

Miktoarm Stars

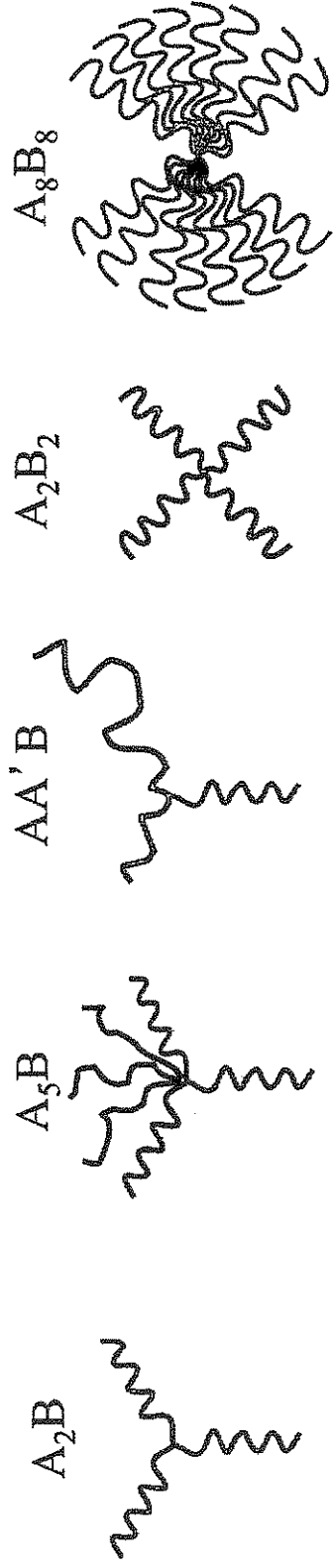


FIG. 1A

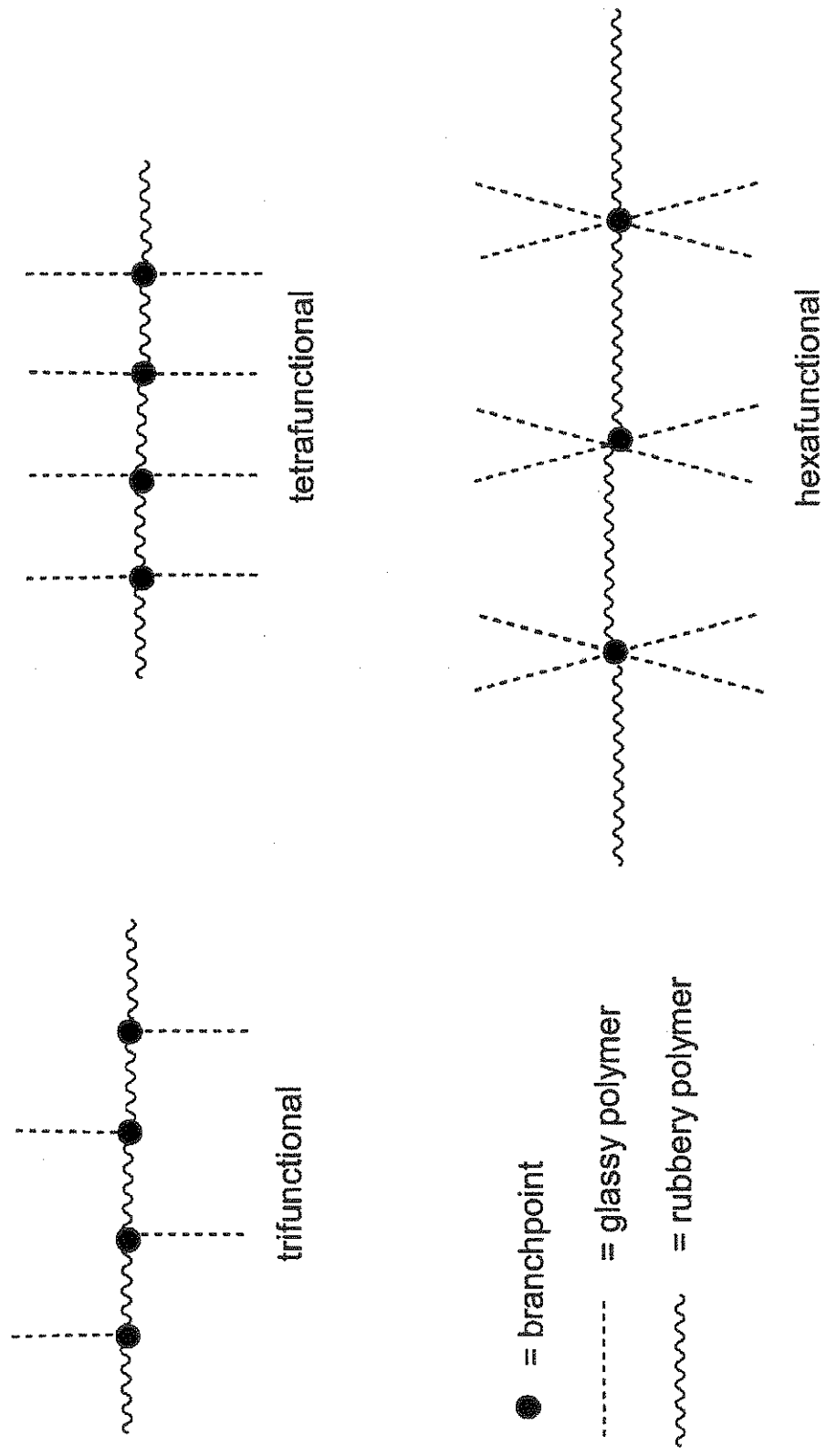


FIG. 1B

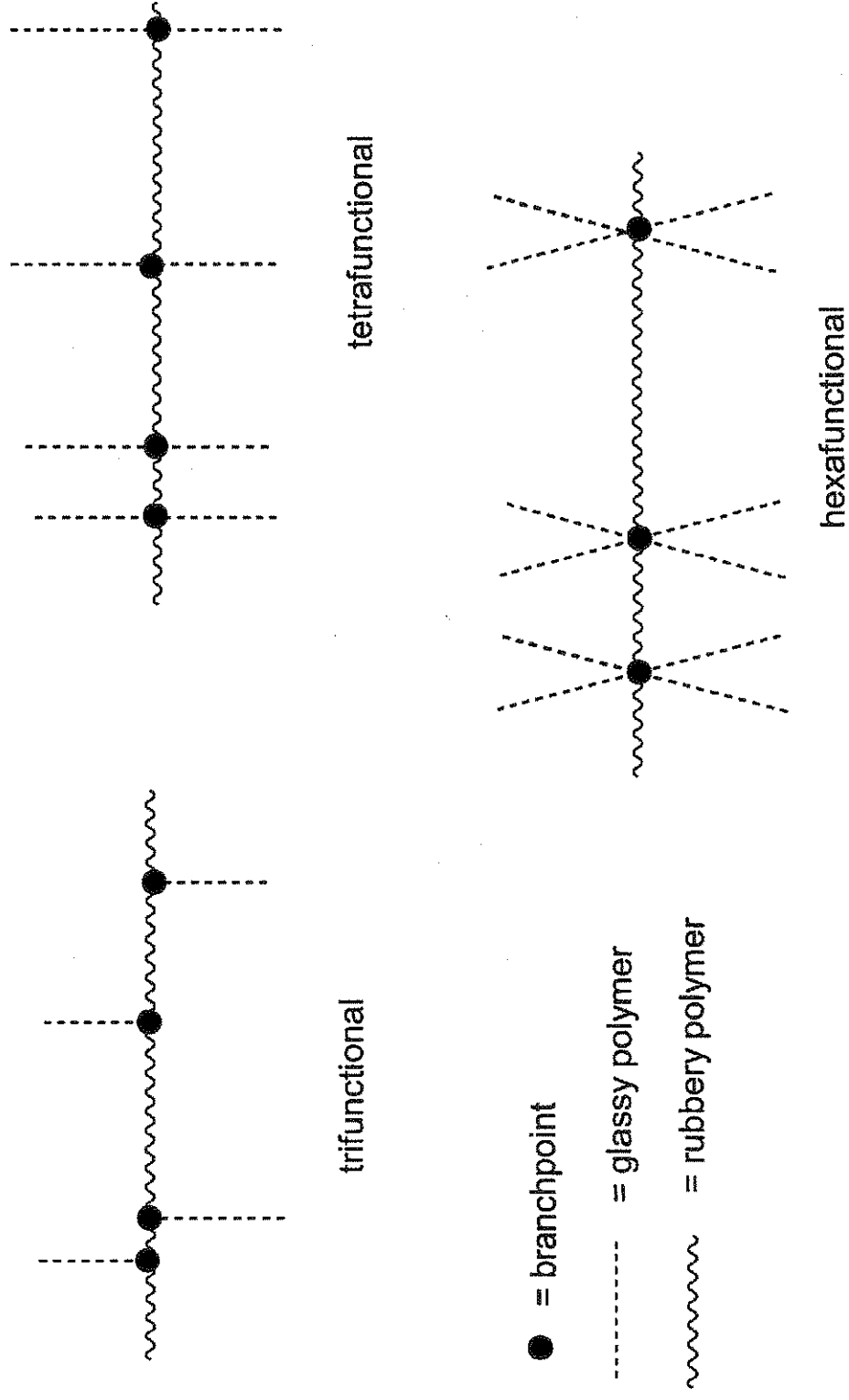


FIG. 1C

FIG. 2A

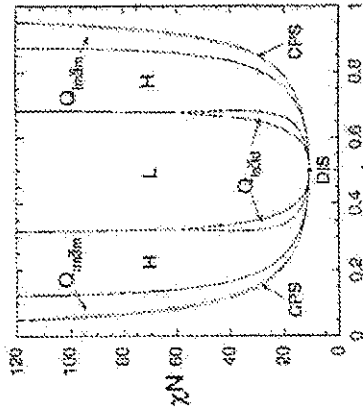


FIG. 2B

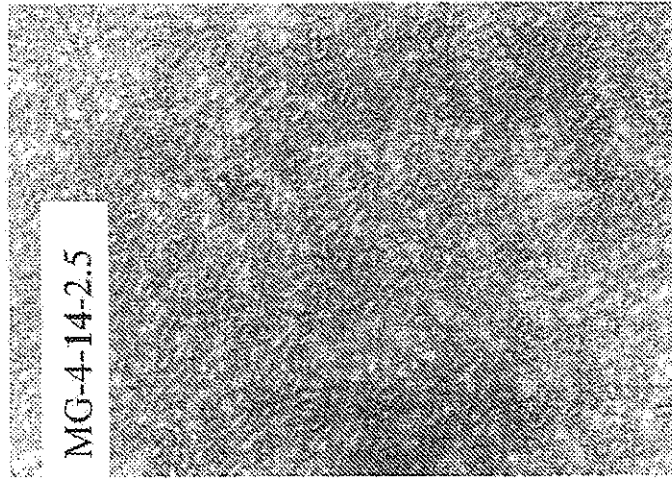


FIG. 2D

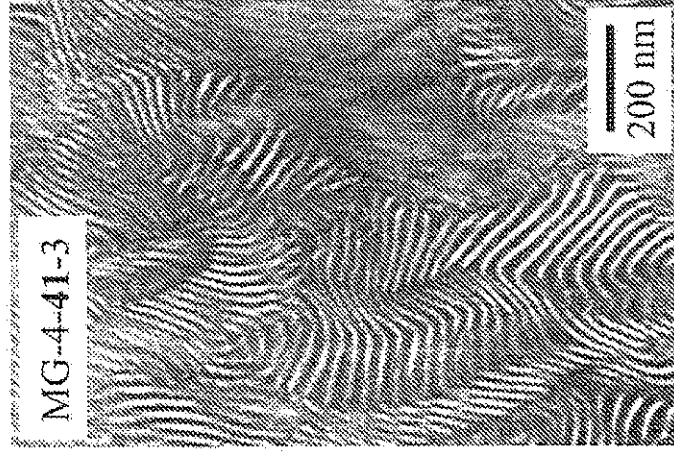
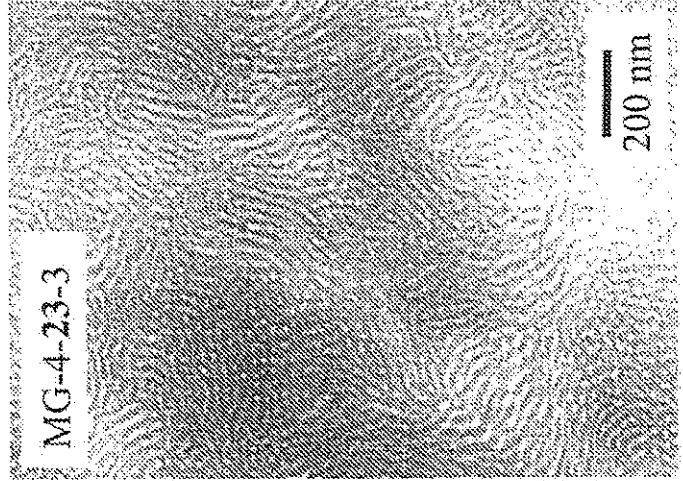


FIG. 2C



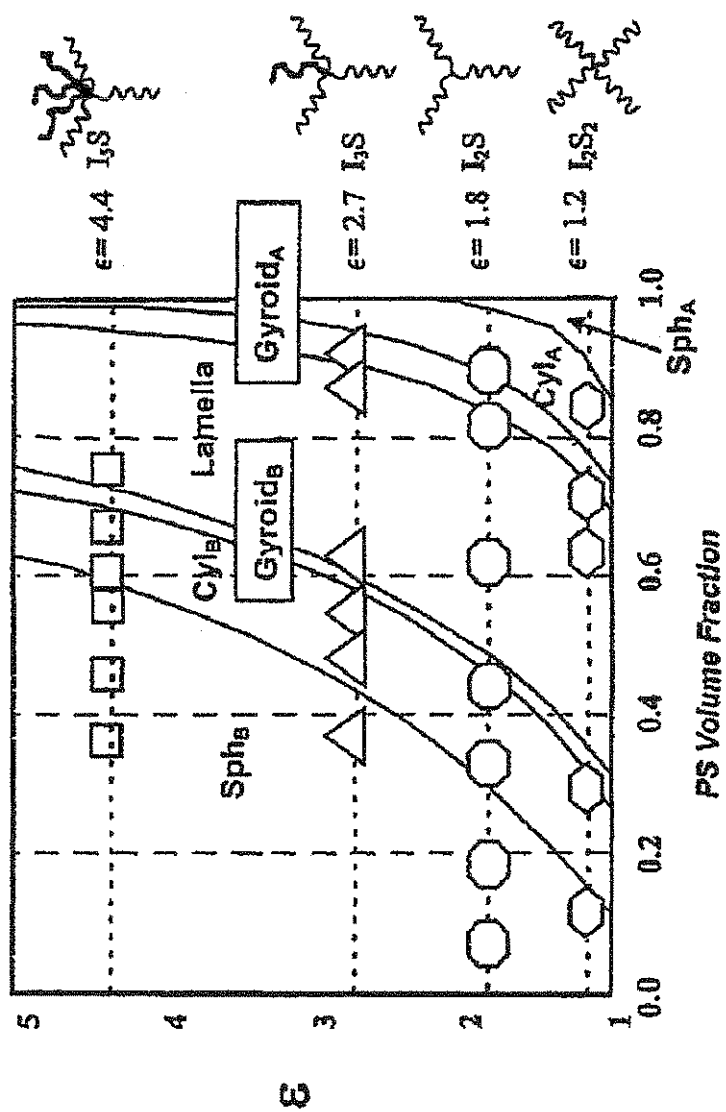


FIG 3

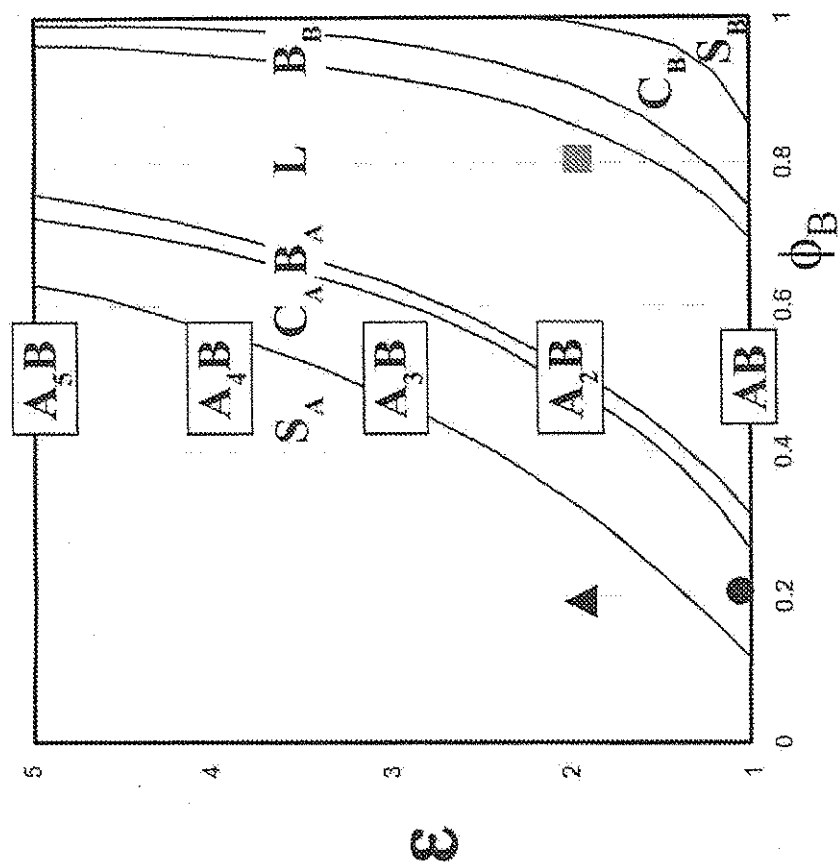
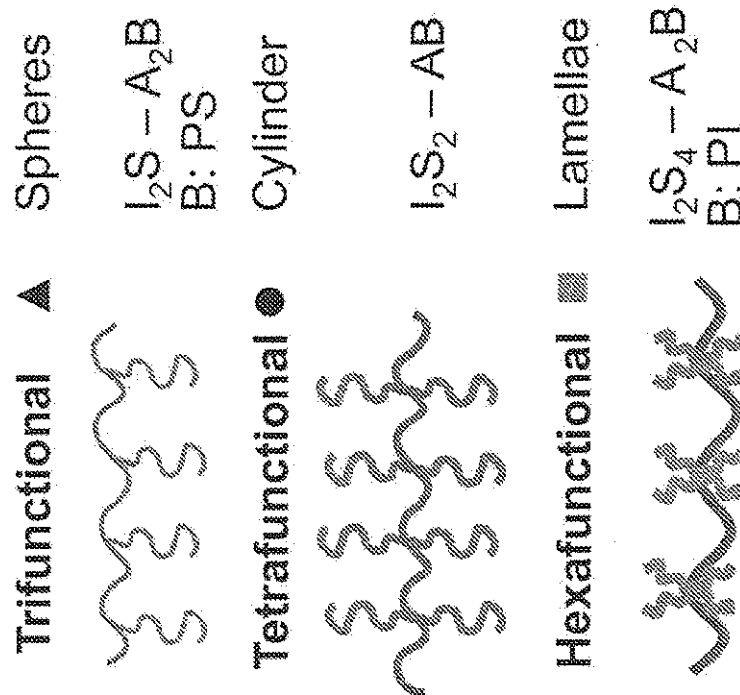
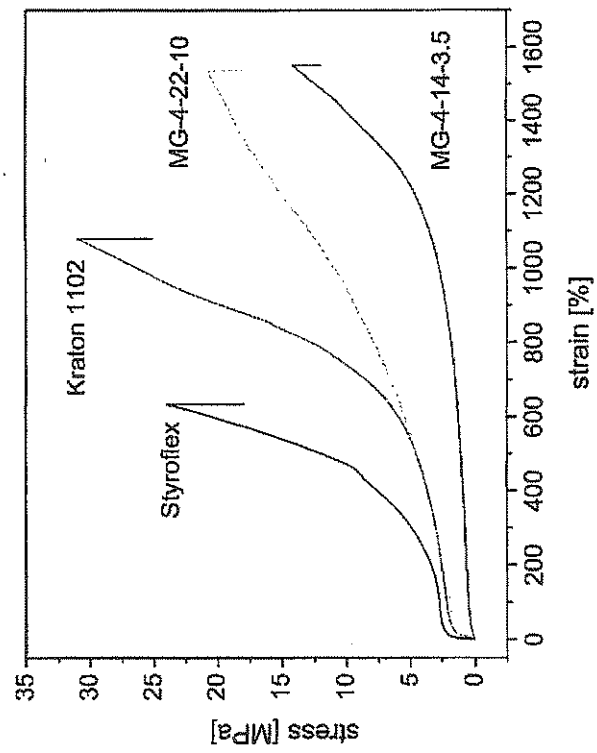


FIG. 4



**FIG. 5**

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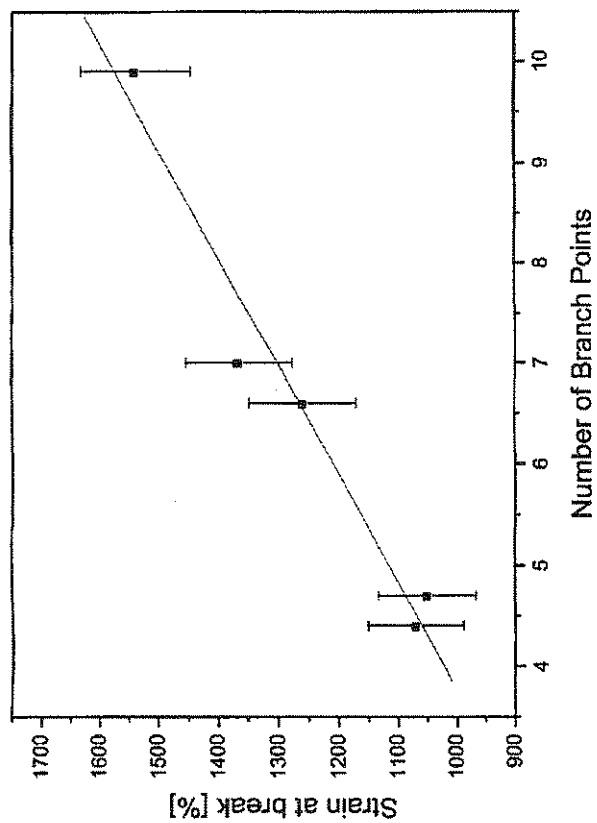


FIG. 6A

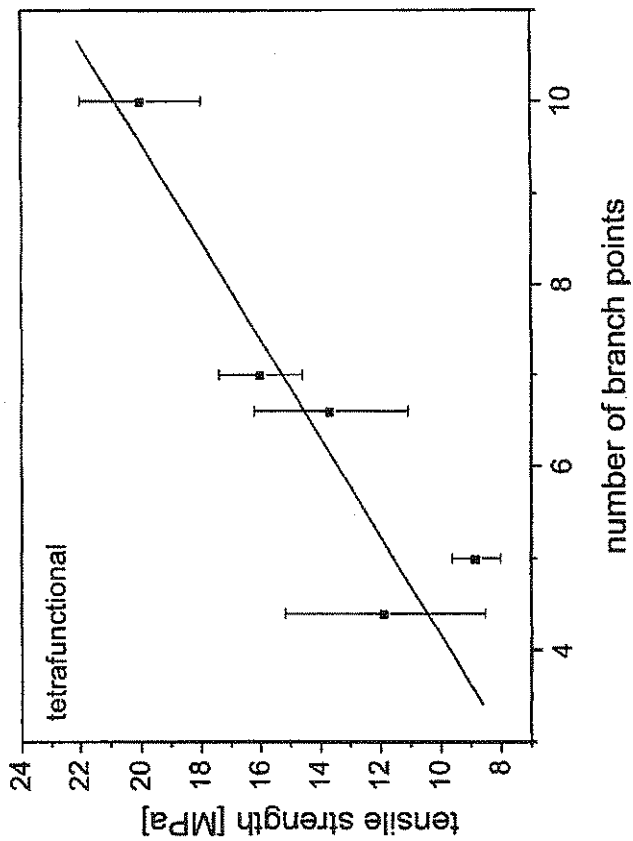


FIG. 6B

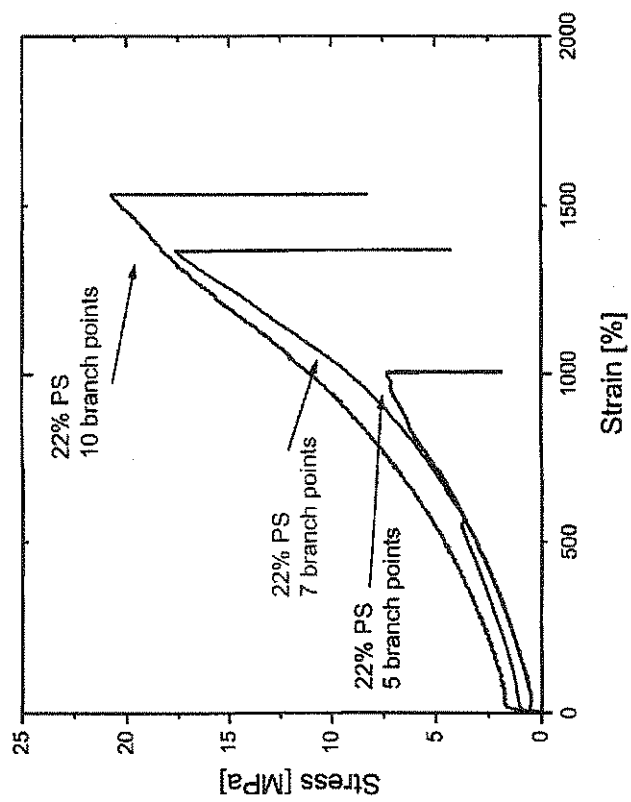


FIG. 6C

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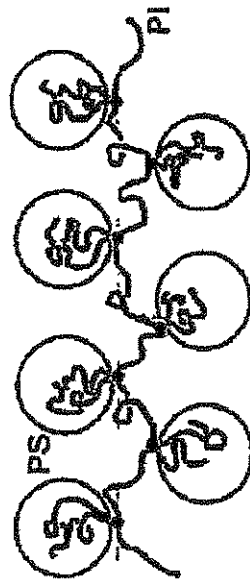


FIG. 7

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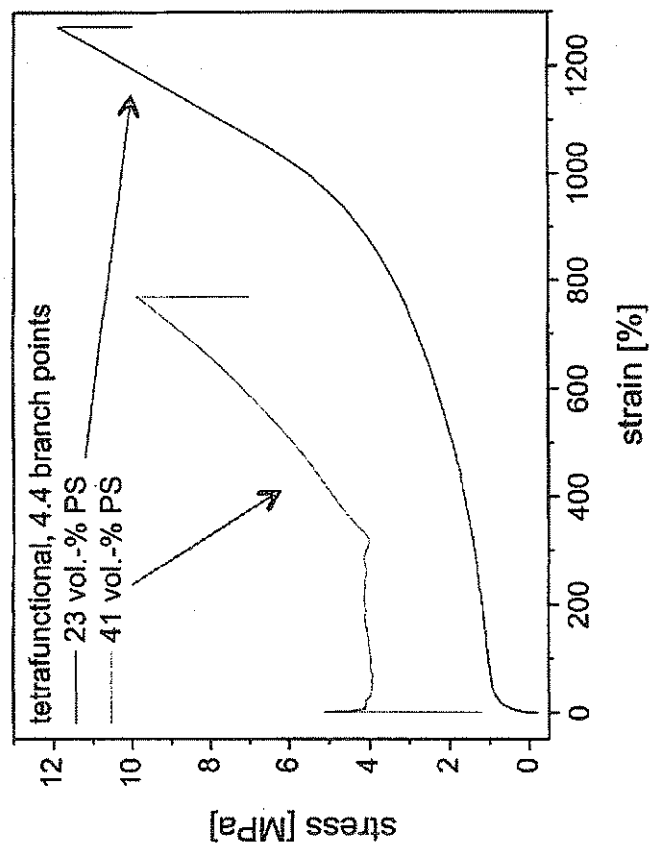


FIG. 8A

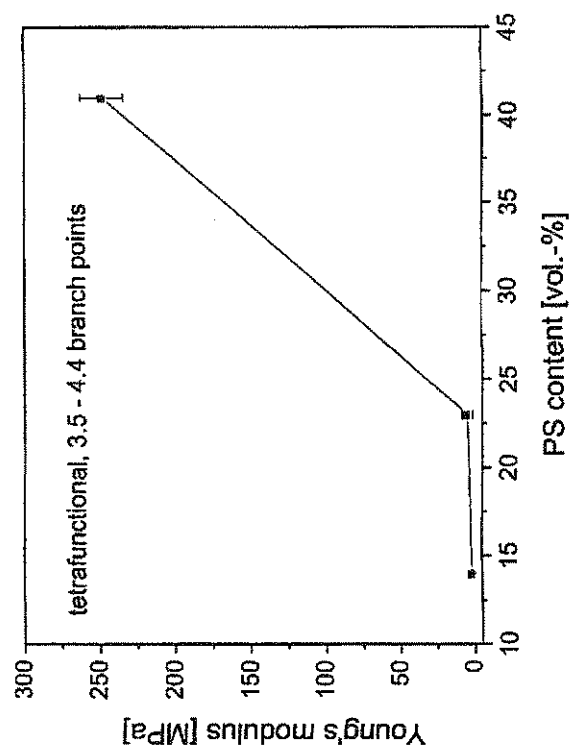


FIG. 8B

FIG. 9A

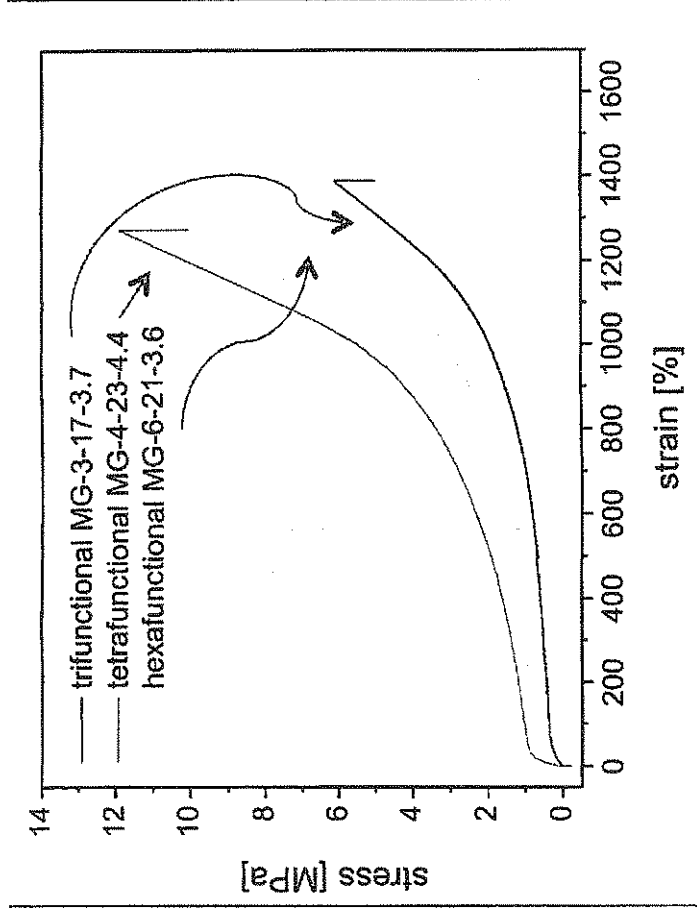
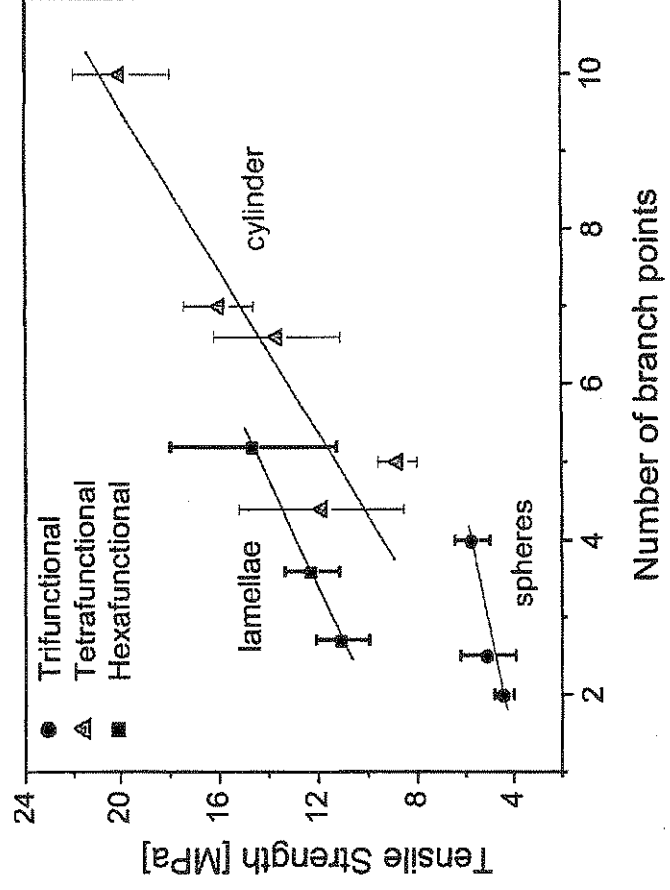


FIG. 9B



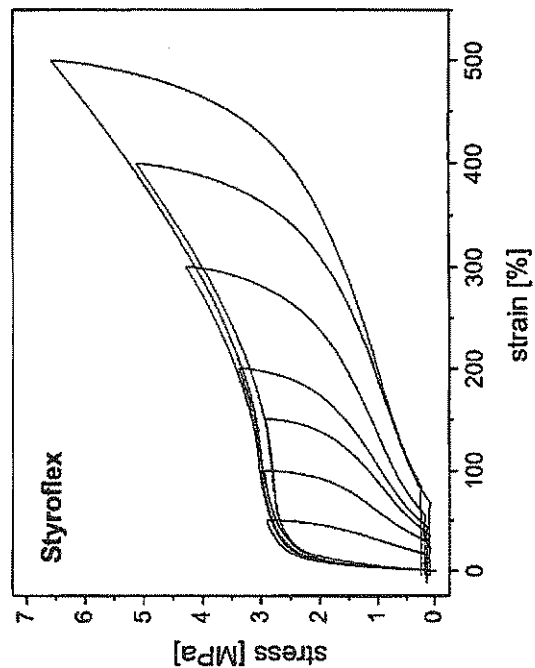
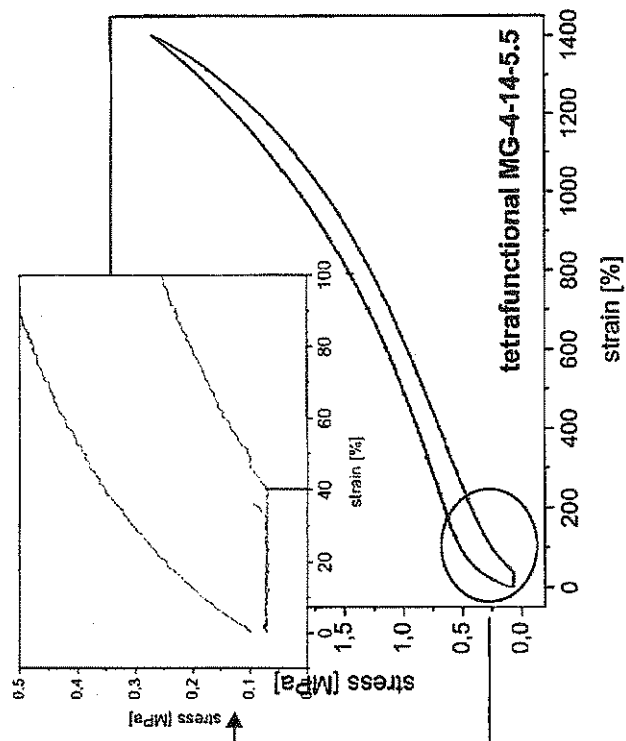
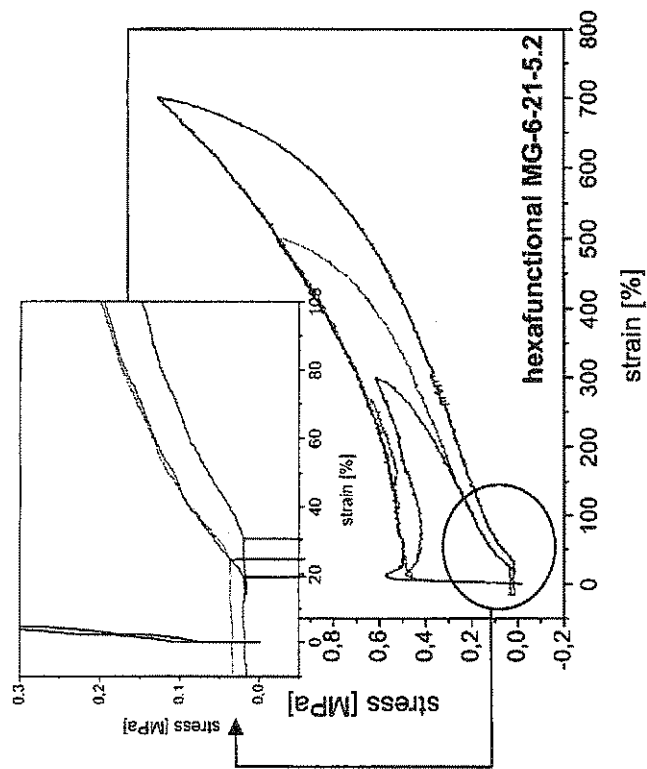


FIG. 10

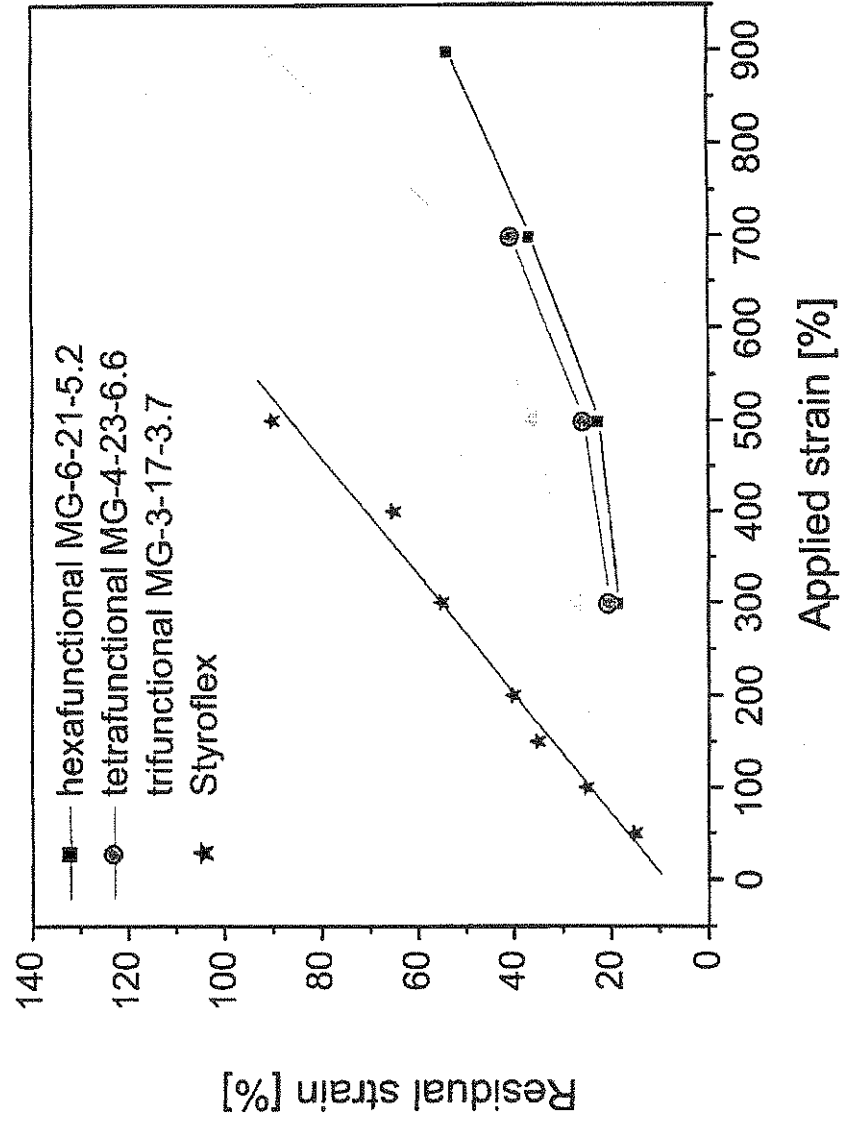
**FIG. 11**

FIG. 12A

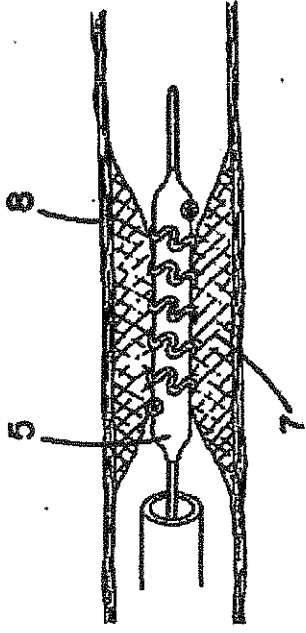


FIG. 12B

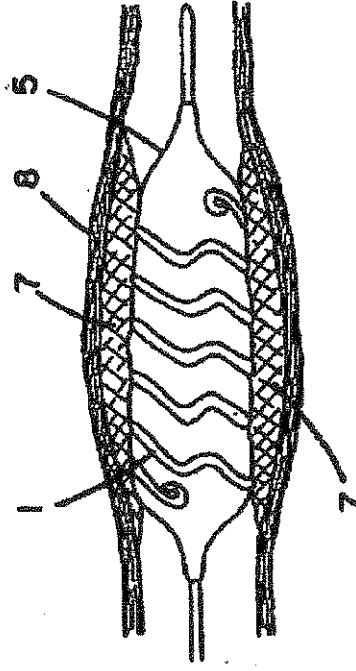
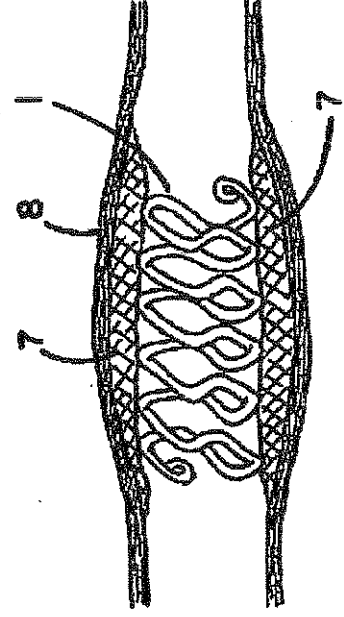


FIG. 12C



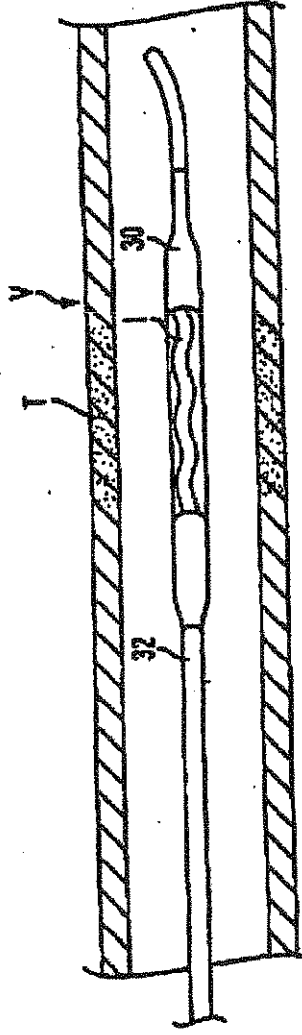


FIG. 13A

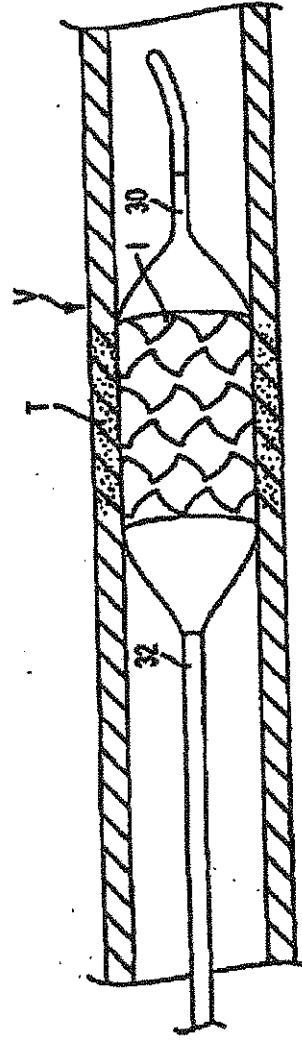


FIG. 13B

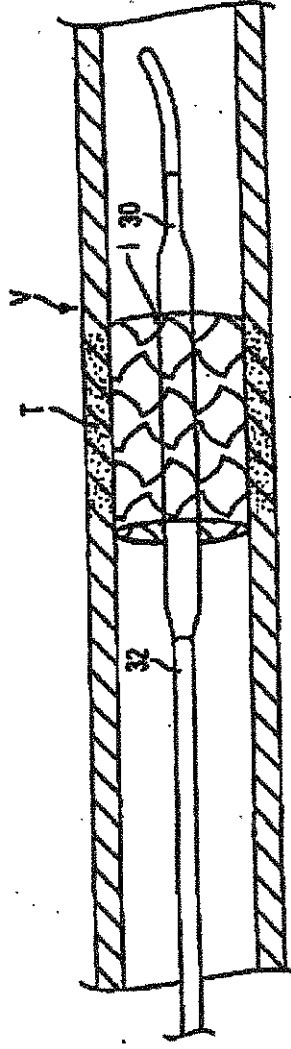


FIG. 13C

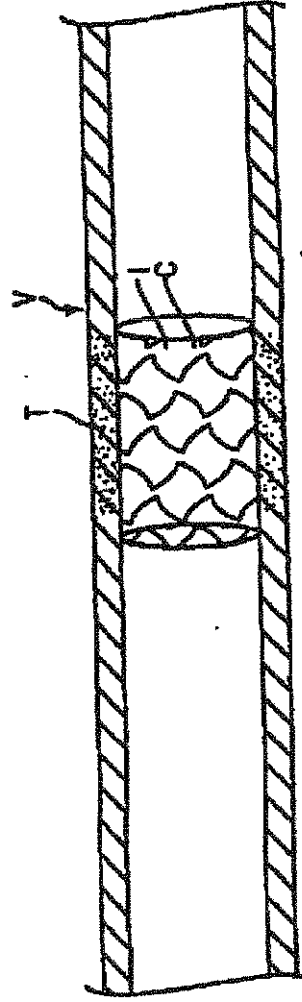


FIG. 13D

Tensile characteristics of random multigraft copolymer

strain at break

	ε_B [%]
MG-4-15-4/5	1783 ± 11
MG-4-15-7/8	1445 ± 32
MG-4-20-6	1344 ± 34.7

tensile strength

	σ_B [N/mm ²]
MG-4-15-4/5	5.82 ± 0.16
MG-4-15-7/8	9.87 ± 0.66
MG-4-20-6	10.6 ± 0.98

elastic modulus

	E [N/mm ²]
MG-4-15-4/5	3 ± 0.29
MG-4-15-7/8	4.21 ± 0.08
MG-4-20-6	6.58 ± 0.78

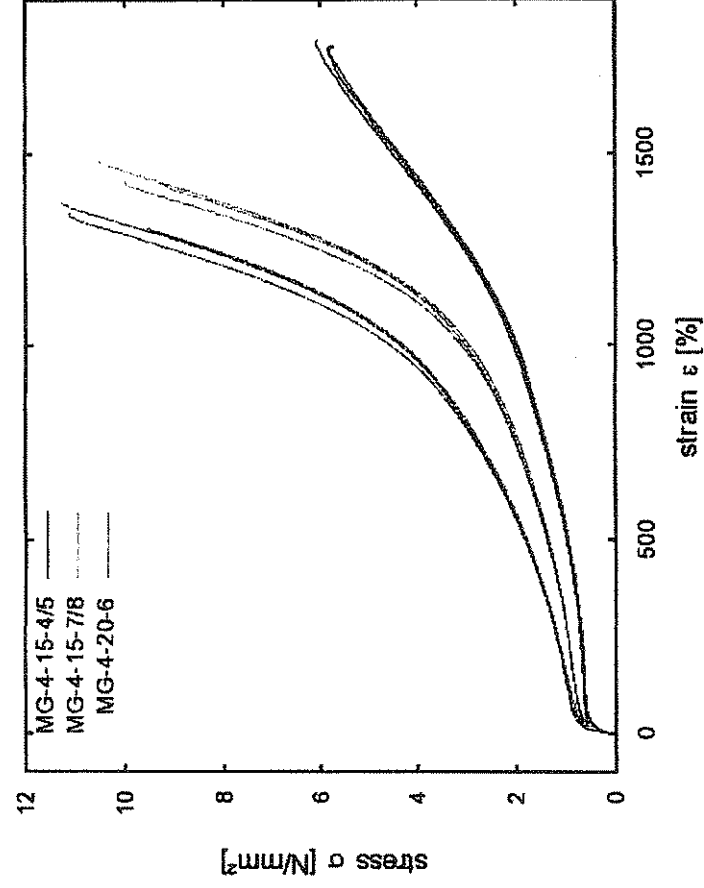


Fig. 14

Hysteresis of random multigraft copolymers

$\epsilon_{\max} = 1000\%$, 1st cycle

residual strain after 1st cycle

	$\epsilon_{\text{res}} [\%]$
MG-4-15-4/5	162 ($= 0.09 \epsilon_B$)
MG-4-15-7/8	110 ($= 0.076 \epsilon_B$)
MG-4-20-6	113 ($= 0.084 \epsilon_B$)

Dissipated hysteresis energy (1st cycle)

	$W_{\text{dis}} [\%]$
MG-4-15-4/5	62.3
MG-4-15-7/8	55.5
MG-4-20-6	62.3

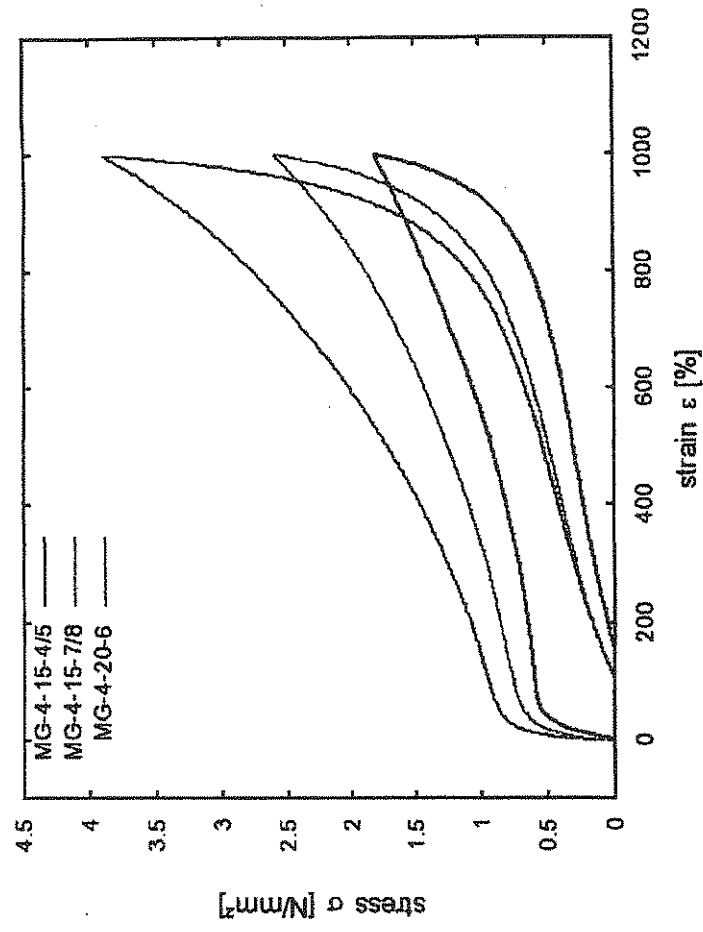


Fig. 15

Hysteresis of random multigraft copolymers

$\epsilon_{\max} = 1000 \%$, 2nd cycle

- residual strain of cycle 1 was subtracted from each curve

residual strain after 2nd cycle

	$\epsilon_{\text{res}} [\%]$
MG-4-15-4/5	9.7
MG-4-15-7/8	5.3
MG-4-20-6	7.1

dissipated hysteresis energy (2nd cycle)

	$W_{\text{dis}} [\%]$
MG-4-15-4/5	12.2
MG-4-15-7/8	10.1
MG-4-20-6	12.7

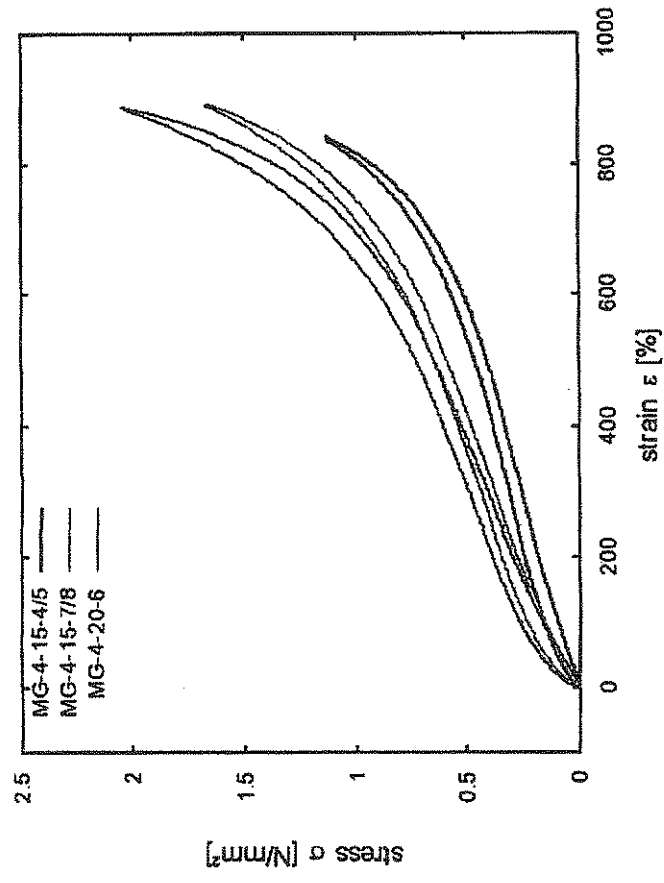


Fig. 16

Hysteresis of random multigraft copolymers,

$\epsilon_{\max} = 0.9 \epsilon_B$, 1st cycle

residual strain after 1st cycle

	ϵ_{res} [%]
MG-4-15-4/5	255 (= 0.143 ϵ_B)
MG-4-15-7/8	139 (= 0.096 ϵ_B)
MG-4-20-6	147 (= 0.109 ϵ_B)

dissipated hysteresis energy (1st cycle)

	W_{dis} [%]
MG-4-15-4/5	73.7
MG-4-15-7/8	59.3
MG-4-20-6	65.2

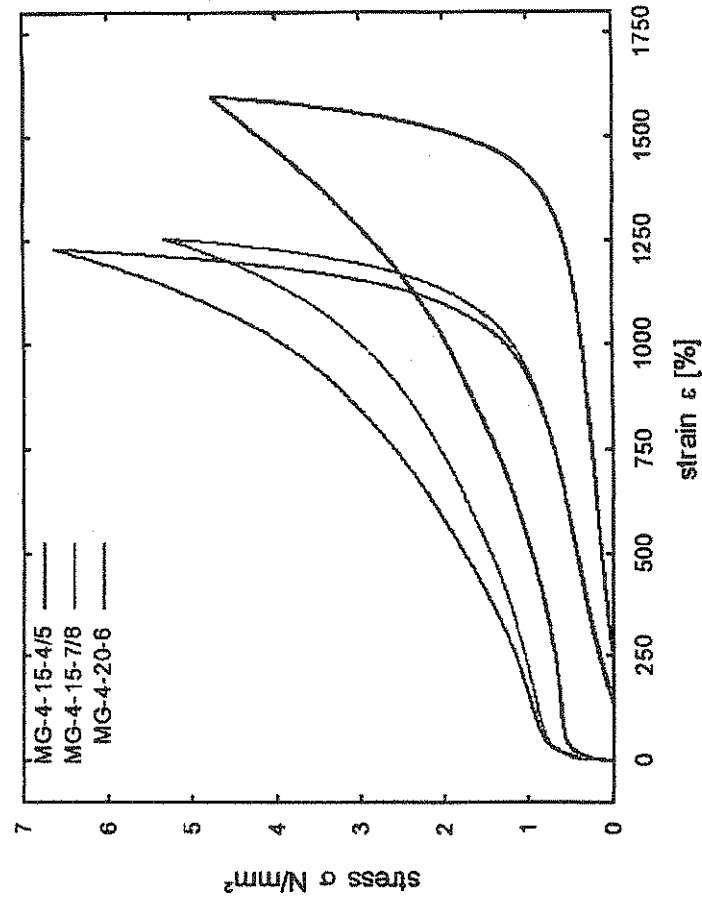


Fig. 17

Hysteresis of random multigraft copolymers

$\epsilon_{\max} = 0.9 \epsilon_B$, 2nd cycle

■ residual strain of cycle 1 was subtracted

residual strain after 2nd cycle

	ϵ_{res} [%]
MG-4-15-4/5	15.9
MG-4-15-7/8	8.6
MG-4-20-6	10.4

dissipated hysteresis energy (2nd cycle)

	W_{dis} [%]
MG-4-15-4/5	13.9
MG-4-15-7/8	11.8
MG-4-20-6	14.1

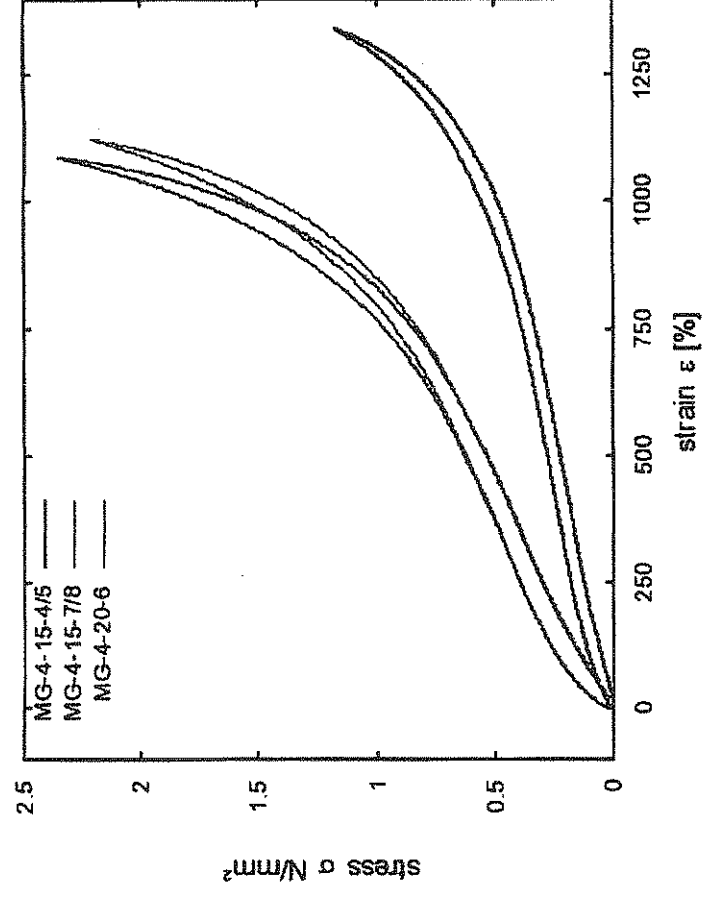


Fig. 18