

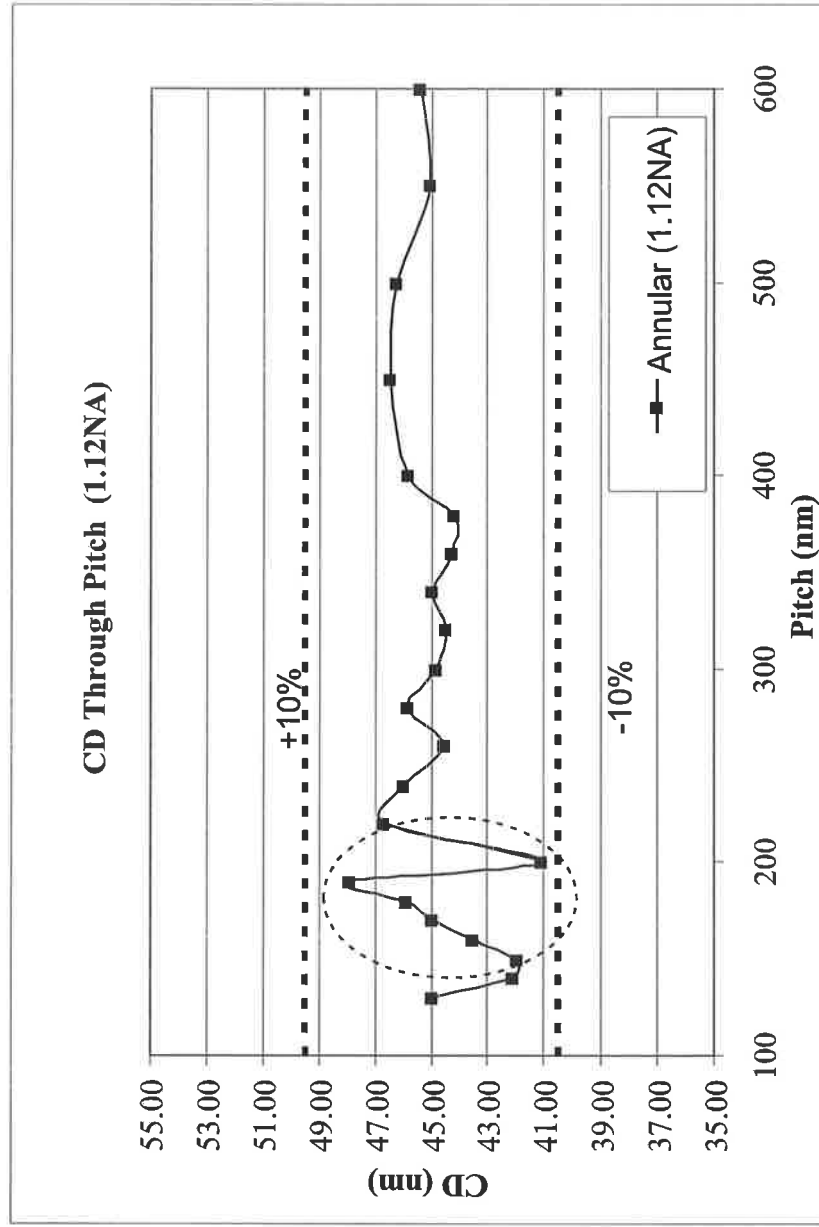


Figure 1

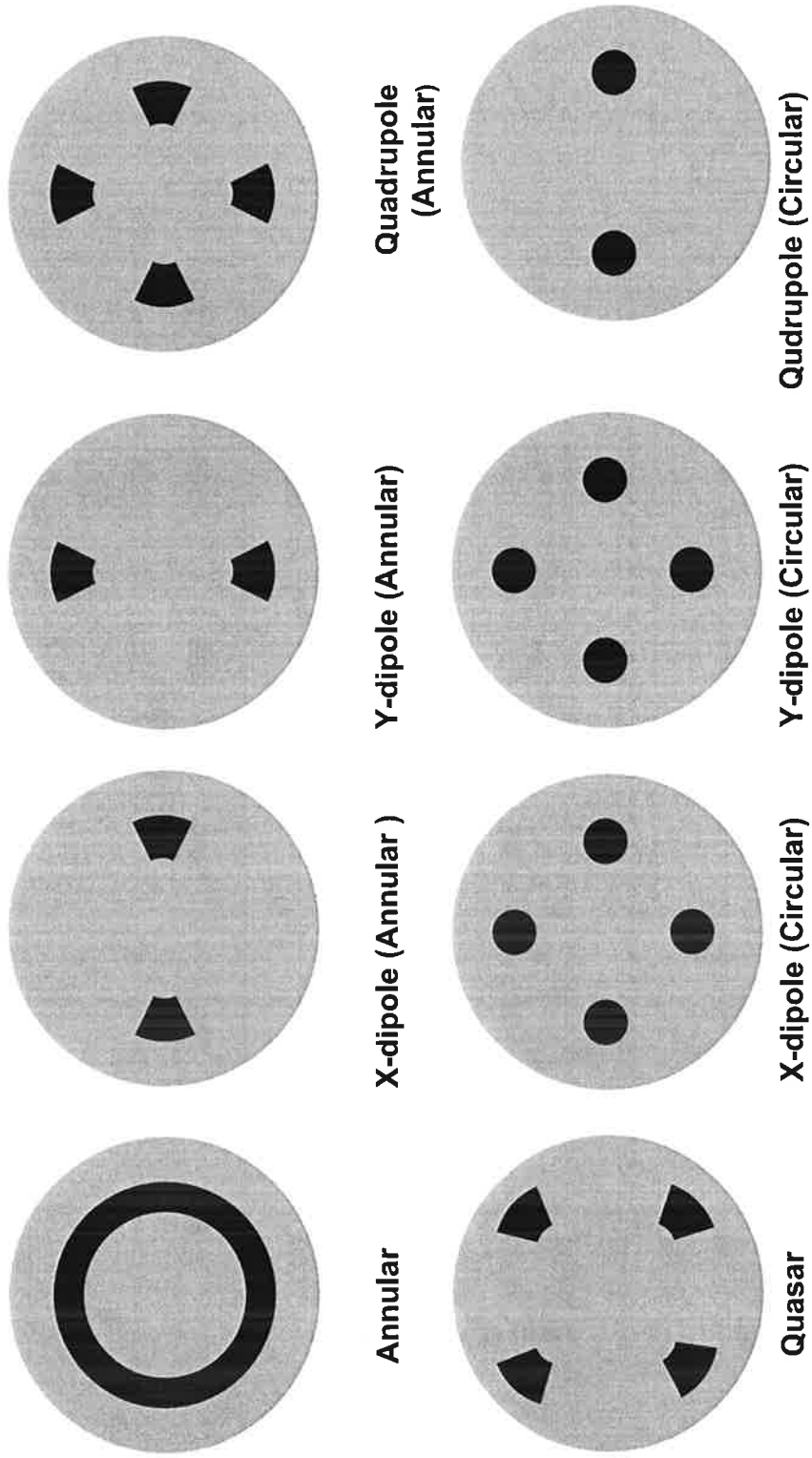


Figure 2

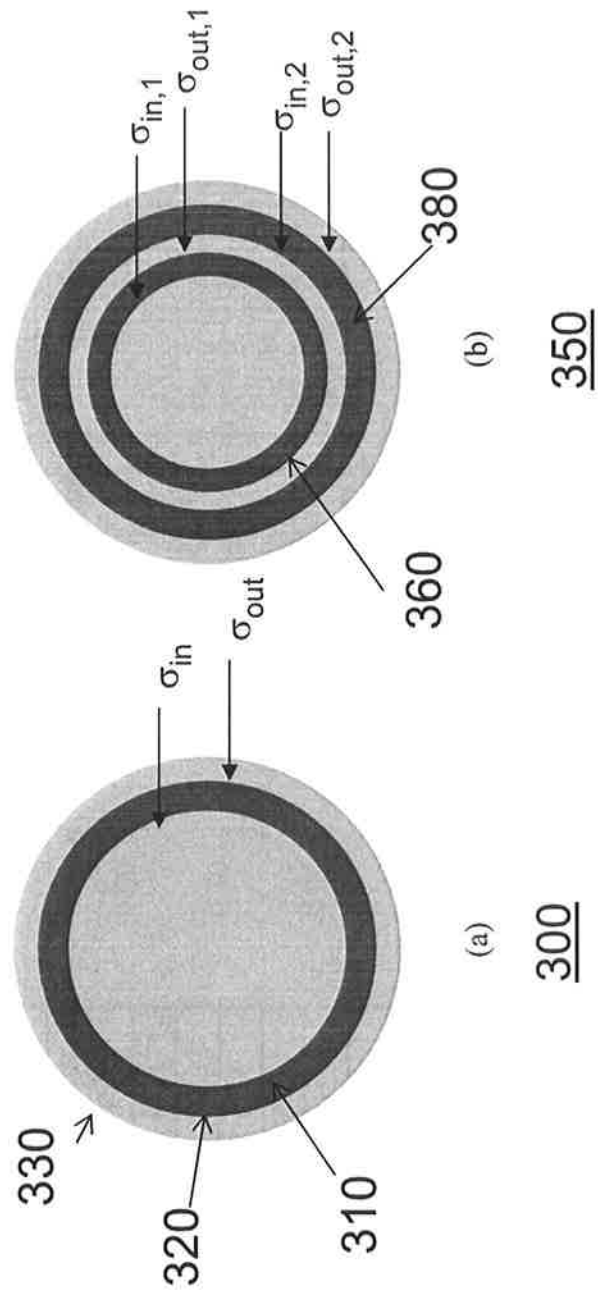
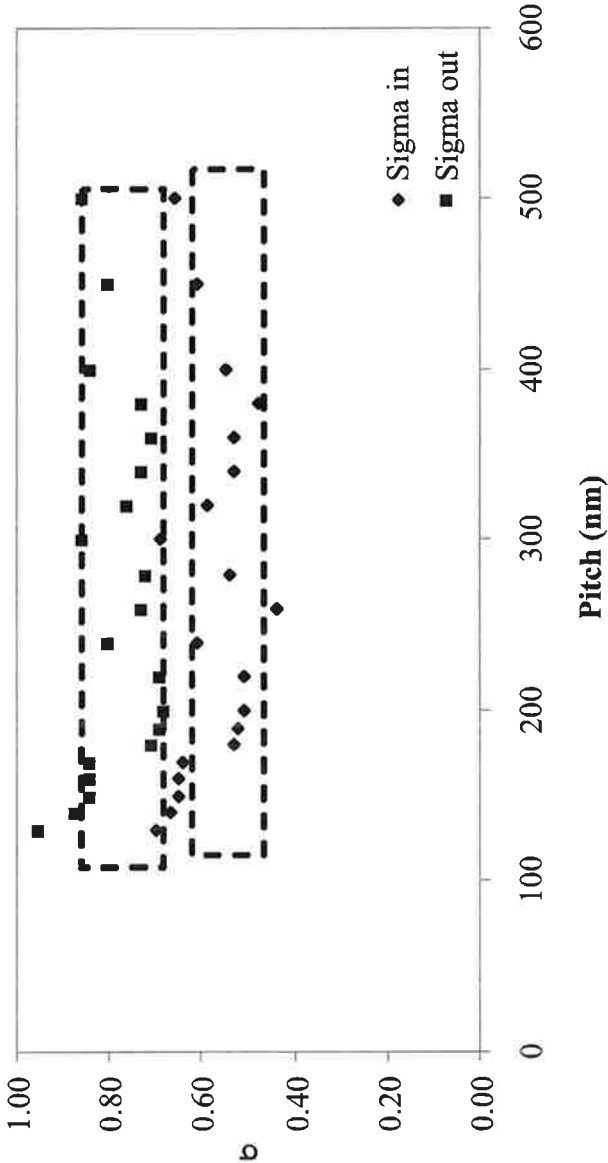


Figure 3

Pitch	Sigma in	Sigma out
130	0.70	0.95
140	0.67	0.87
150	0.65	0.84
160	0.65	0.84
170	0.64	0.84
180	0.53	0.71
190	0.52	0.69
200	0.51	0.68
220	0.51	0.69
240	0.61	0.8
260	0.44	0.73
280	0.54	0.72
300	0.69	0.86
320	0.59	0.76
340	0.53	0.73
360	0.53	0.71
380	0.48	0.73
400	0.55	0.84
450	0.61	0.8
500	0.66	0.86

(a)

Optimum σ setting for 45 nm line with different pitches



(b)

Figure 4

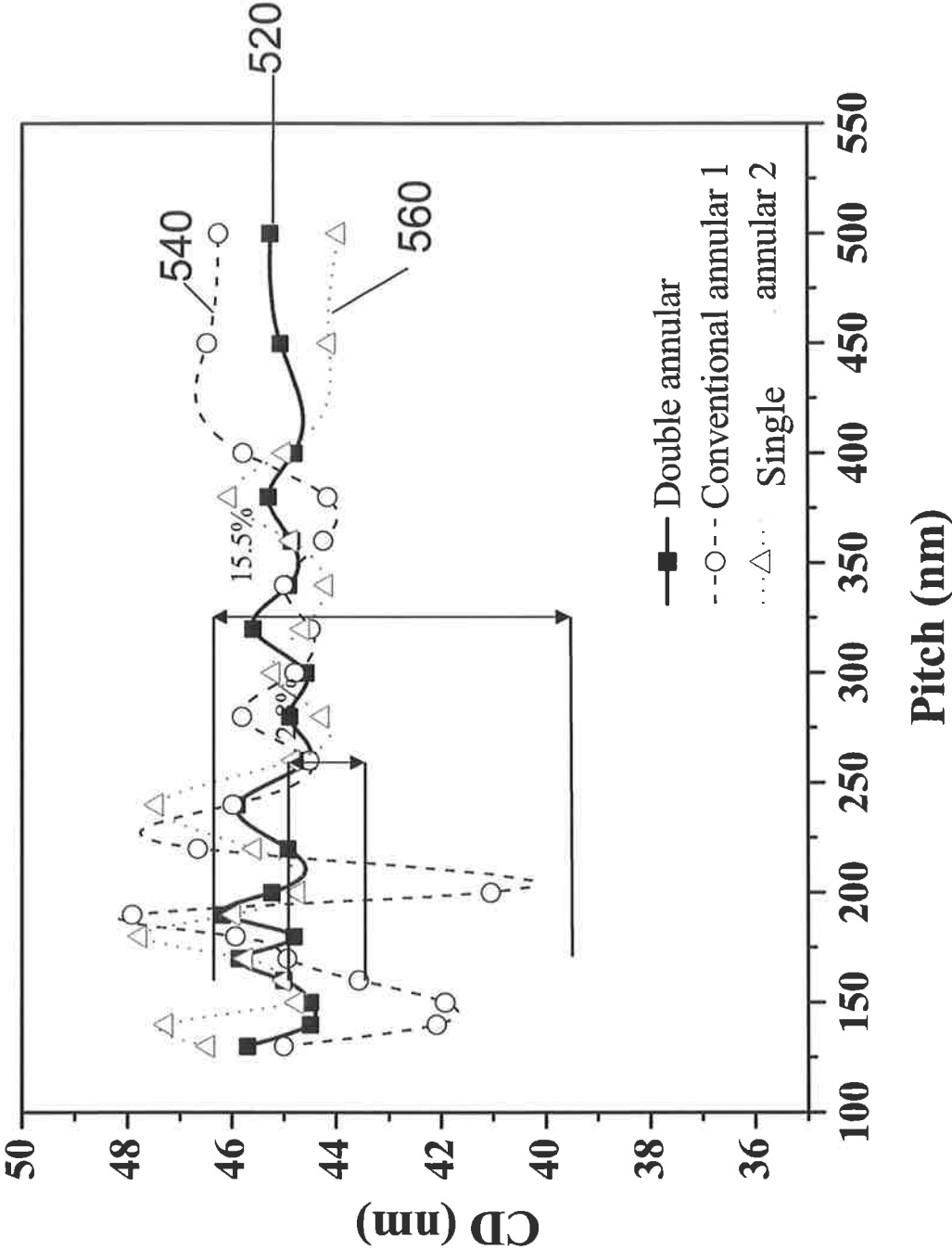


Figure 5

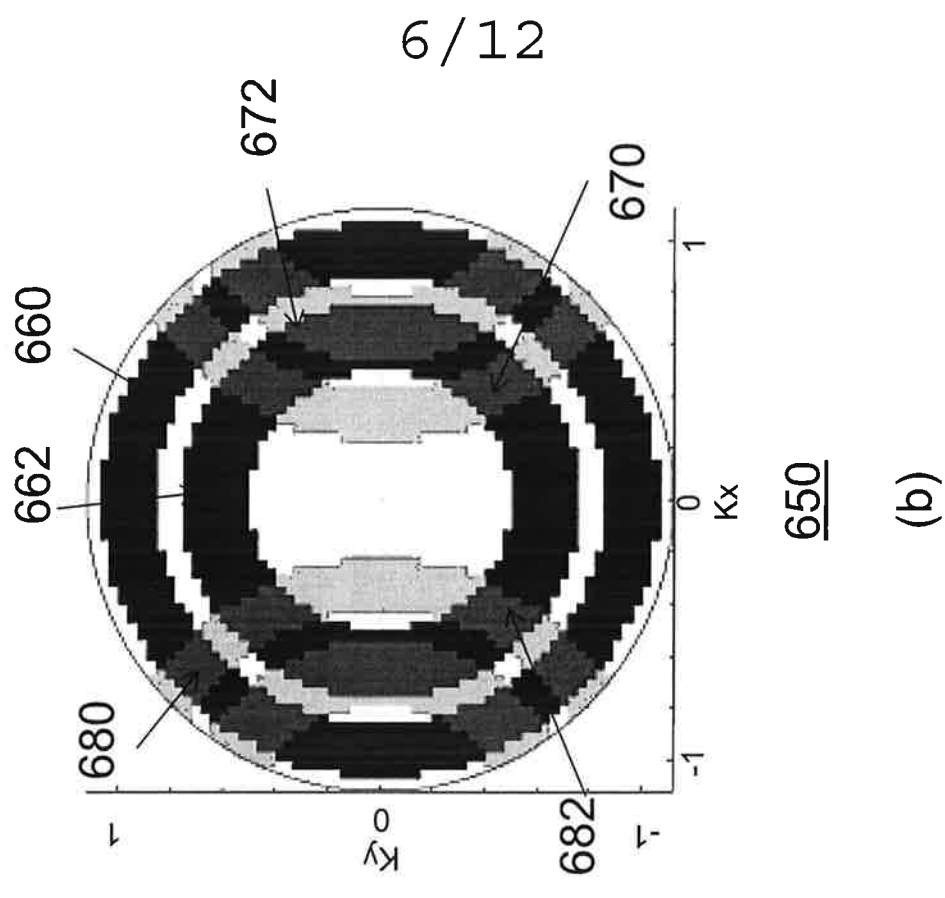
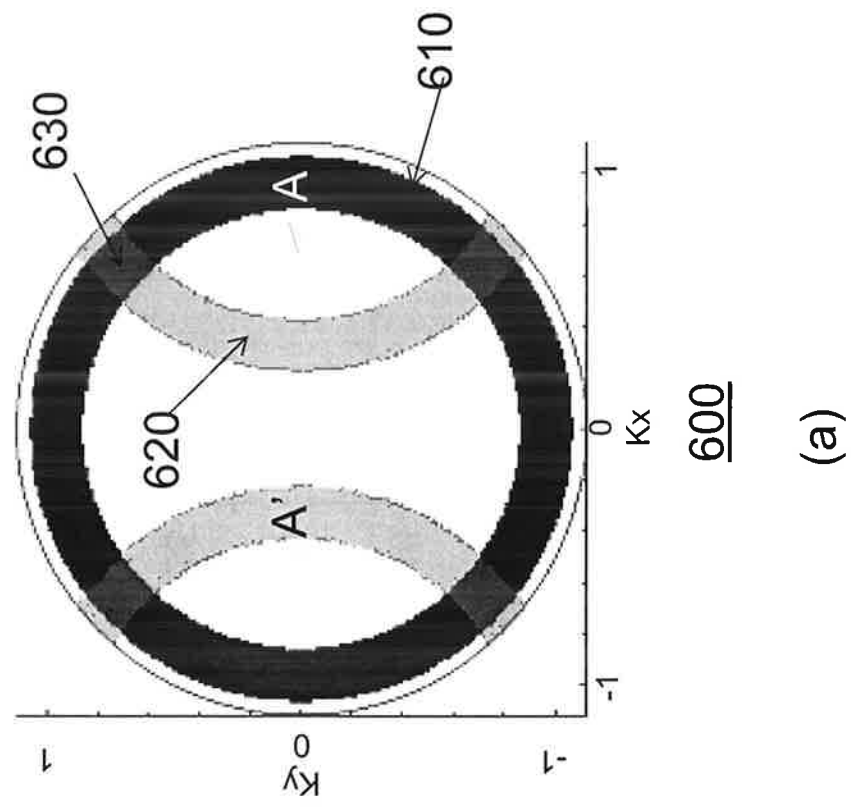


Figure 6

Figure 7a
150nm pitch

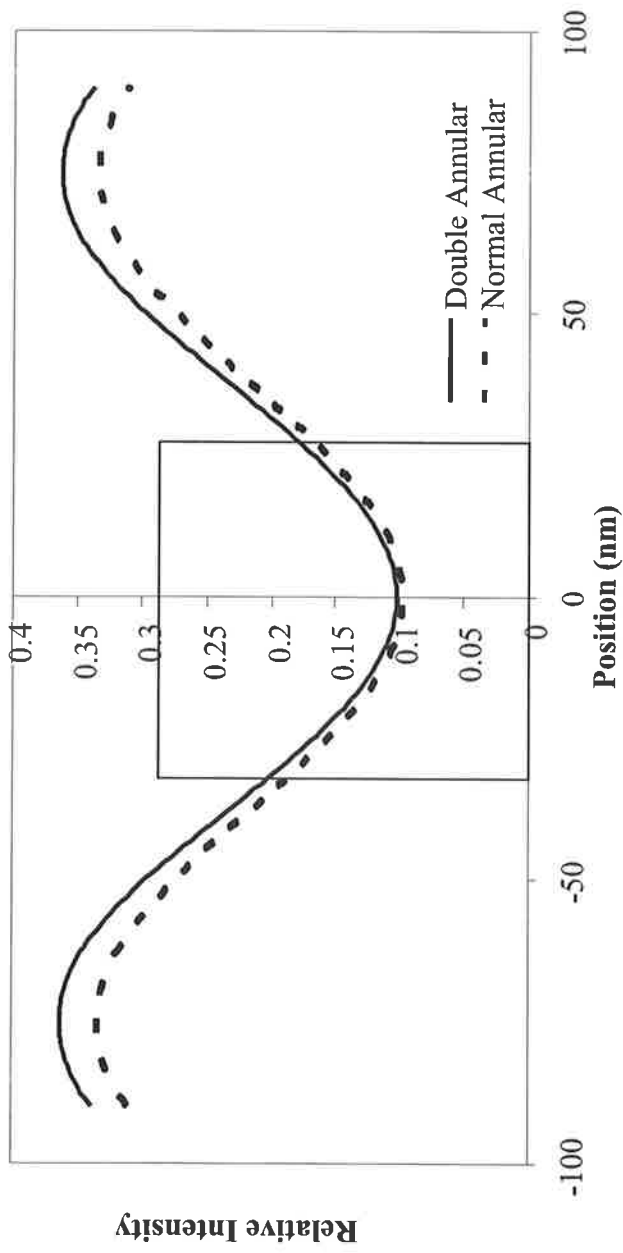


Figure 7b
190nm pitch

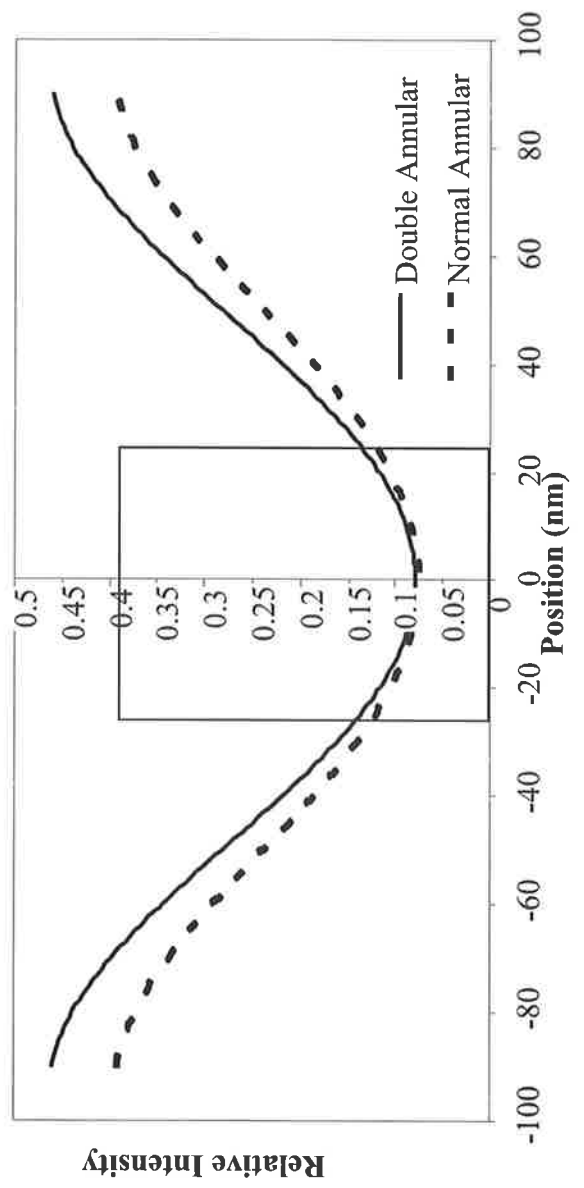
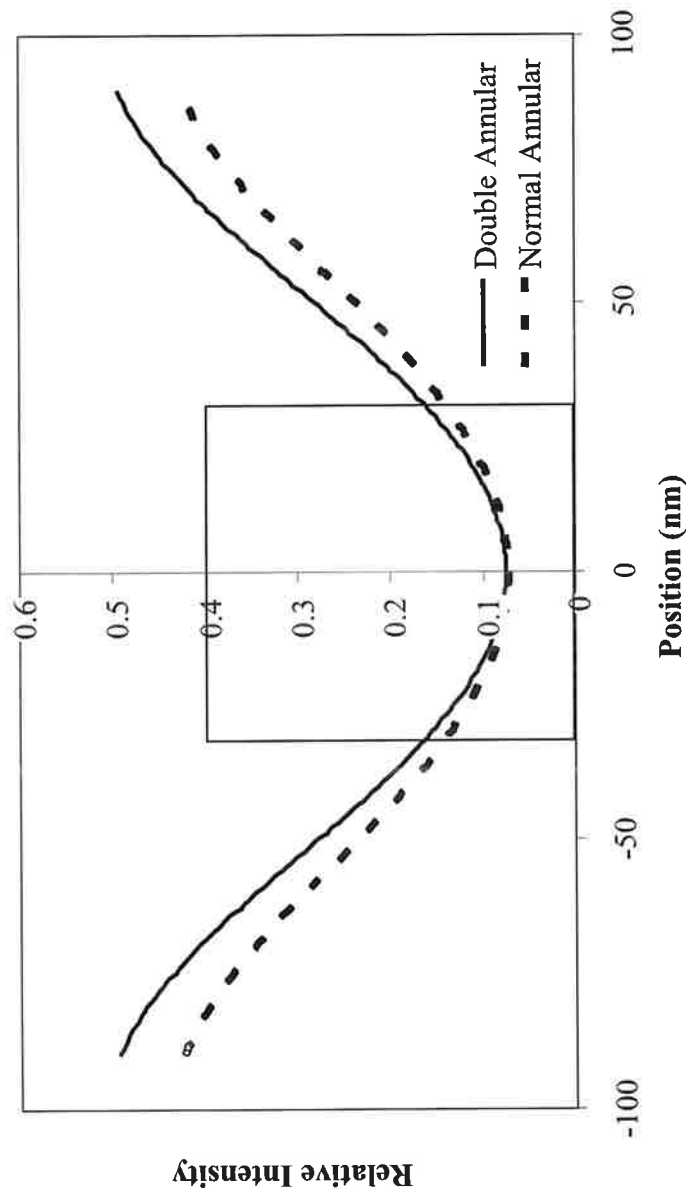


Figure 7c
200nm pitch



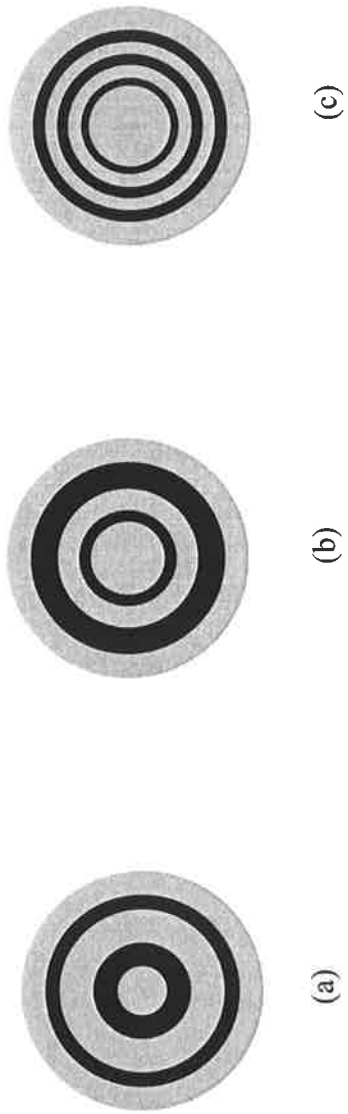


Figure 8

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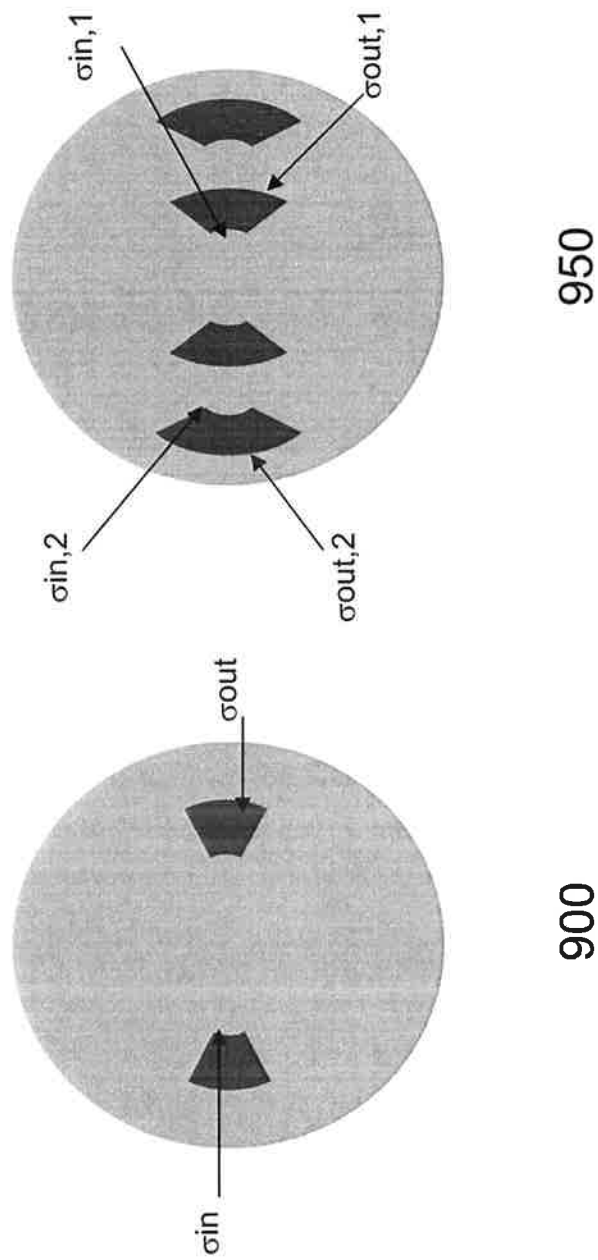


Figure 9

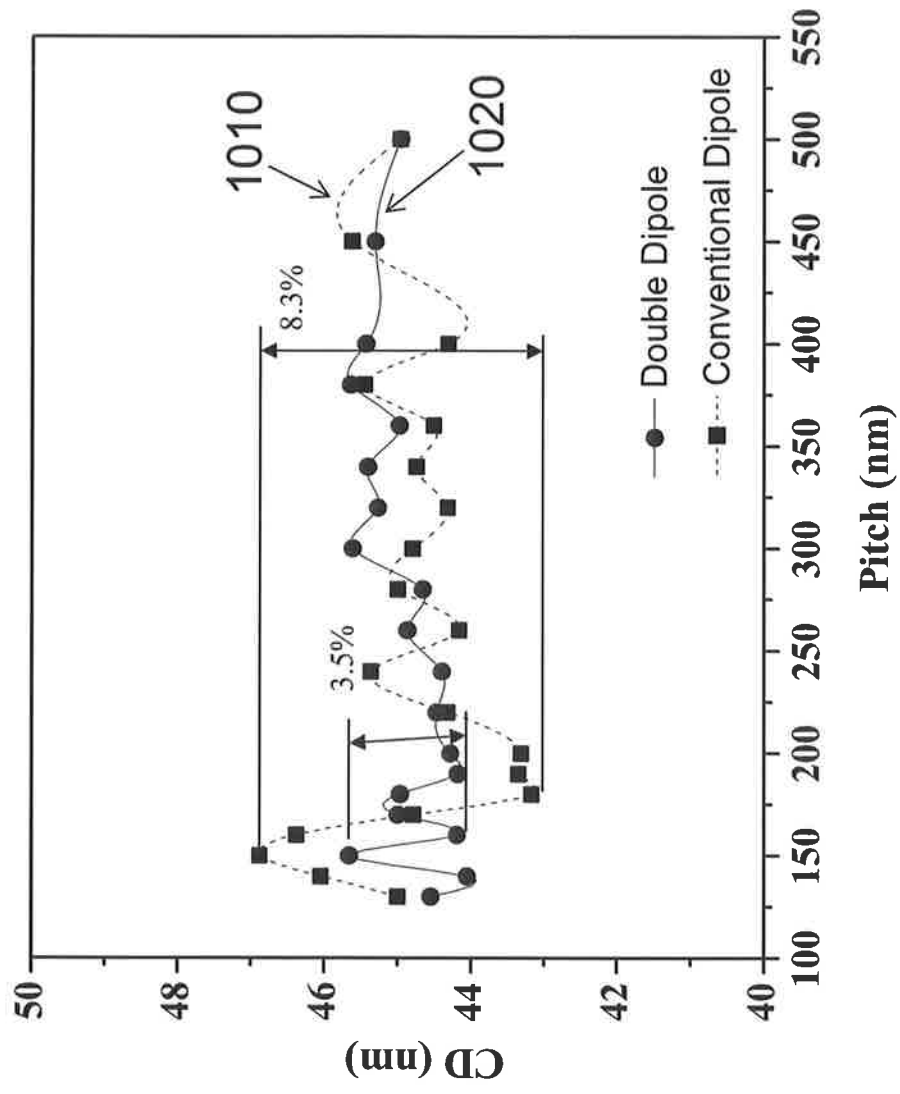


Figure 10

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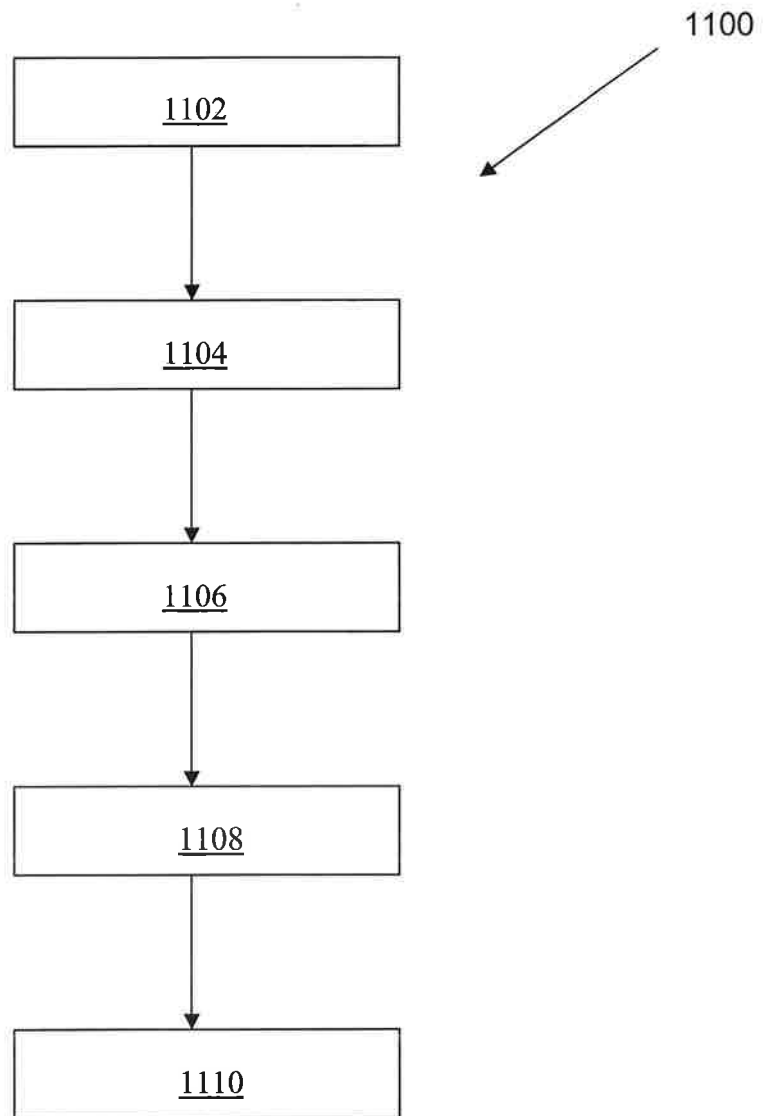


Figure 11