Images taken after 24 hours
(samples from wafer #216)

In Sodium Bicarbonate: (Basic pH ~ 9.5-10)
1) stripped
2) stripped + peroxide treated
3) stripped + peroxide + vapor silanised
4) stripped + peroxide + solution silanised
5) stripped + vapor silanised
6) stripped + solution silanised
7) duplicate of 2
8) control (in Water)

The 'only' stripped sample was the first one to undergo discoloration (after around 3 hrs).

Vapor silanisation prevents discoloration due to bicarbonate.
(previously its been observed that, after 4 weeks, even vapor silanised sample is discolored)

Peroxide doesn't seem to have an effect.
(but, it seemingly prevents discoloration due to sodium hypochlorite & sodium chloride)
Compared to the 'only' stripped sample, peroxide and solution silanisation does help in delaying discoloration but not to such an extent as vapor silanisation.

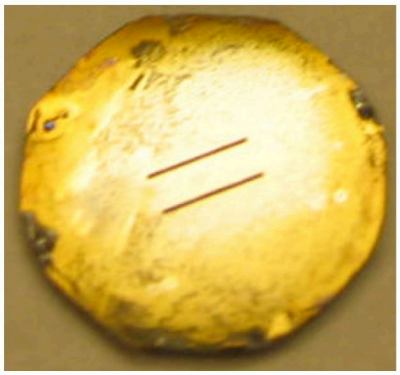

fig 1

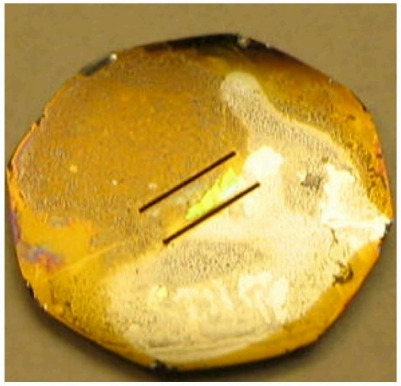

fig 2

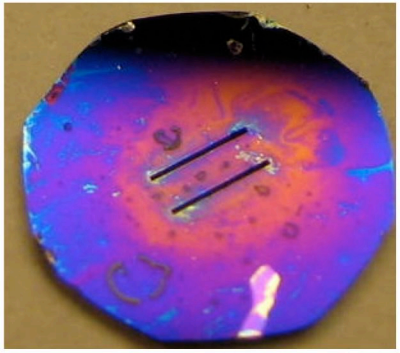

fig 3

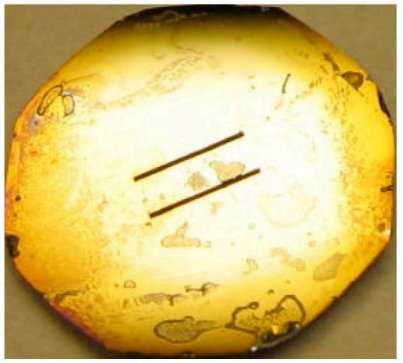

fig 4

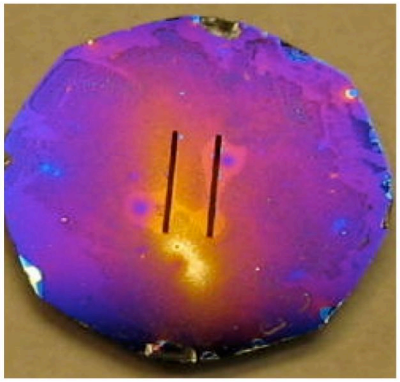

fig 5

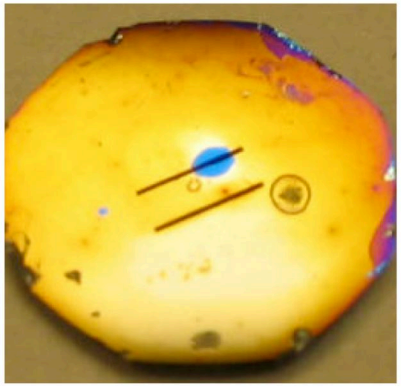

fig 6

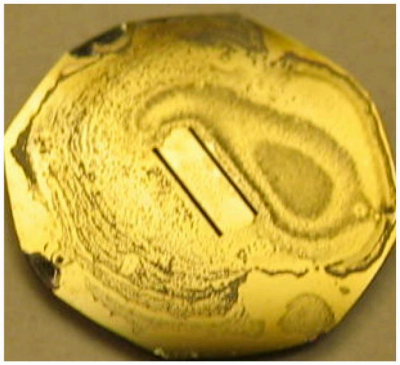

fig 7

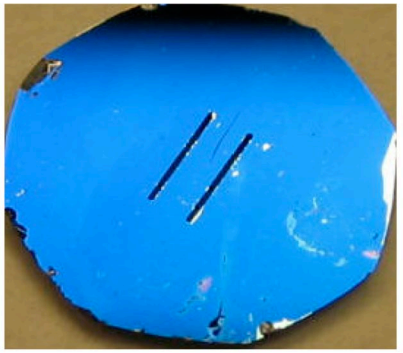

fig 8

Images taken after 3 days
(samples from wafer #216)

In DMEM: (Basic pH ~ 9-9.5)

1) stripped
2) stripped + peroxide treated
3) stripped + peroxide + vapor silanised
4) stripped + peroxide + solution silanised
5) stripped + vapor silanised
6) stripped + solution silanised
7) duplicate of 2
8) control (in Water)

Complete discoloration takes place in all the samples except the vapor silanised ones.

Vapor silanisation specifically prevents from discoloration.
(previously its been observed that, after 4 weeks, even vapor silanised sample is discolored due to DMEM/EBM)

Intact membranes were also observed in the vapor silanised samples which would have disrupted due to mishandling.

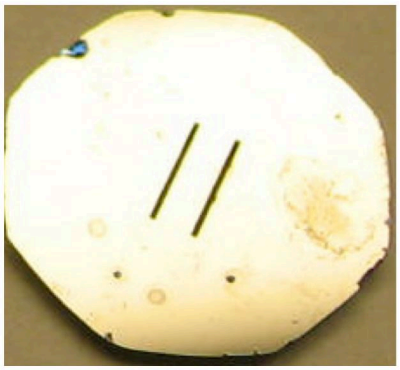

fig 1

fig 2

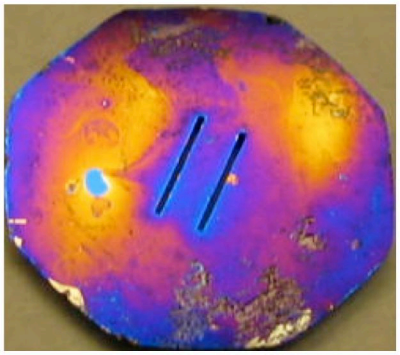

fig 3

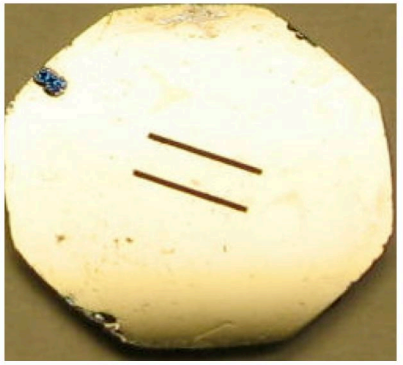

fig 4

fig 5

fig 6

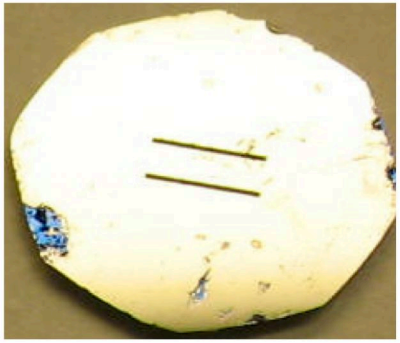

fig 7

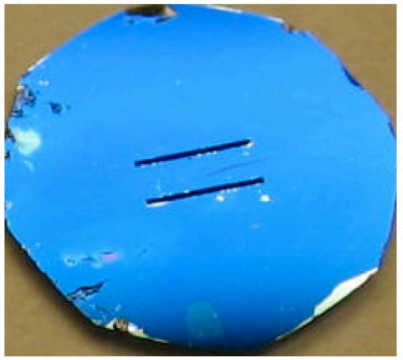

fig 8

Images taken after 5 days
(samples from wafer #216)

In L-15 media: (pH ~ 7-7.5)

1) stripped
2) stripped + peroxide treated
3) stripped + peroxide + vapor silanised
4) stripped + peroxide + solution silanised
5) stripped + vapor silanised
6) stripped + solution silanised
7) duplicate of 2
8) control (in Water)

No discoloration takes place in any of the samples.

Membranes were also found intact in some samples which would have disrupted due to mishandling.

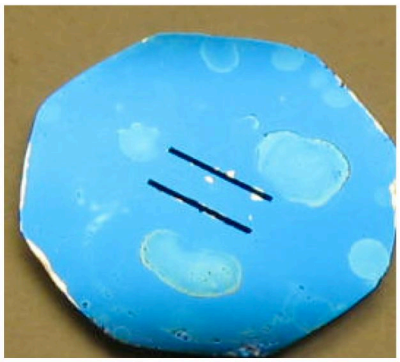

fig 1

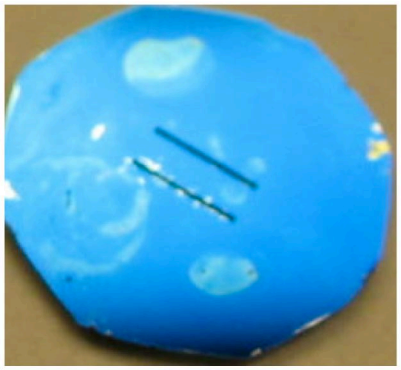

fig 2

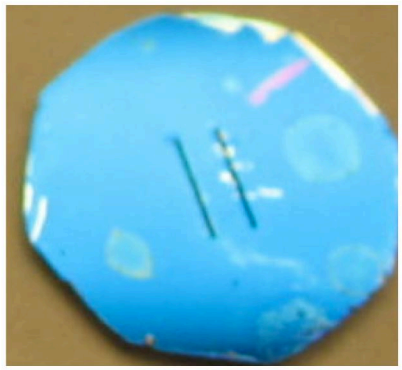

fig 3

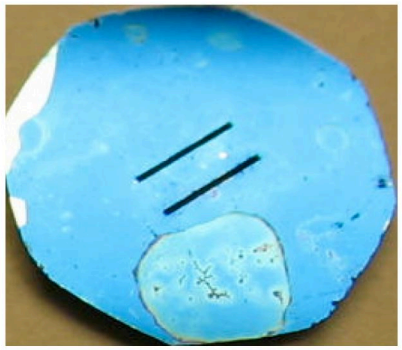

fig 4

fig 5

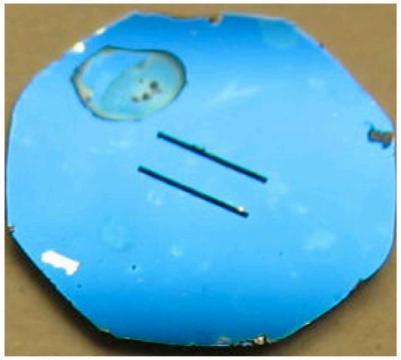

fig 6

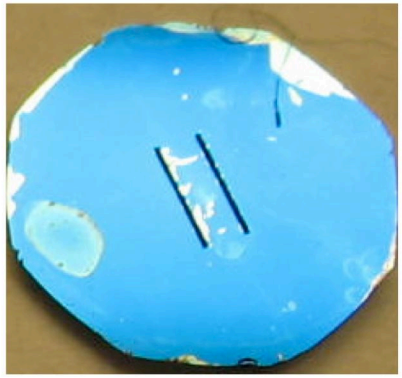

fig 7

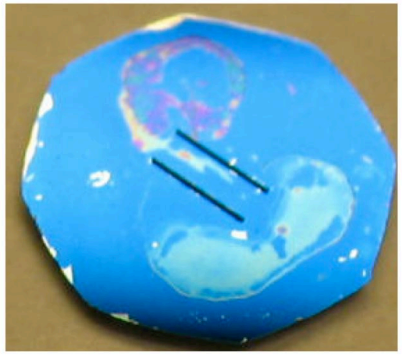

fig 8

Conclusion:

Vapor Silanisation helps in delaying discoloration.

L-15 media doesn't degrade the samples.

What's Next:

Checking viability of cells in L-15 media.

What kind of cells? - hybridoma cells - there are a variety of them.

Media used for hybridoma culture is usually serum free and protein free.

Will have to reconstitute and check with L-15 media such that hybridoma culture can take place.