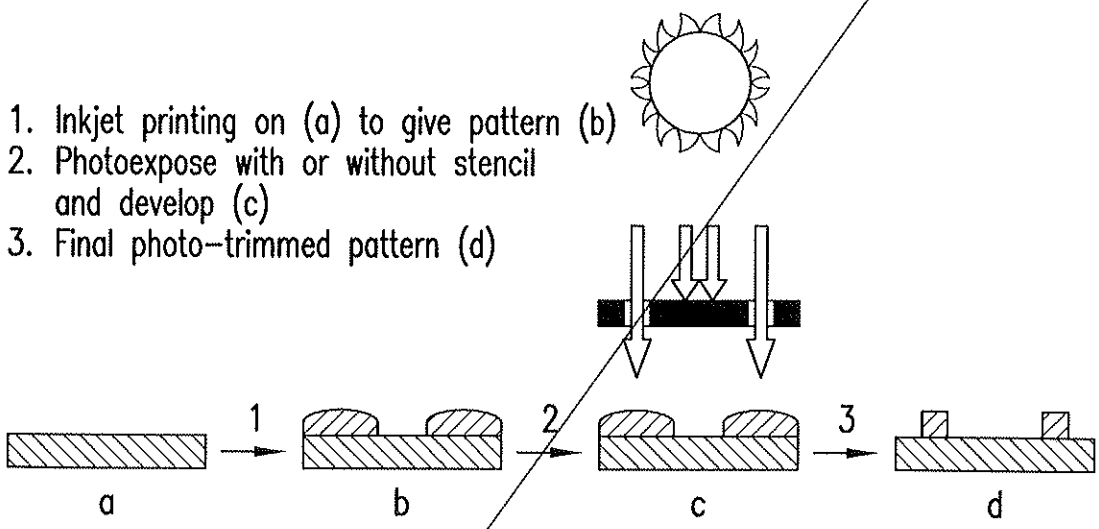

1. Inkjet printing on (a) to give pattern (b)
2. Photoexpose with or without stencil and develop (c)
3. Final photo-trimmed pattern (d)
1
2
3
a
b
c
d

FIG.1

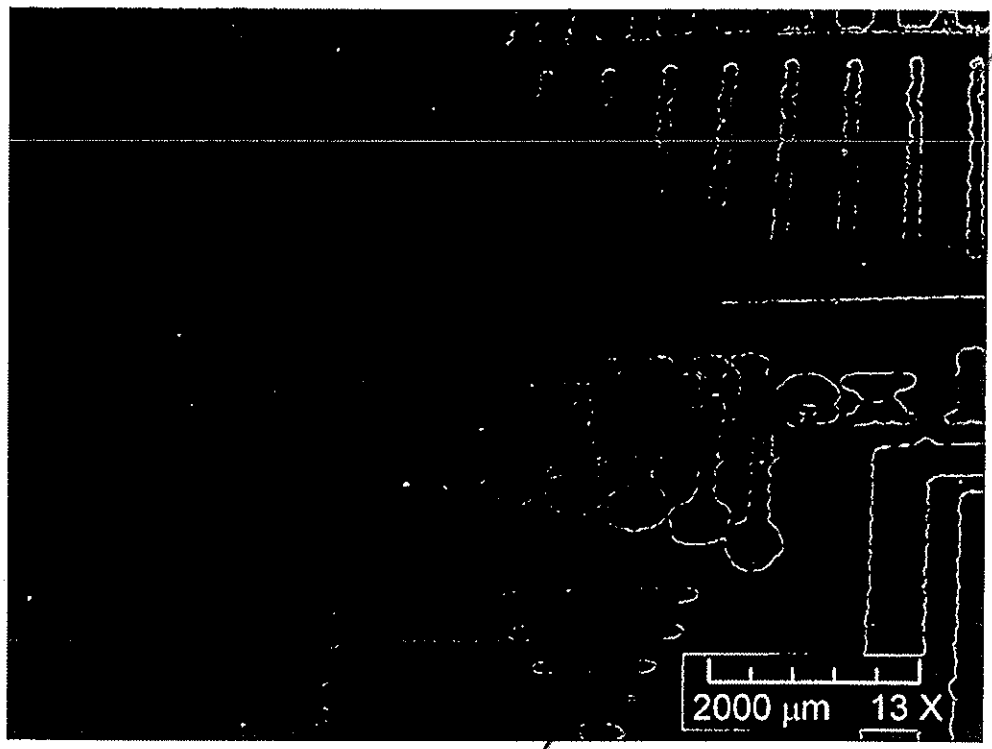


FIG.2

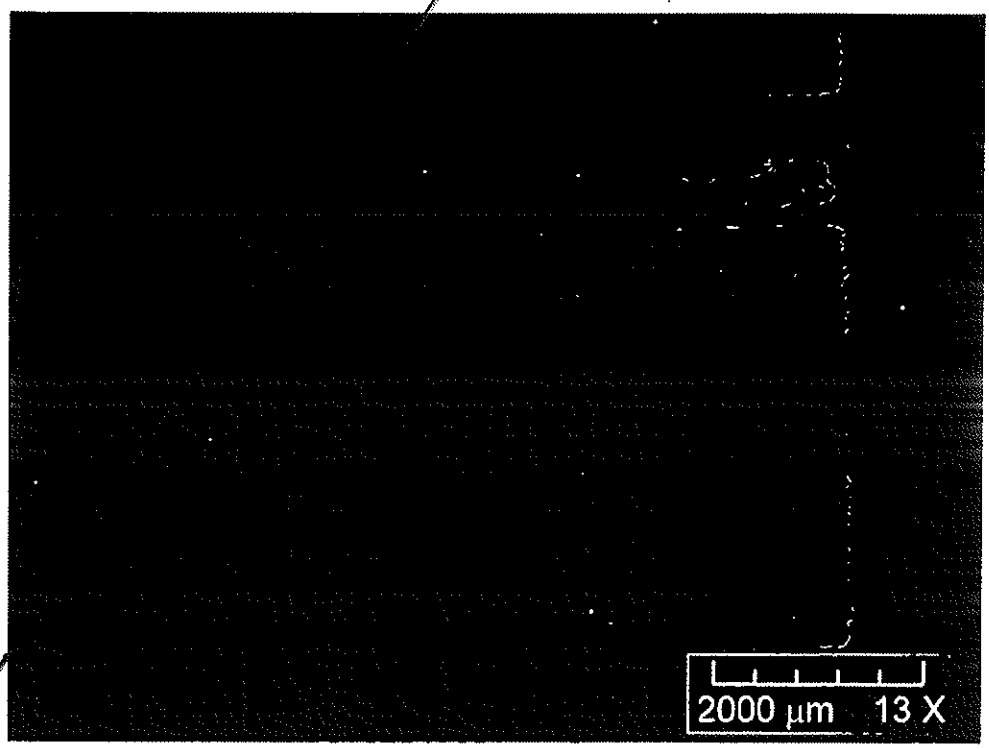


FIG.3

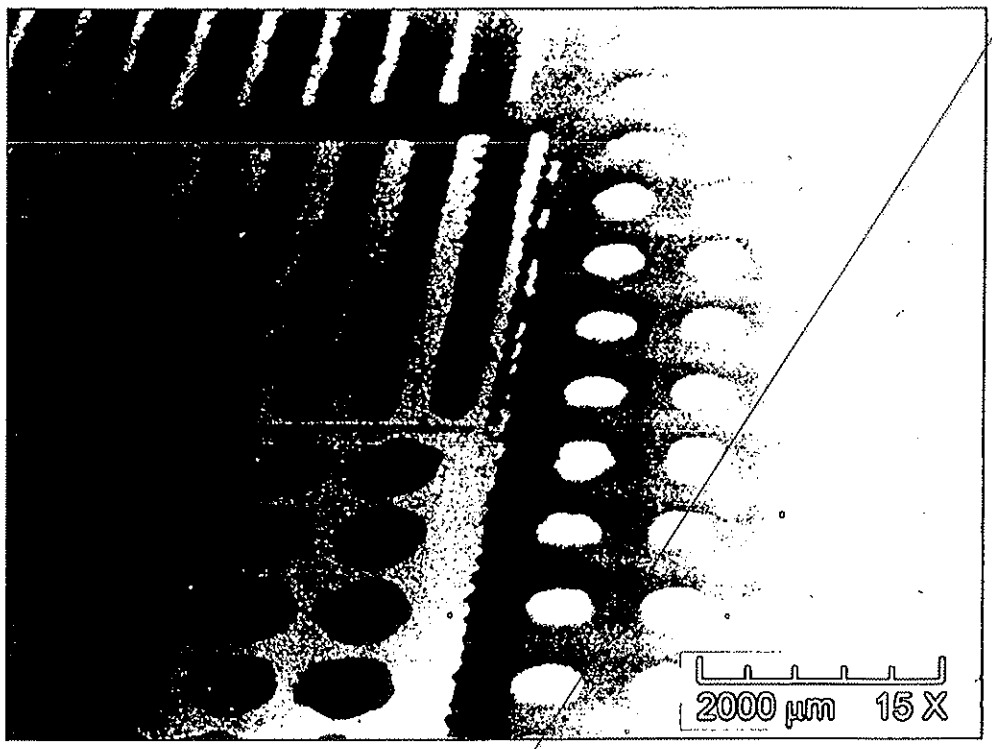


FIG.4

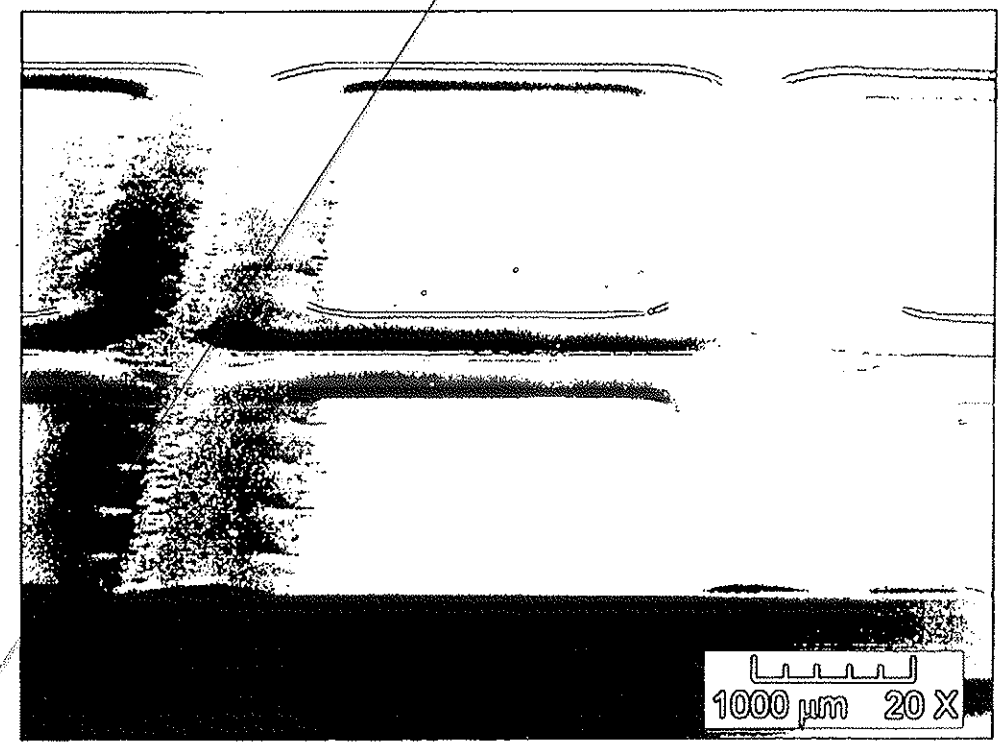


FIG.5

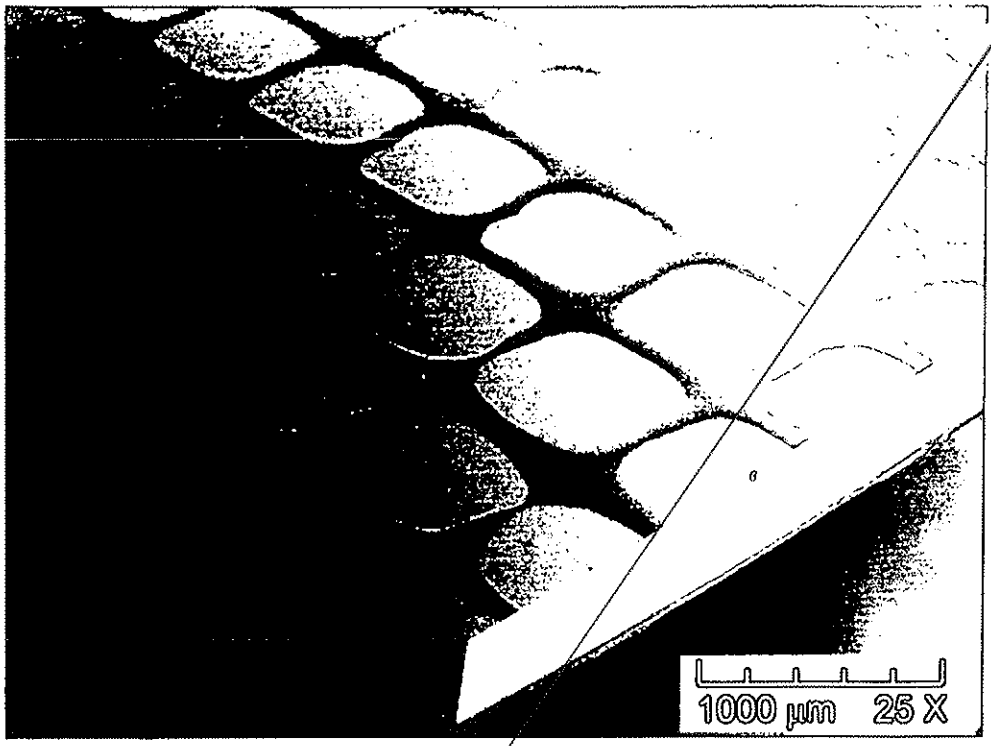


FIG.6

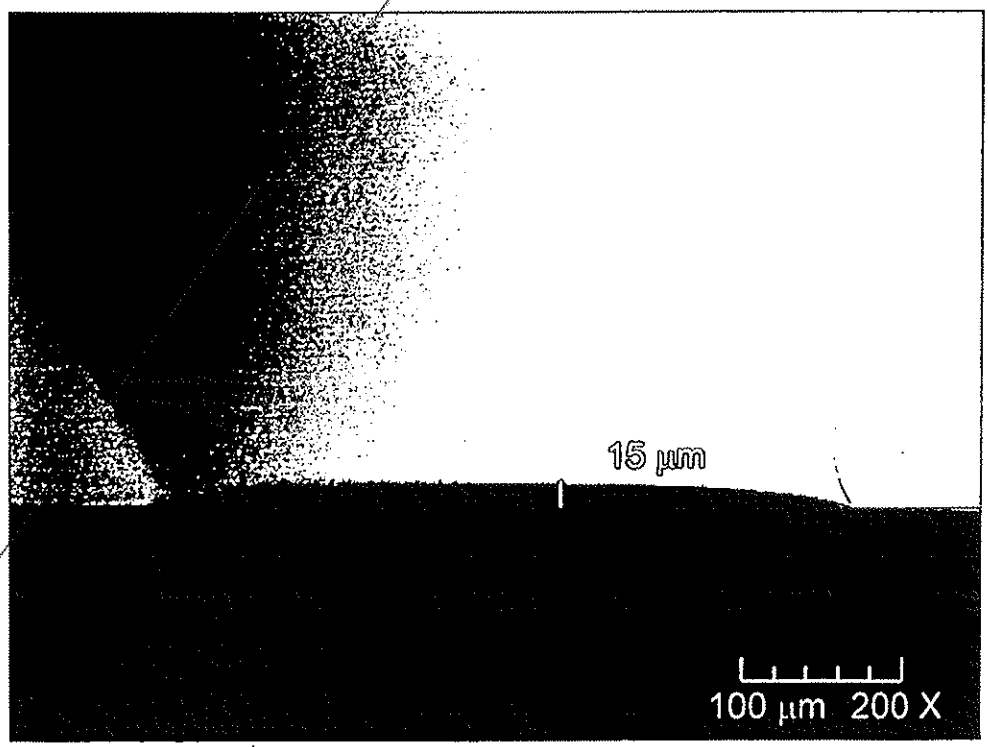


FIG.7

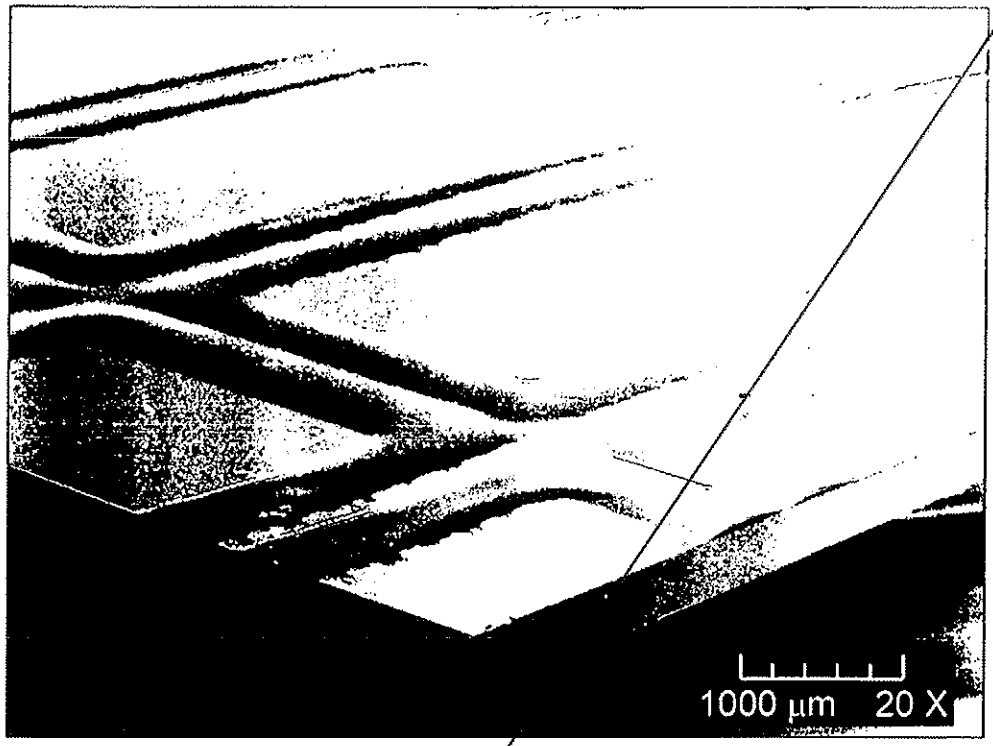


FIG.8

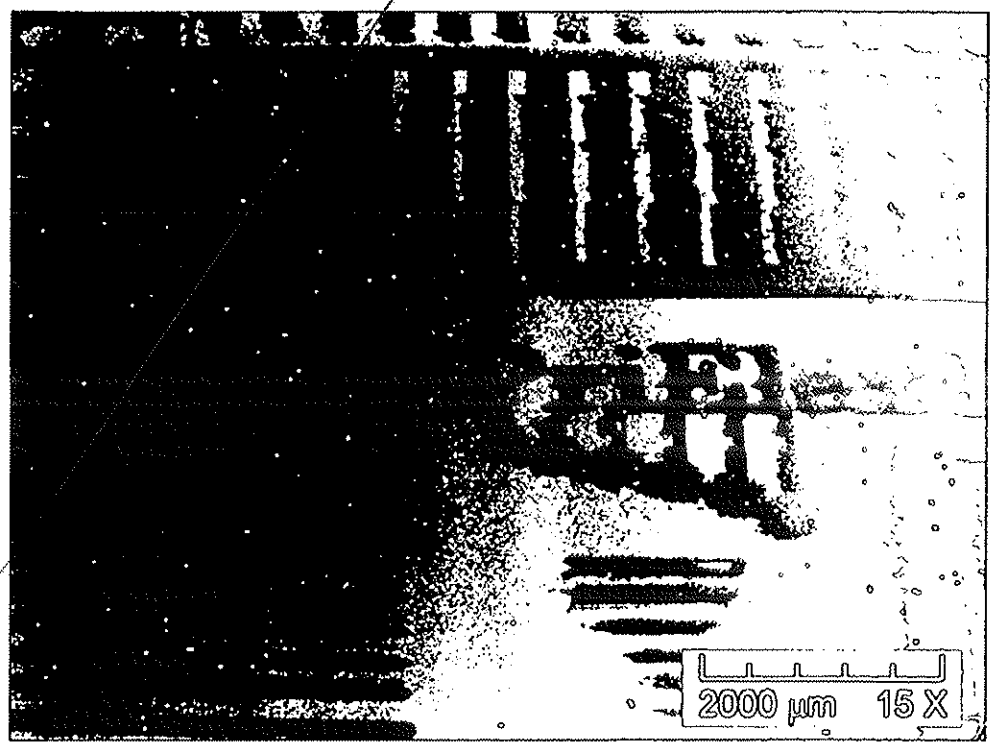


FIG.9

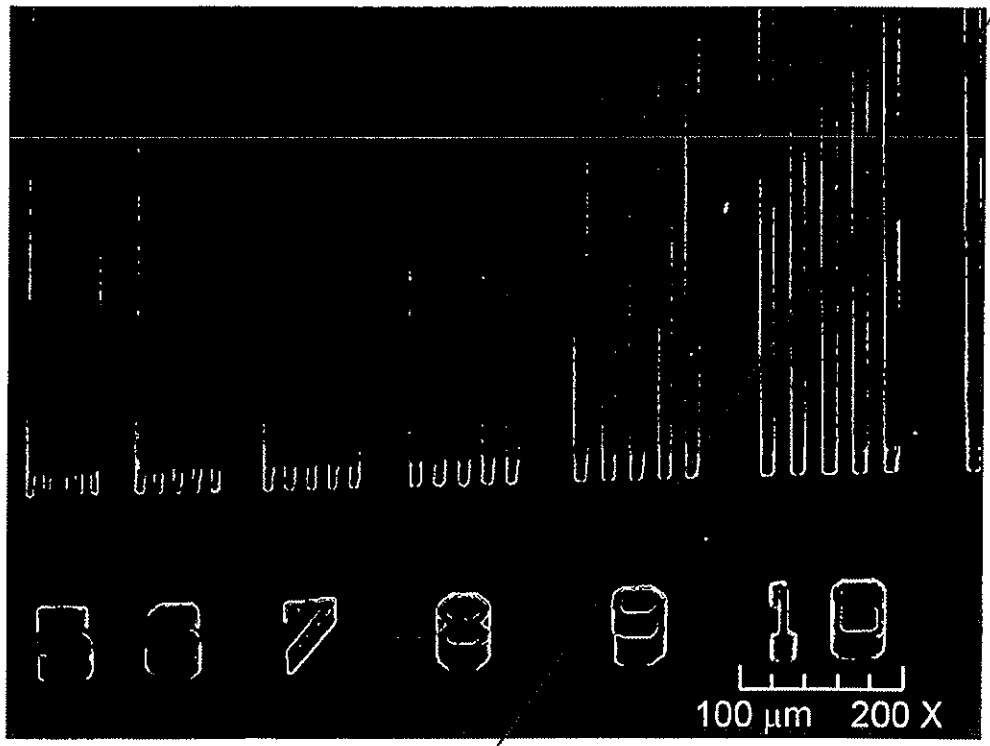


FIG.10

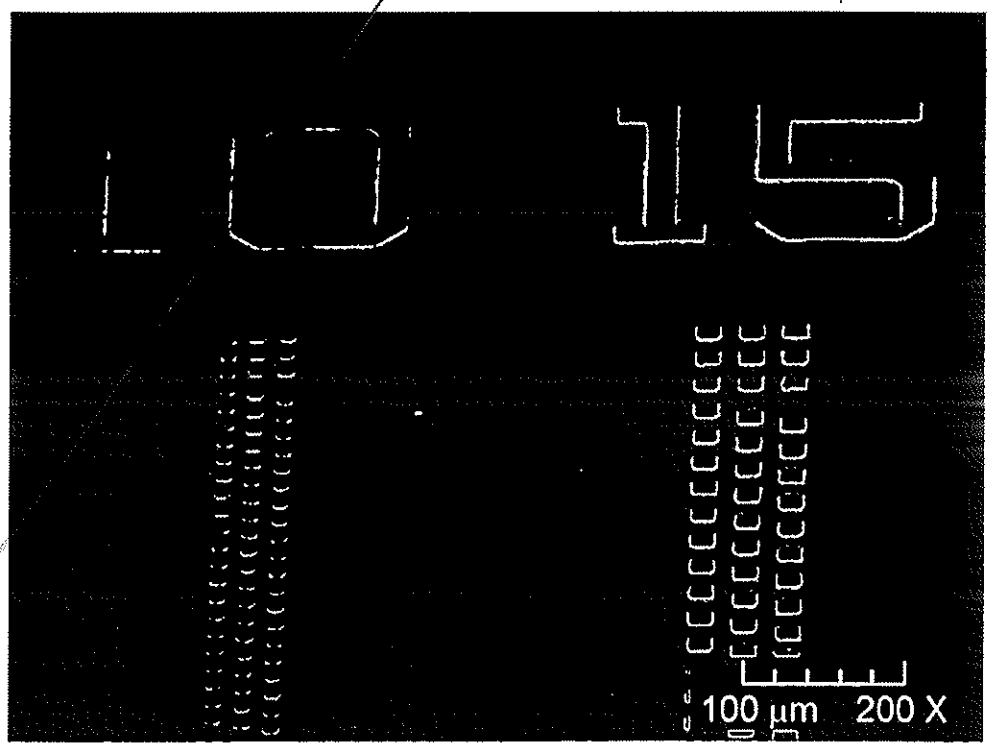


FIG.11

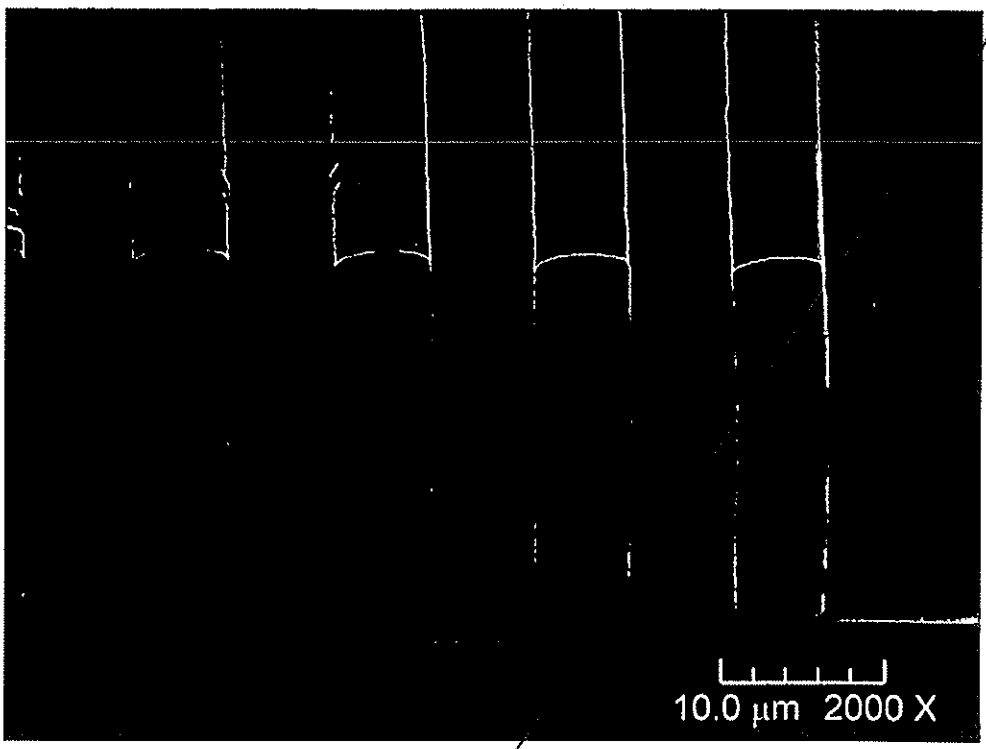


FIG.12

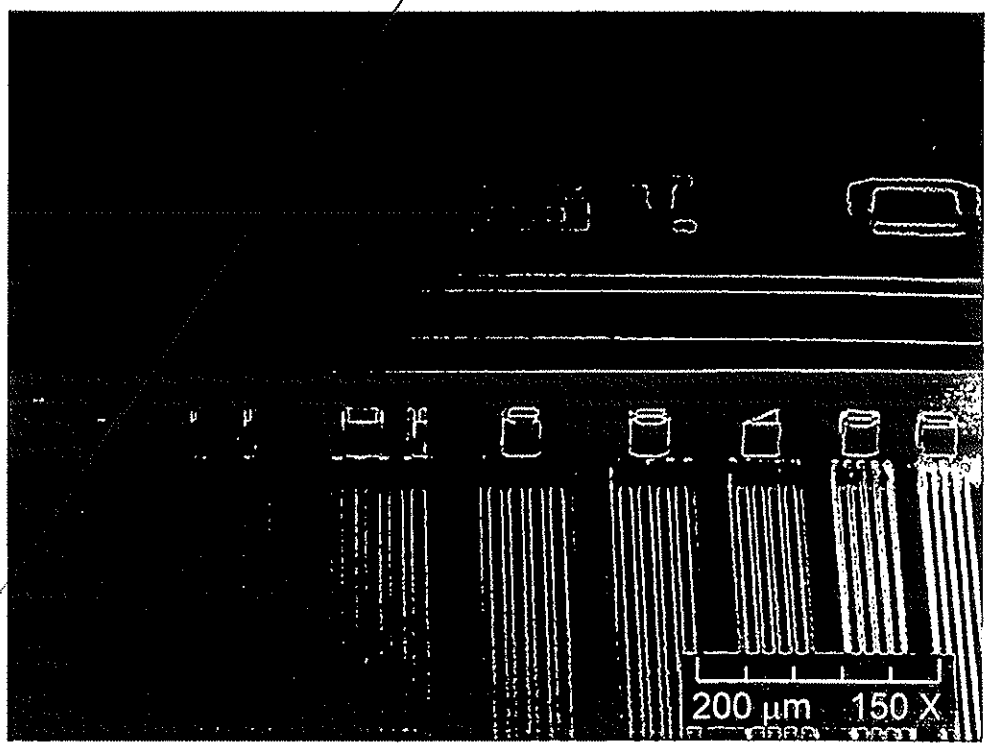


FIG.13

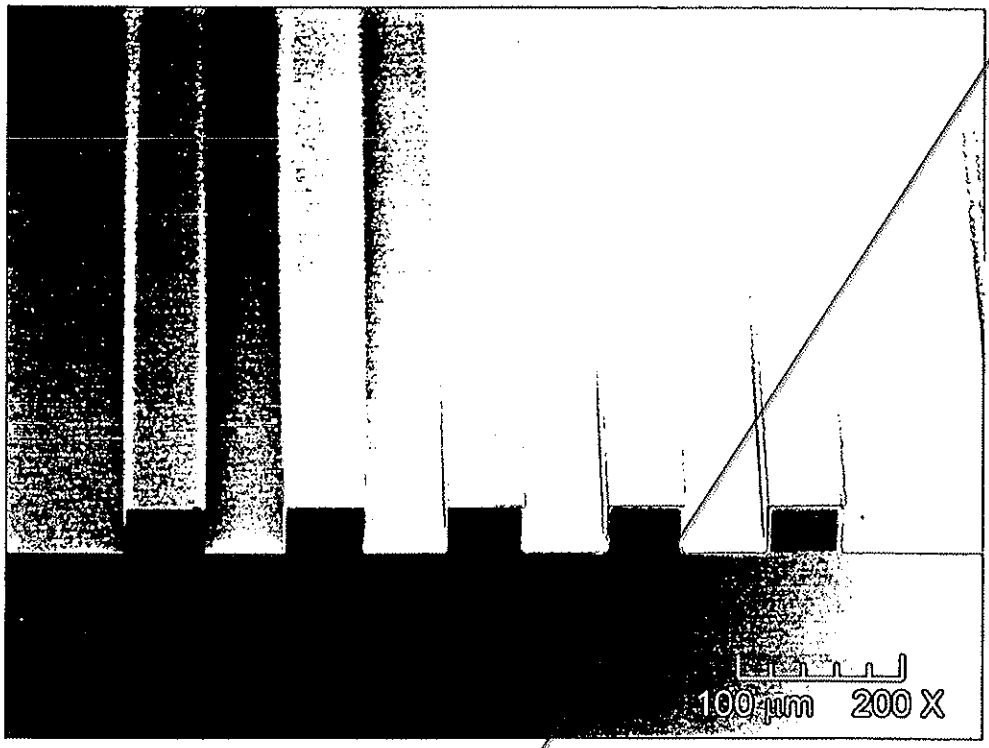


FIG. 14

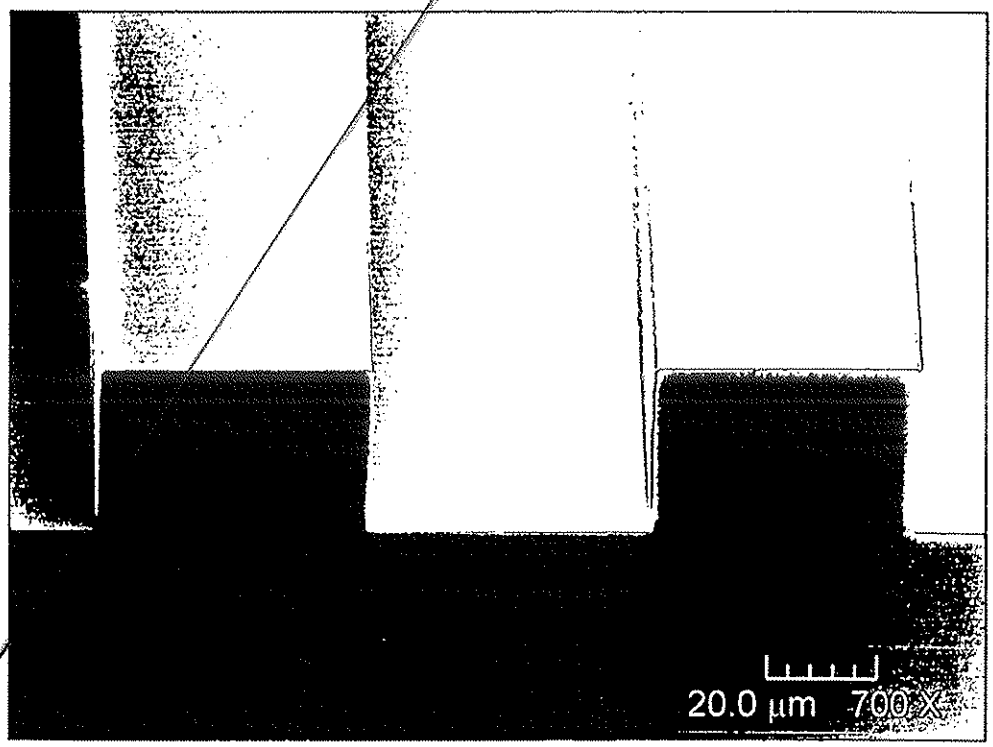


FIG. 15

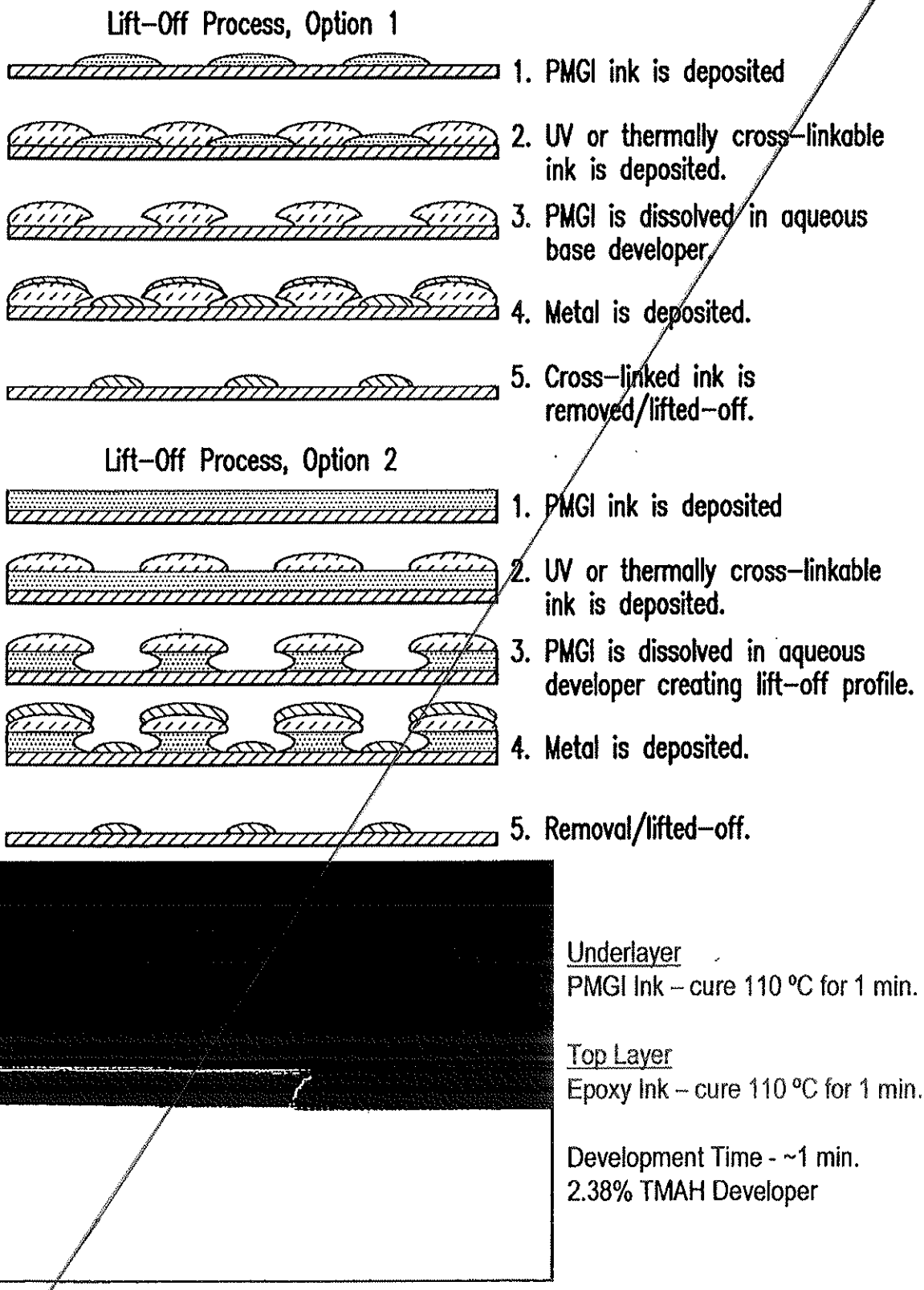

Lift–Off Process, Option 1
1. PMGI ink is deposited
2. UV or thermally cross–linkable ink is deposited.
3. PMGI is dissolved in aqueous base developer.
4. Metal is deposited.
5. Cross–linked ink is removed/lifted–off.
Lift–Off Process, Option 2
1. PMGI ink is deposited
2. UV or thermally cross–linkable ink is deposited.
3. PMGI is dissolved in aqueous developer creating lift–off profile.
4. Metal is deposited.
5. Removal/lifted–off.
Underlayer
PMGI Ink – cure 110 °C for 1 min.
Top Layer
Epoxy Ink – cure 110 °C for 1 min.
Development Time - ~1 min.
2.38% TMAH Developer

FIG. 16

1. Inkjet printing on (a) to give pattern (b)
2. Photoexpose with or without stencil and develop (c)
3. Final photo-trimmed pattern (d)

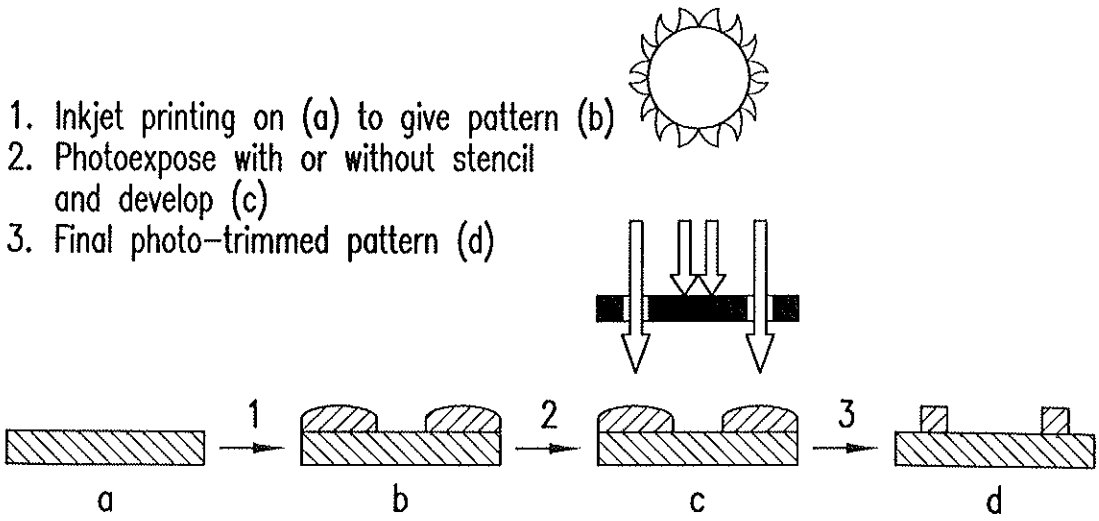


FIG.1

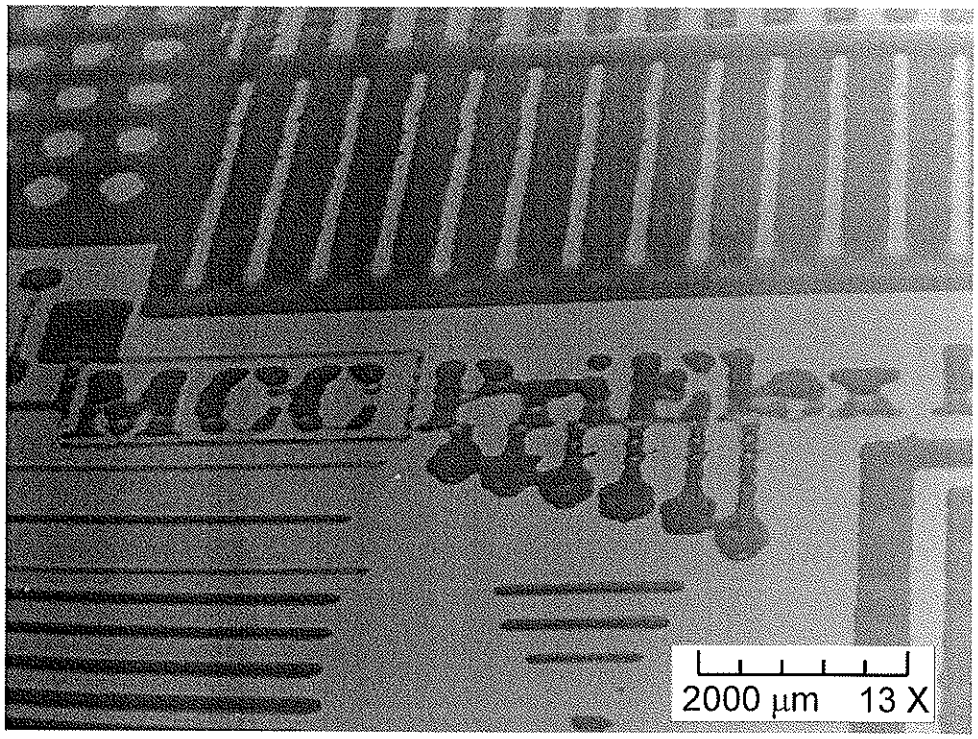


FIG.2

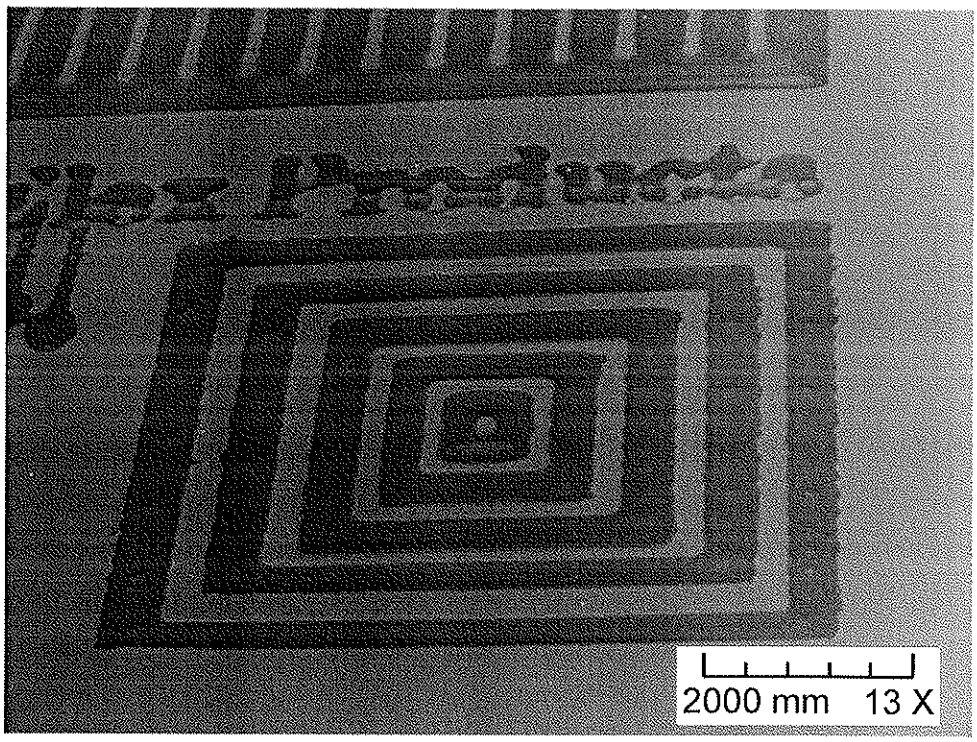


FIG.3

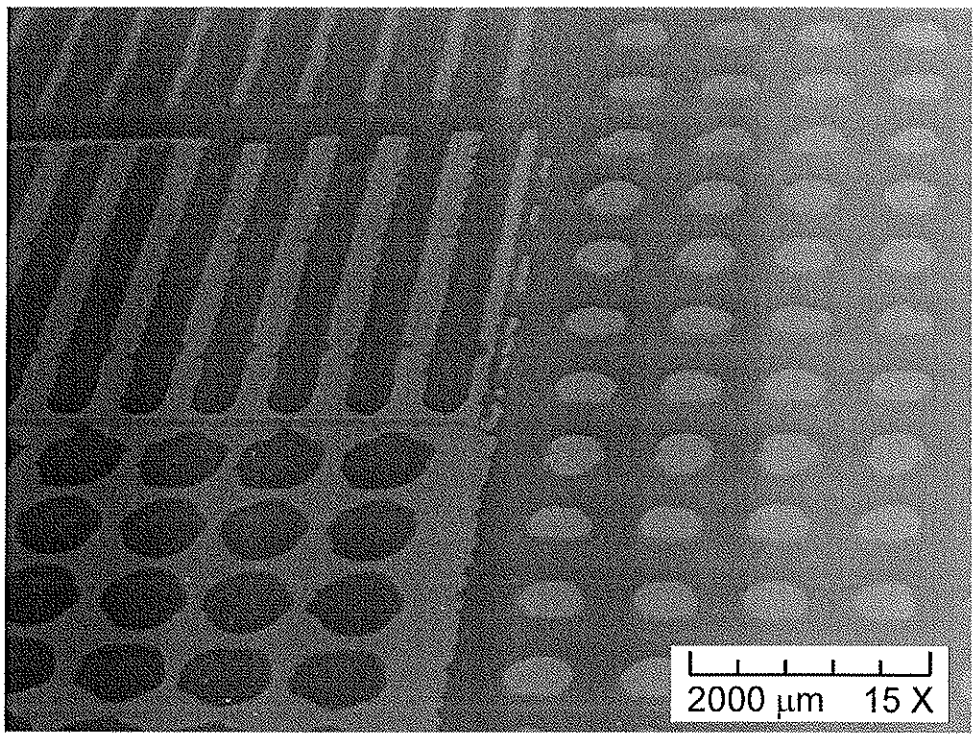


FIG.4

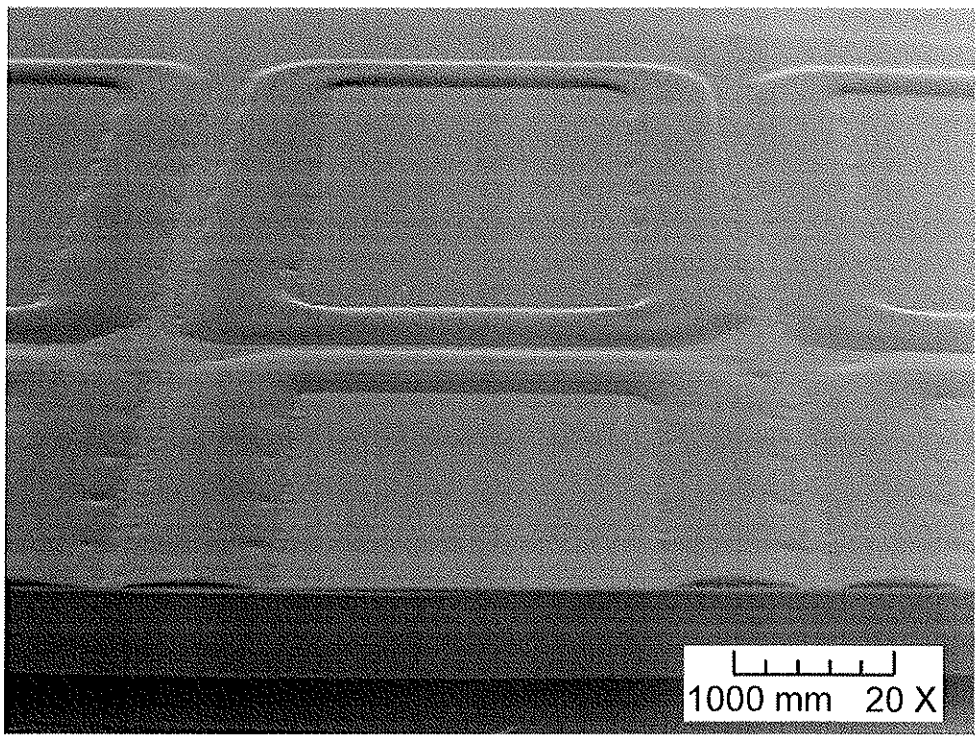


FIG.5

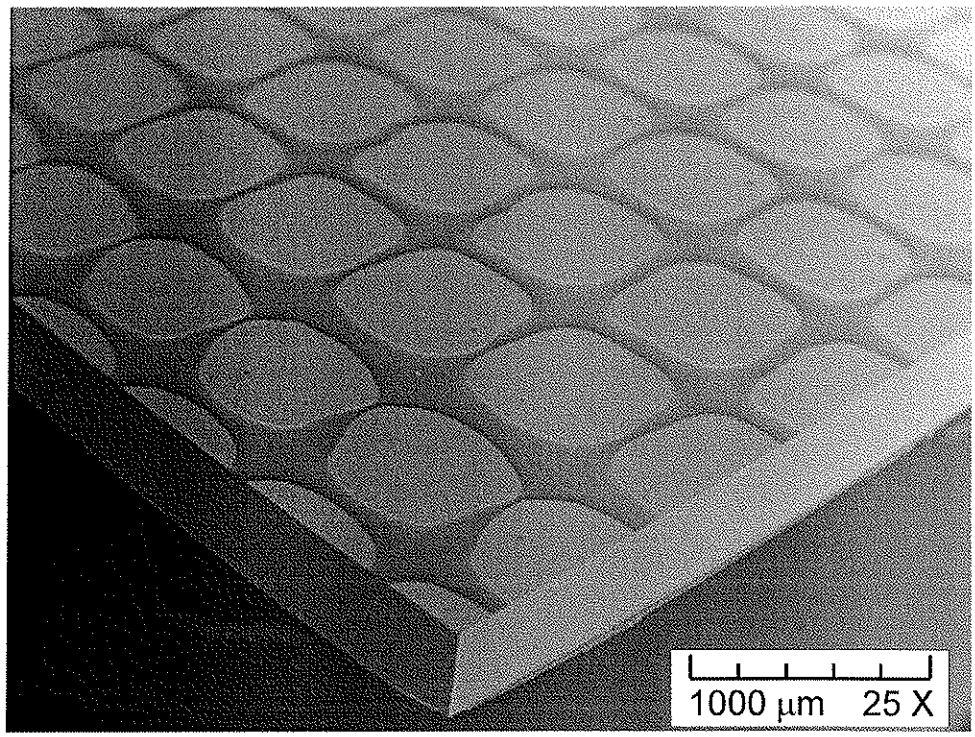


FIG.6

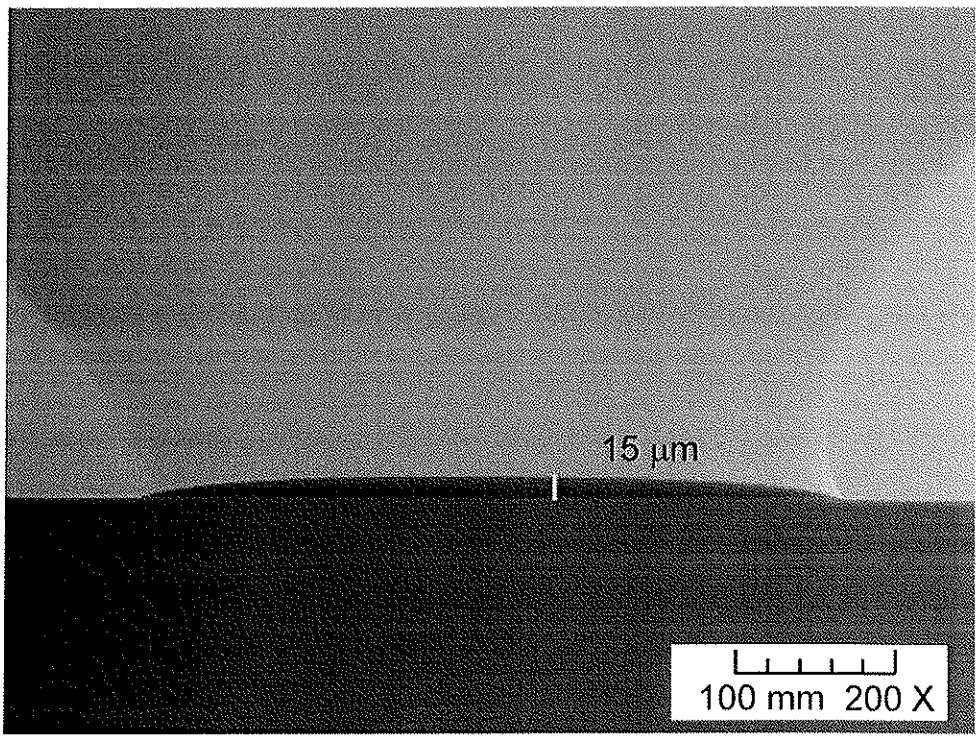


FIG.7

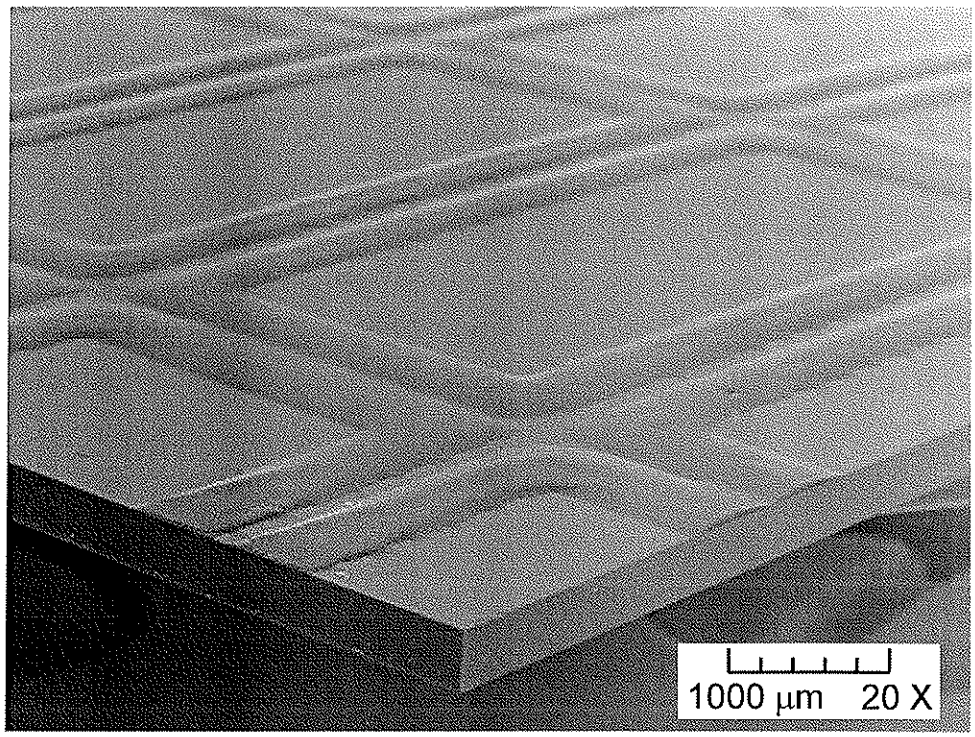


FIG.8

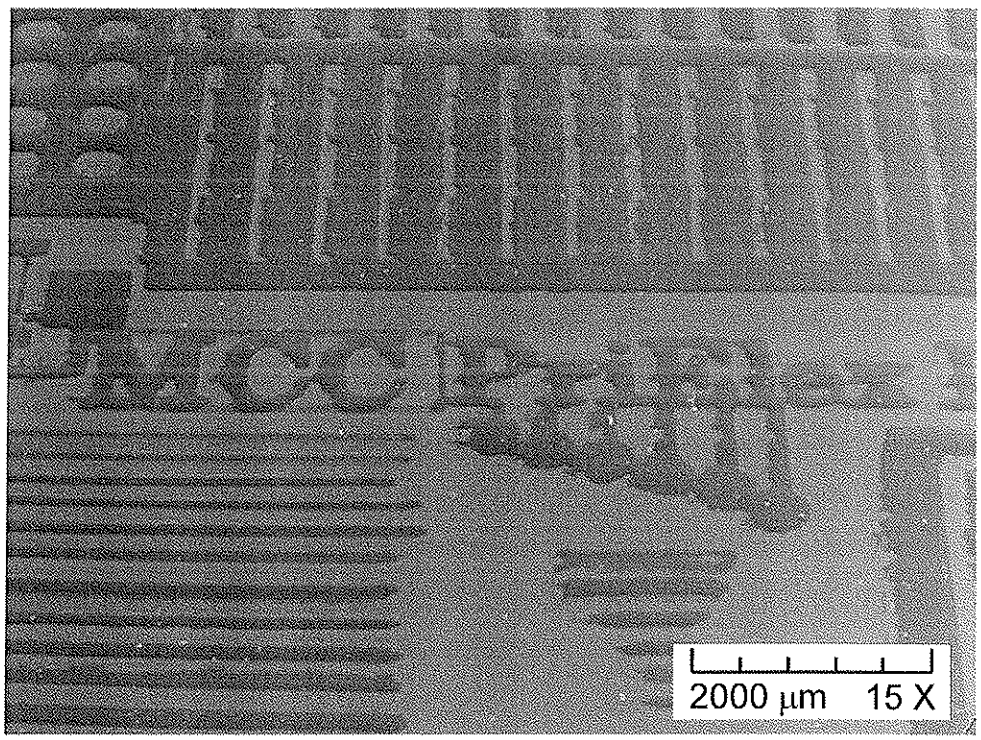


FIG.9

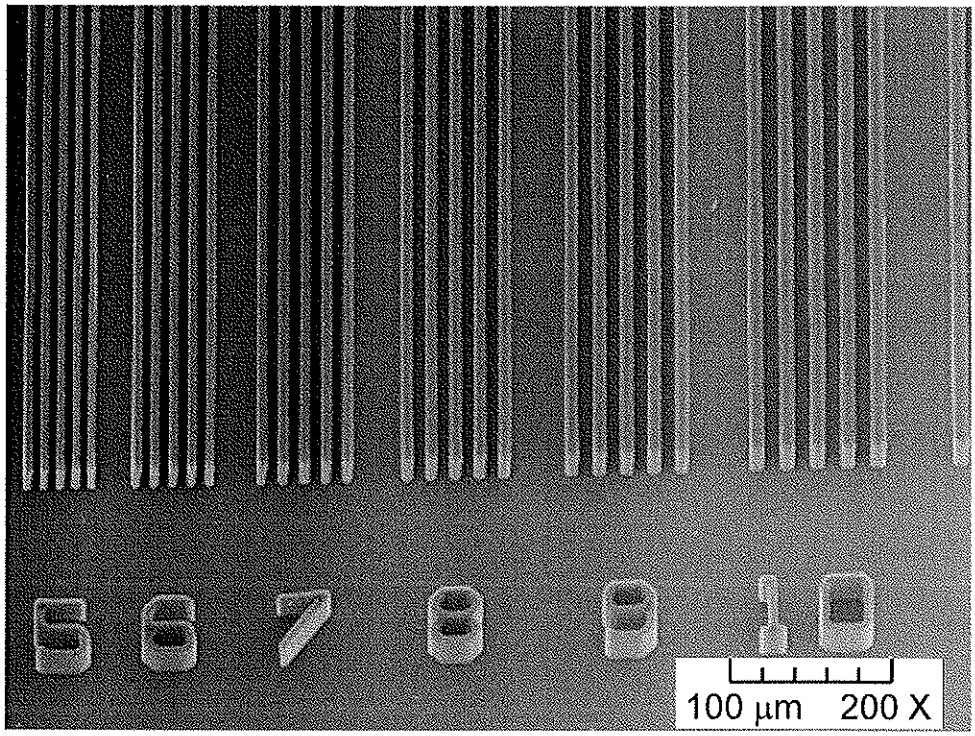


FIG.10

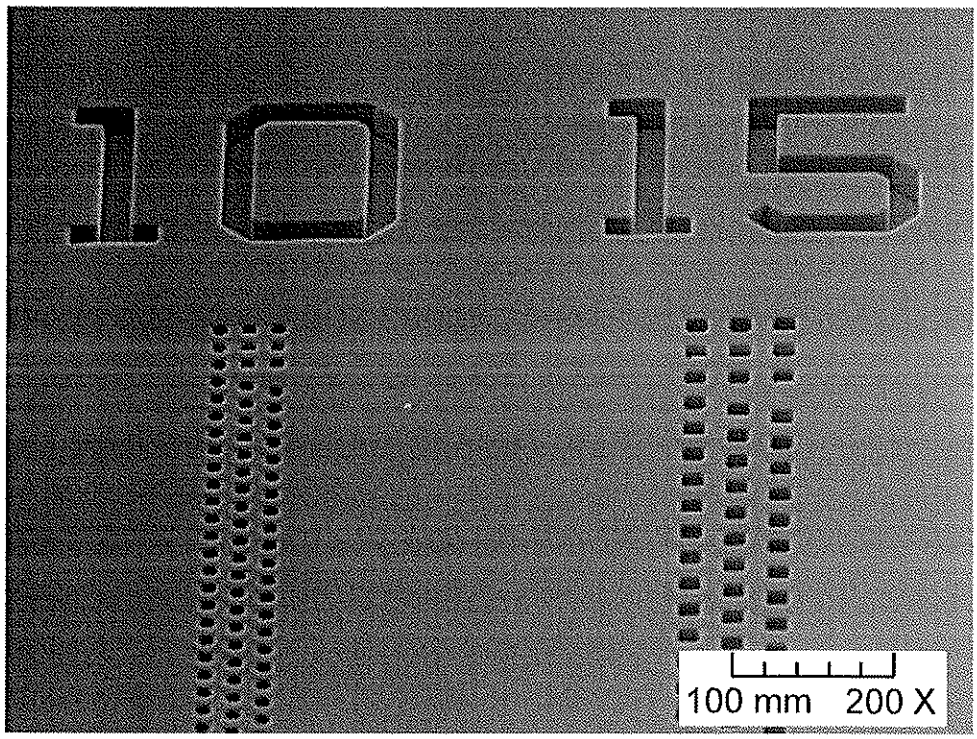


FIG.11

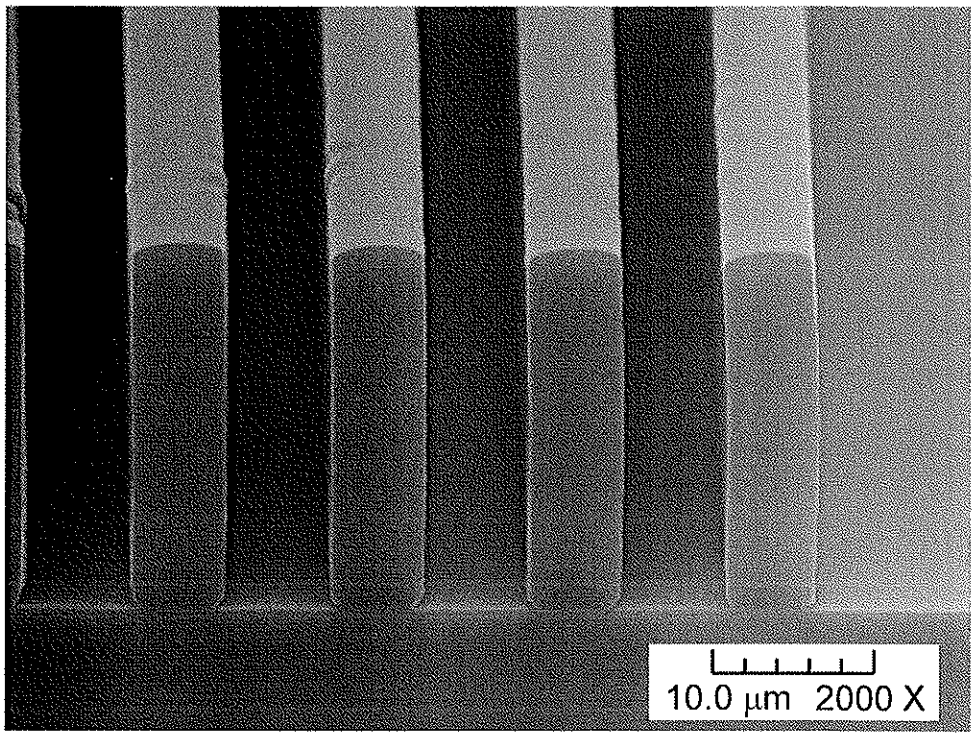


FIG. 12

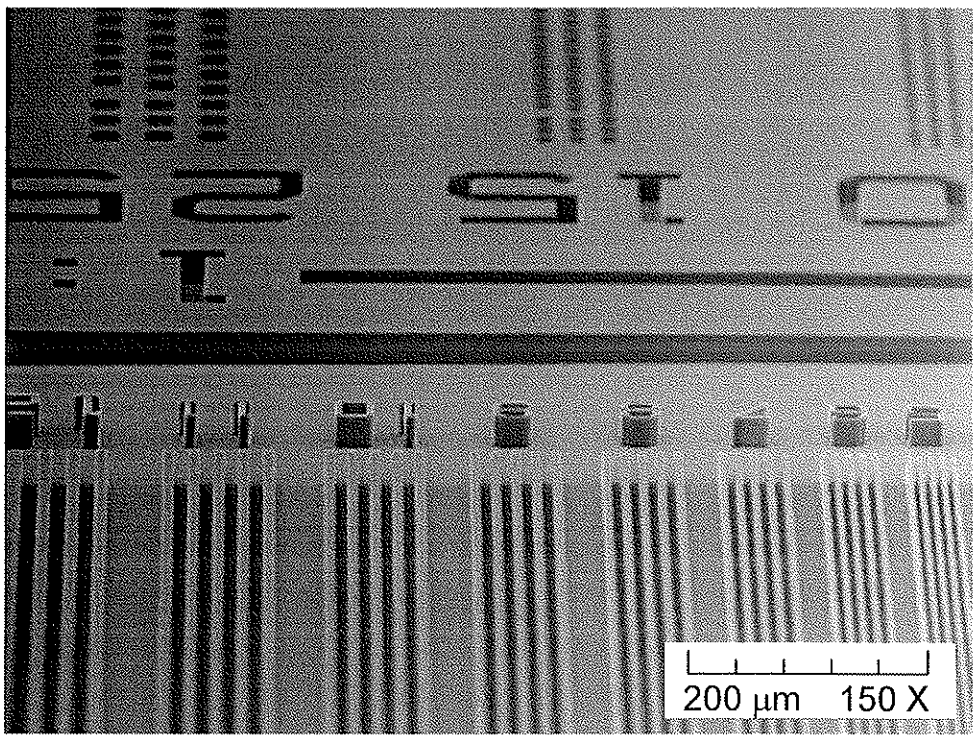


FIG. 13

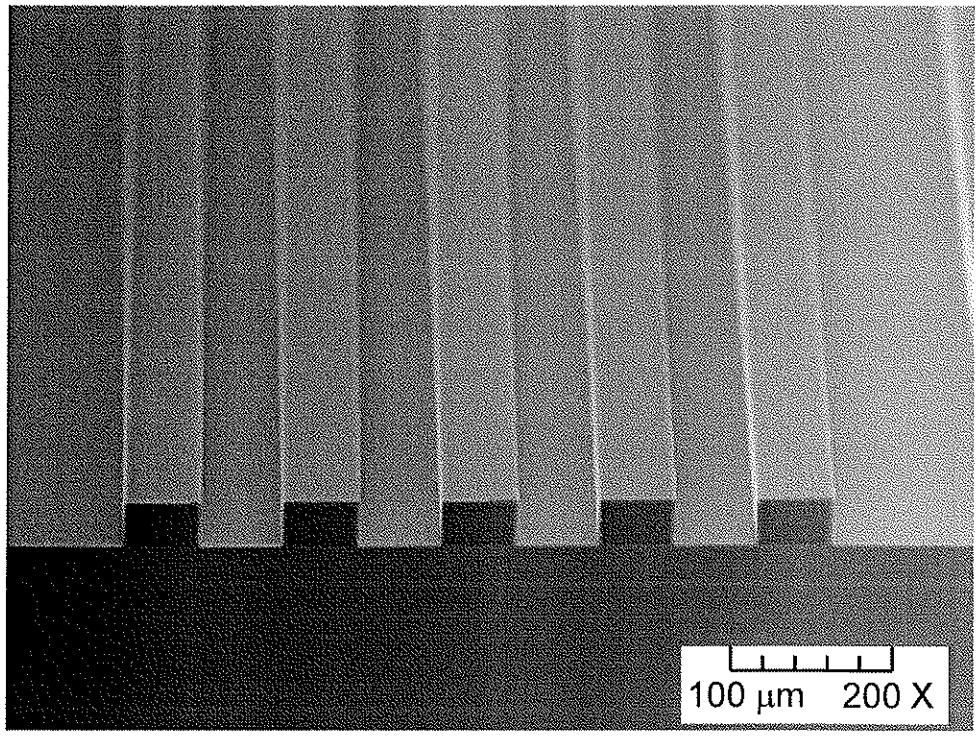


FIG. 14

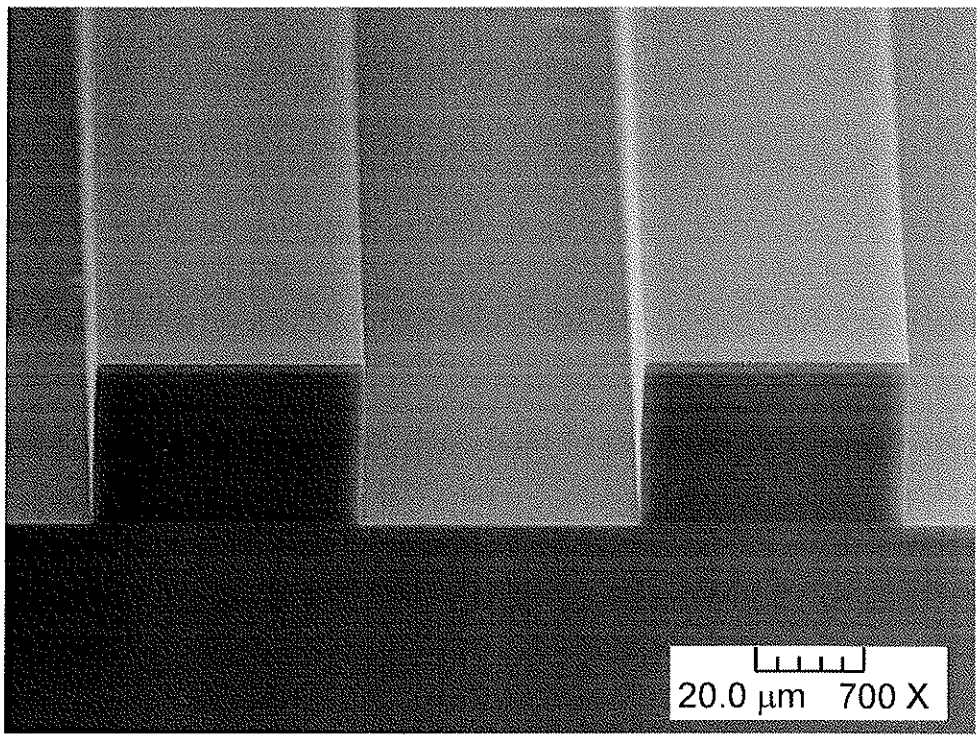
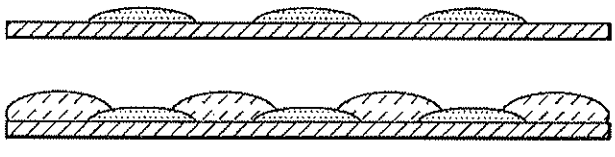


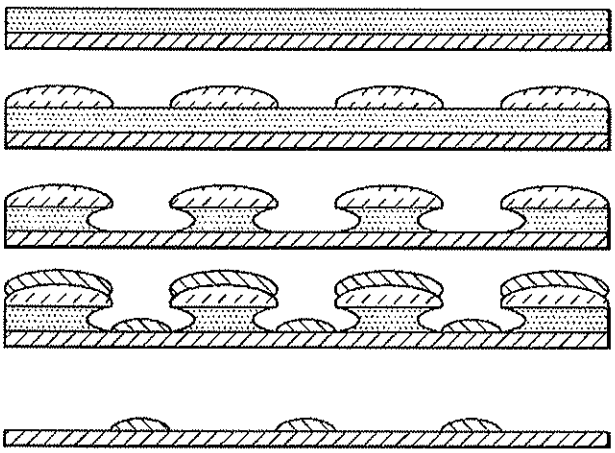
FIG. 15

Lift–Off Process, Option 1

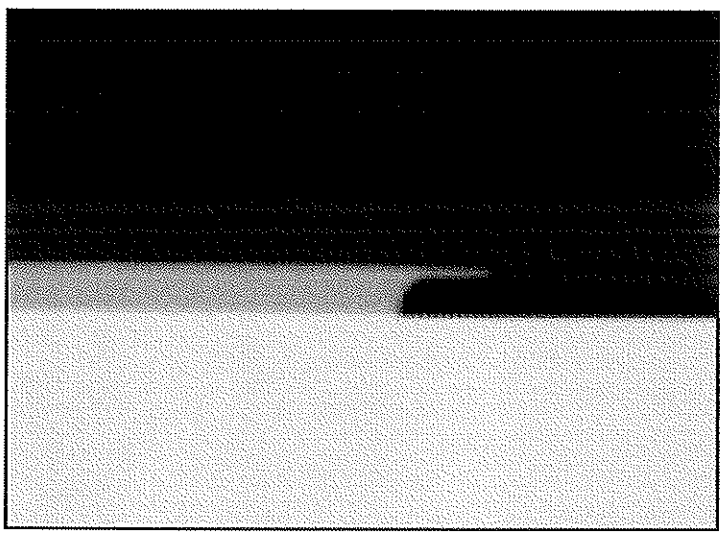


1. PMGI ink is deposited
2. UV or thermally cross–linkable ink is deposited.
3. PMGI is dissolved in aqueous base developer.
4. Metal is deposited.
5. Cross–linked ink is removed/lifted–off.

Lift–Off Process, Option 2



1. PMGI ink is deposited
2. UV or thermally cross–linkable ink is deposited.
3. PMGI is dissolved in aqueous developer creating lift–off profile.
4. Metal is deposited.
5. Removal/lifted–off.



Underlayer
PMGI Ink – cure 110 °C for 1 min.

Top Layer
Epoxy Ink – cure 110 °C for 1 min.

Development Time - ~1 min.
2.38% TMAH Developer

FIG. 16