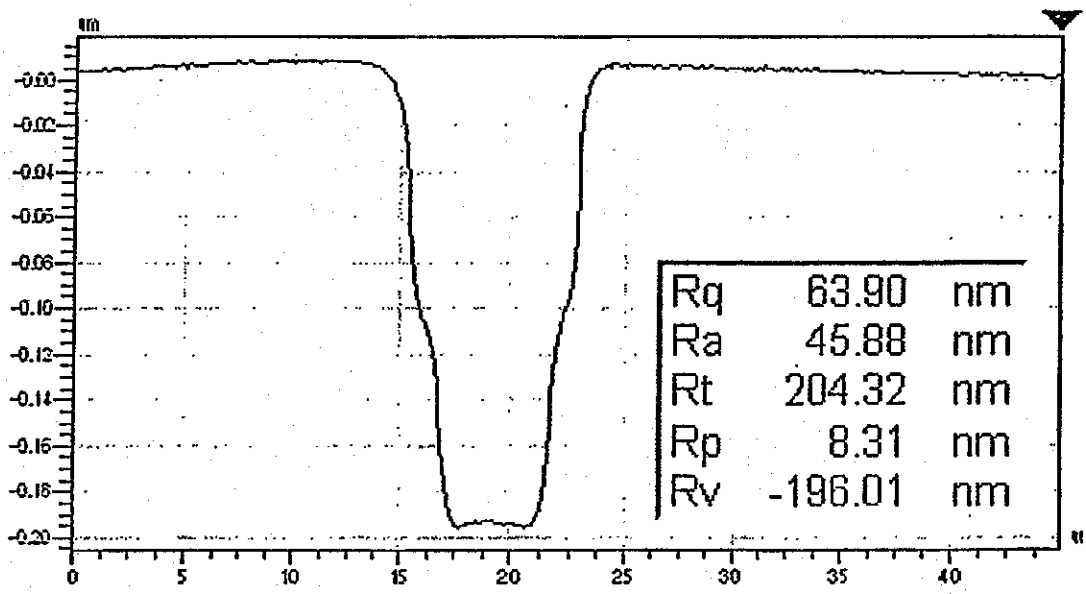
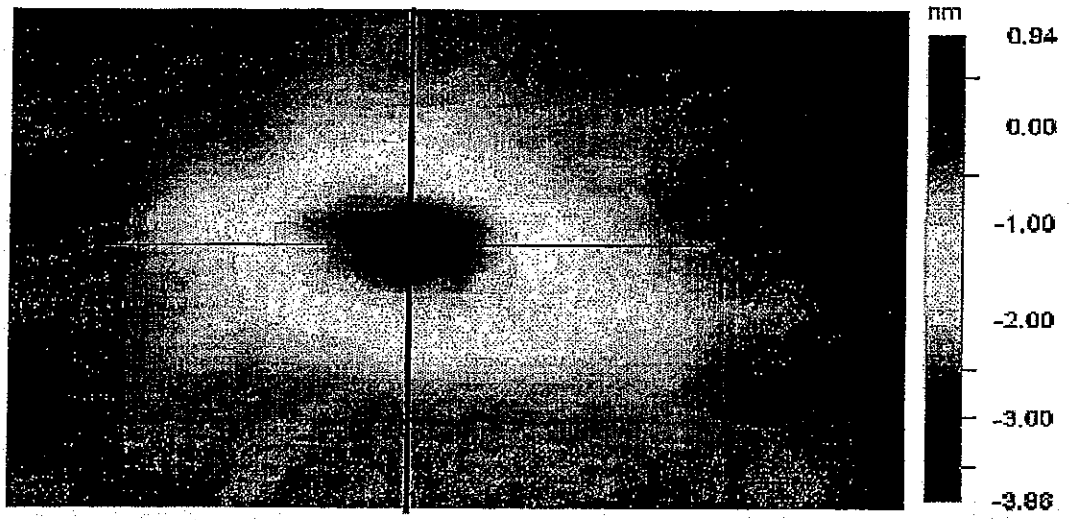


FIGURE 13C


nm
0.94
0.00
-1.00
-2.00
-3.00
-3.86

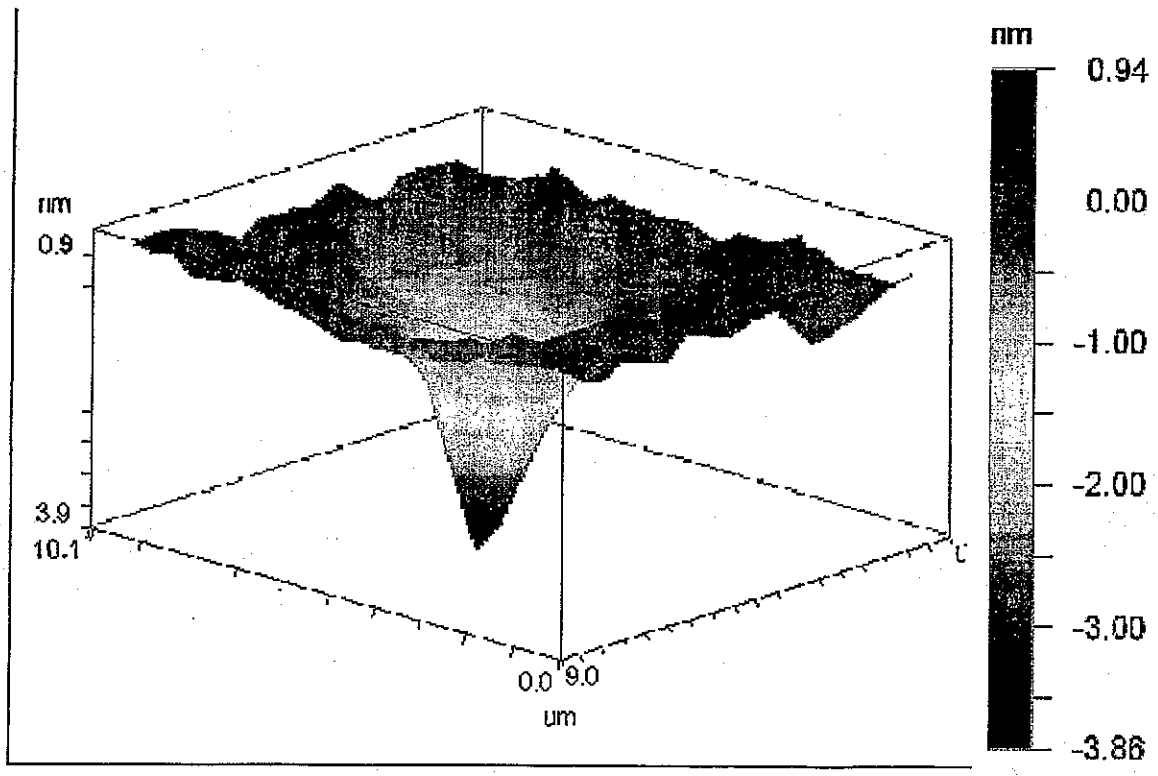
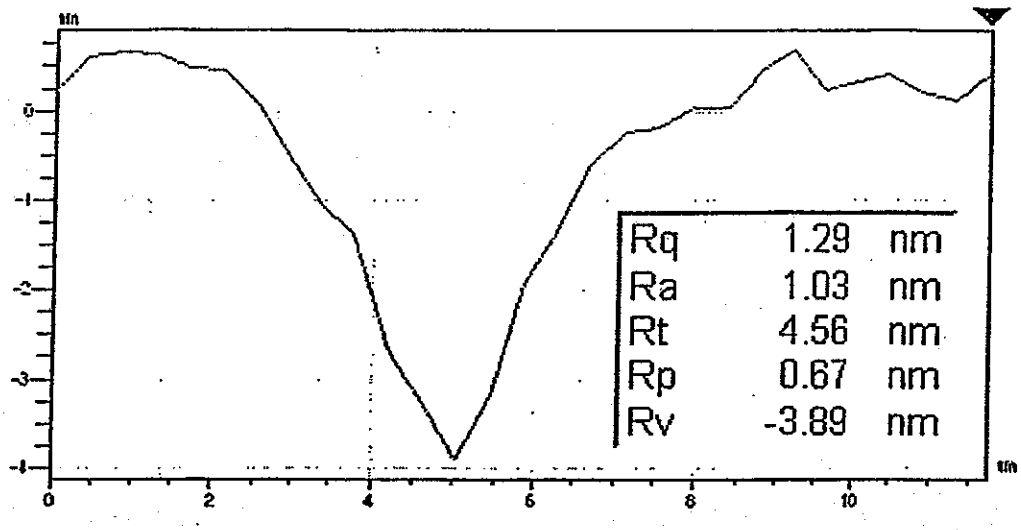

nm
0.94
0.00
-1.00
-2.00
-3.00
-3.86
nm
0.9
3.9
10.1
0.0
9.0
um

FIGURE 13D

X PROFILE



Y PROFILE

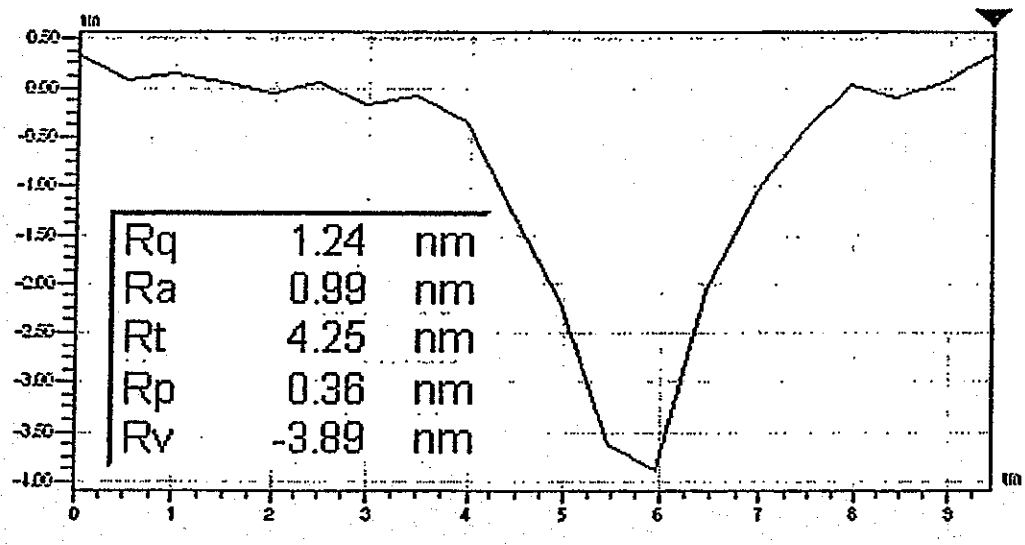


FIGURE 13E

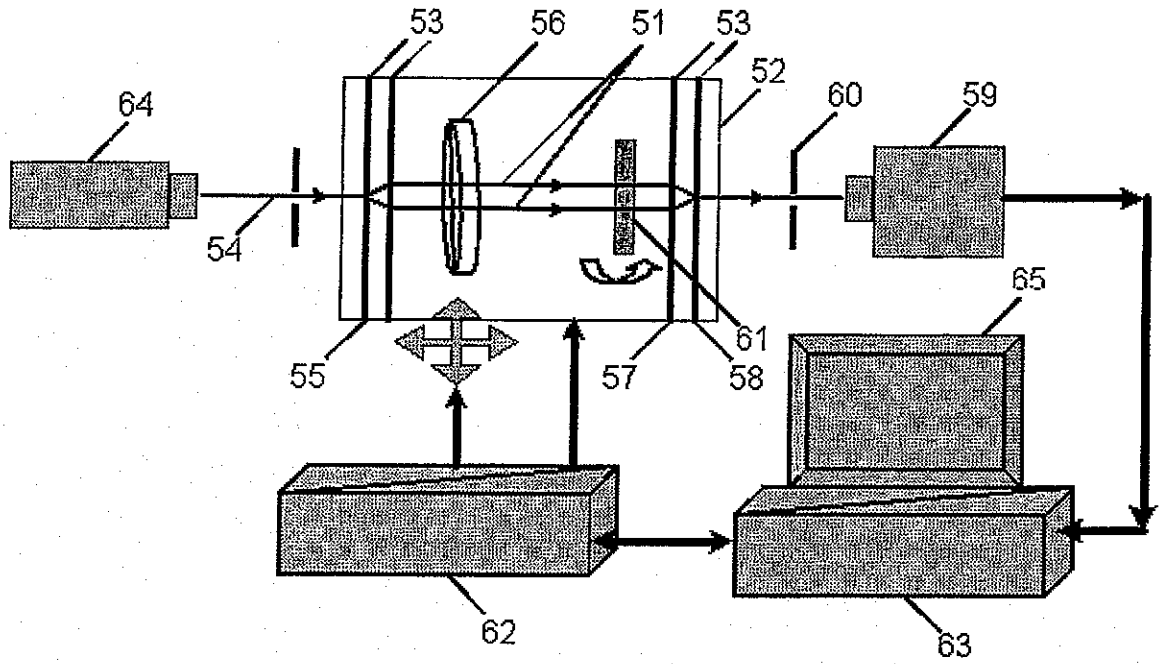


FIGURE 14