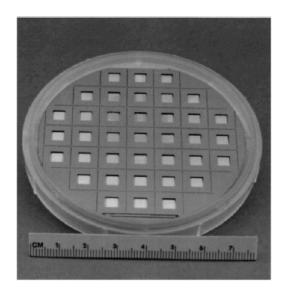
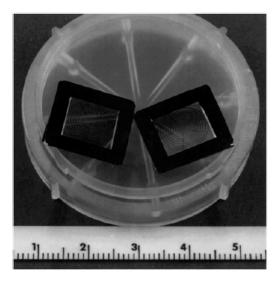


Fig. 1. Thin windows are fabricated by depositing silicon rich—silicon nitride on both surfaces of silicon wafers using LPCVD and then patterning and etching the silicon from one side. This method can mass produce a great variety of window shapes.





 $\textbf{Fig. 2a. 5} \ \textit{mm edge, 100} \ \textit{nm thick silicon nitride window array}.$



 $\it Fig.~2c.~10~mm~edge,~100~nm~thick~silicon~nitride~windows~with~targets.$

Foils from Silson:

Window: $5 \times 5 \text{ mm}^2$ Frame: $10 \times 10 \text{ mm}^2$ $50 \text{ nm Si}_3\text{N}_4 = 17 \text{ g/cm}^2$