
Finished products of Shin-Etsu's synthetic quartz glass (VIOSIL)

- 1 . Shin-Etsu's synthetic quartz glass
- 2 . Surface-modified substrates
- 3 . Substrates with holes & disk-shaped substrates
- 4 . Quartz glass plates with microfluidic channels

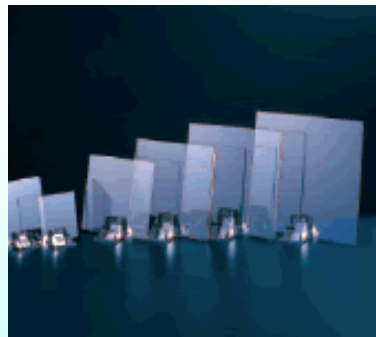
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URL: <http://www.shinetsu.co.jp>

The logo for Shin-Etsu, featuring the company name in a stylized font. 'Shin' is in blue and 'Etsu' is in green, with a blue horizontal bar behind the text.

Shin-Etsu's synthetic quartz glass



- High purity
- Chemical resistance
- Heat resistance
- Low thermal expansion
- Transparent (UV)
- Non fluorescent
- Low dielectric loss
- High-tech surface processing

Photomasks for ICs and LCDs

High temperature poly-Si TFT-LCDs

Micro lenses

RF devices

DNA chips

Microfluidic chips

Various applications as a substrate

Shin-Etsu's VIOSIL

Surface-modified synthetic quartz plates

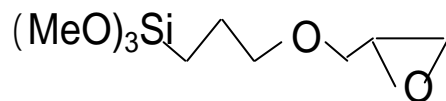
Examples of silane coupling agents for surface modification



[KBM603]



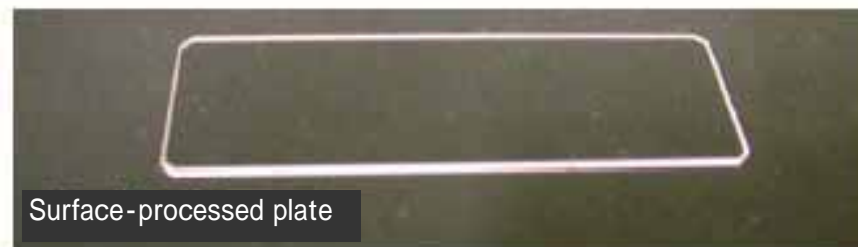
[KBM903]



[KBM403]



[HMDS] (water repellent)



* VIOSIL-SG1APHS

(Product name of surface-silylated slide glass)

By treating the substrate surface with silane coupling agents, we can make substrates water repellent or add other functionality.

Our surface-processed quartz plates show promise for use as DNA chips and for other applications.

(Shin-Etsu's product lineup includes a full range of silane coupling agents.)

Quartz glass slides for DNA chips

KBM603 treatment
(silane coupling agent)

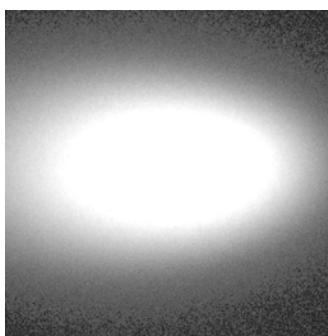


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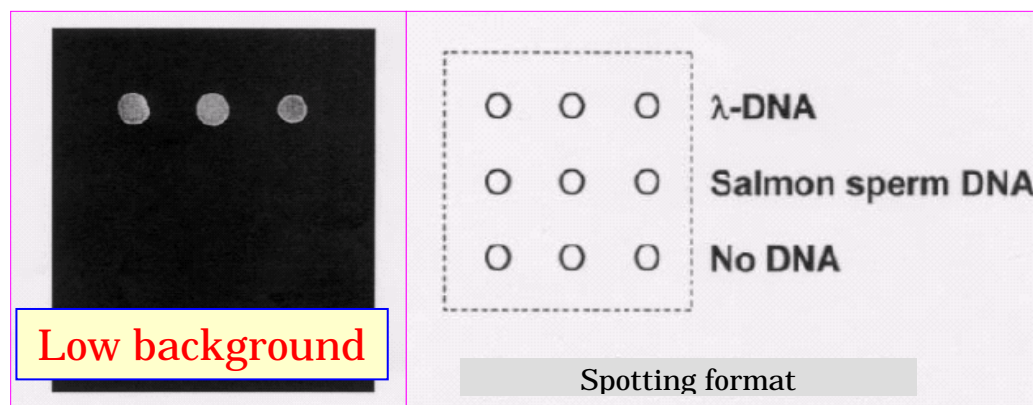
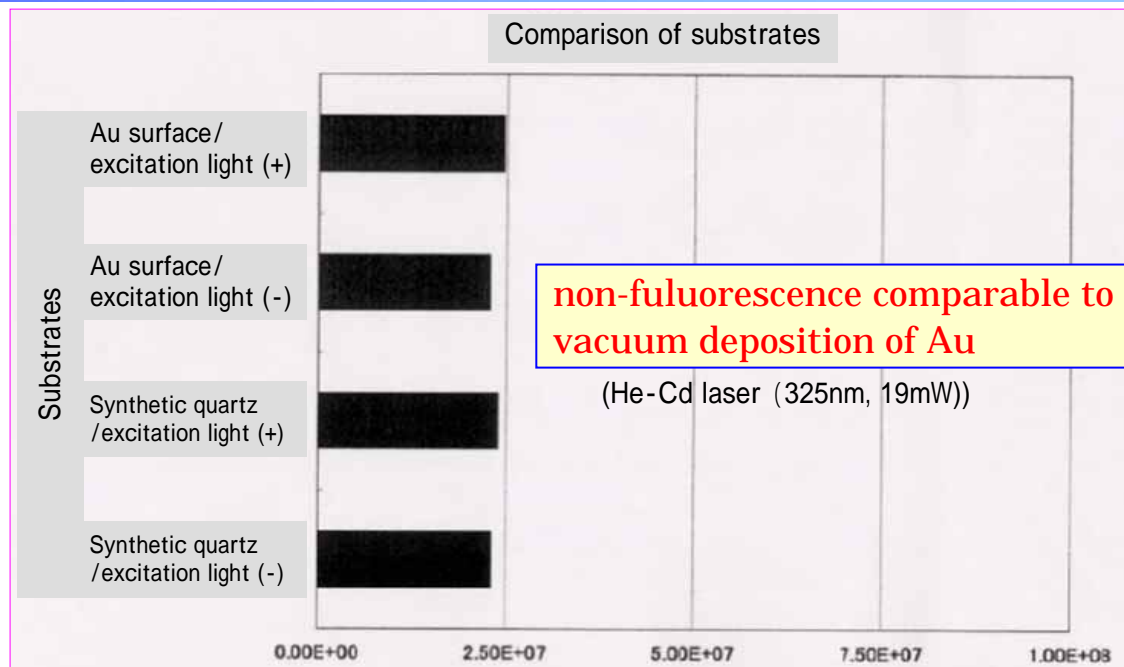
Shin-Etsu's synthetic quartz glass substrate



Microarray glass on the market



Fluorescence during laser irradiation
(He-Cd laser (325nm, 6mW))



ShinEtsu

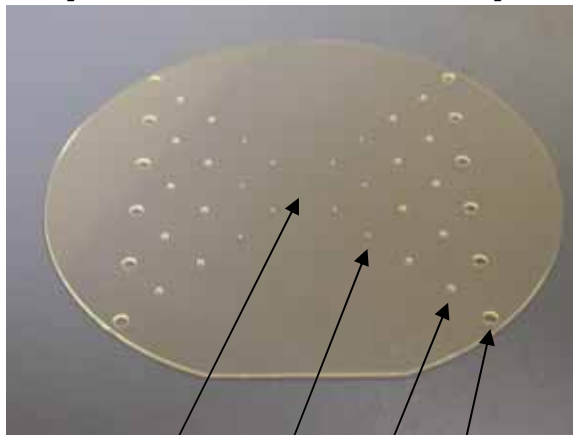
[Data courtesy of Professor K. Matsumoto, Department of Chemistry, Waseda University]

Substrates with holes and disk-shaped substrates

Shin-Etsu can fabricate synthetic quartz glass substrates with holes, and disks with high concentricity.

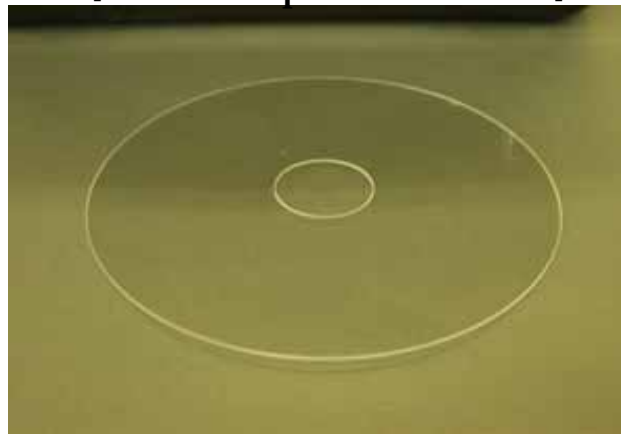
We can also manufacture well plates with bottom plates attached.

[Substrate with holes]



0.12 mm
0.5 mm
1.0 mm
2.0 mm
(Hole diameter)

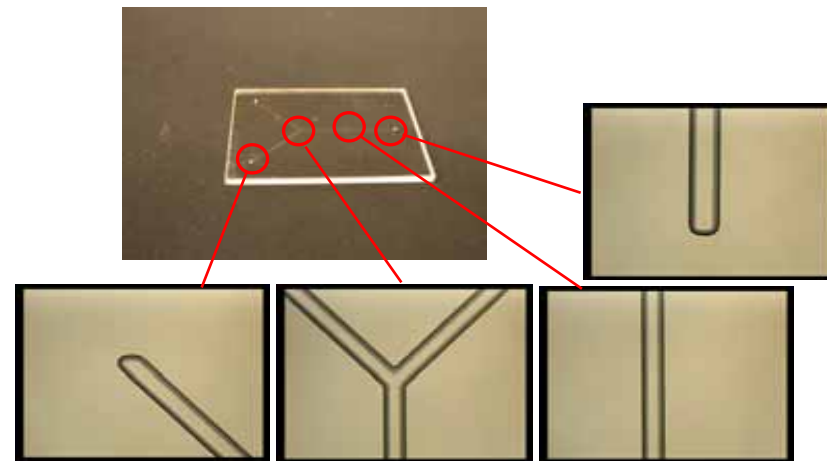
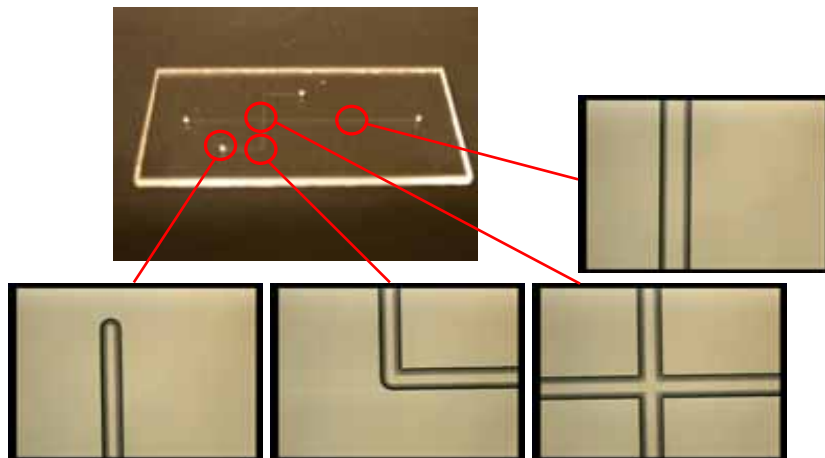
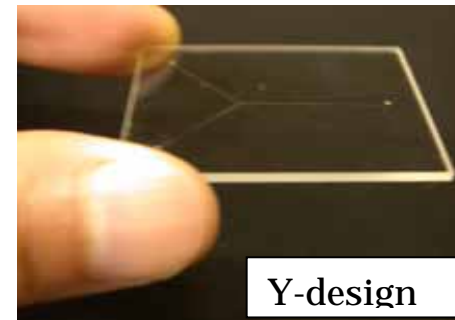
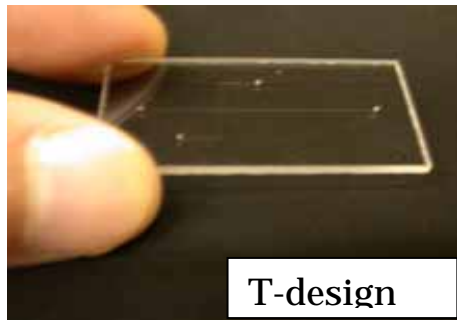
[Disk-shaped substrate]



[96-well plates]



Quartz glass plates with microfluidic channels



Shin-Etsu can produce micro channels on quartz using lithography , binding techniques and other technologies.