Supplemental Material
Mechanical properties of lens capsule
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Table S1. ANOVA comparison of stresses at 70 % strain for GAG+ and GAG- data.
SS deontes sum of squares; df, degrees of freedom; MS, mean of squares; F, F-test
statistic and P-value the level of confidence that variation is due to treatment.

Source of Variation	SS	df	MS	F	P-value
Intraspecies (between individuals)	1.242	9.000	0.138	4.583	0.017
Intrapair (between GAG+ and GAG- matched pairs)	0.316	1.000	0.316	10.490	0.010
Error	0.271	9.000	0.030		
Total	1.828	19.000			

Table S2. ANOVA comparison of stresses at 70 % strain for PBS and SR data. SS
deontes sum of squares; df, degrees of freedom; MS, mean of squares; F, F-test
statistic and P-value the level of confidence that variation is due to treatment.

Source of Variation	SS	df	MS	F	P-value
Intraspecies (between individuals)	0.425044	11	0.03864	2.626927	0.062093
Interpair (between PBS and SR matched pairs)	1.16627	1	1.16627	79.28769	2.33E-06
Error	0.161803	11	0.014709		
Total	1.753117	23			

Table S3. ANOVA comparison of thicknesses for GAG+ and GAG- lens capsules.
SS deontes sum of squares; df, degrees of freedom; MS, mean of squares; F, F-test
statistic and P-value the level of confidence that variation is due to treatment.

Source of Variation	S	df	MS	F	P-value
Intraspecies (between individuals)	729.05	9	81.00556	9.462038	0.001287
Interpair (between GAG+ and GAG- matched pairs)	0.45	1	0.45	0.052563	0.823787
Error	77.05	9	8.561111		

Total	806.55	19

Table S4. ANOVA comparison of thicknesses for PBS and SR lens capsules.
SS deontes sum of squares; df, degrees of freedom; MS, mean of squares; F, F-test
statistic and P-value the level of confidence that variation is due to treatment.

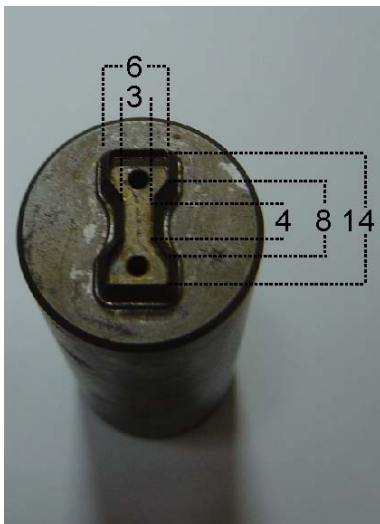| Source of Variation	SS	df	MS	F	P-value
Intraspecies (between individuals)	343.4583	11	31.22348	1.716219	0.192019
Interpair (between PBS and SR matched pairs)	30.375	1	30.375	1.669582	0.2228
Error	200.125	11	18.19318		
Total	573.9583	23			

Figure S1. Stainless steel dumbbell-shaped die used for cutting lens capsules.
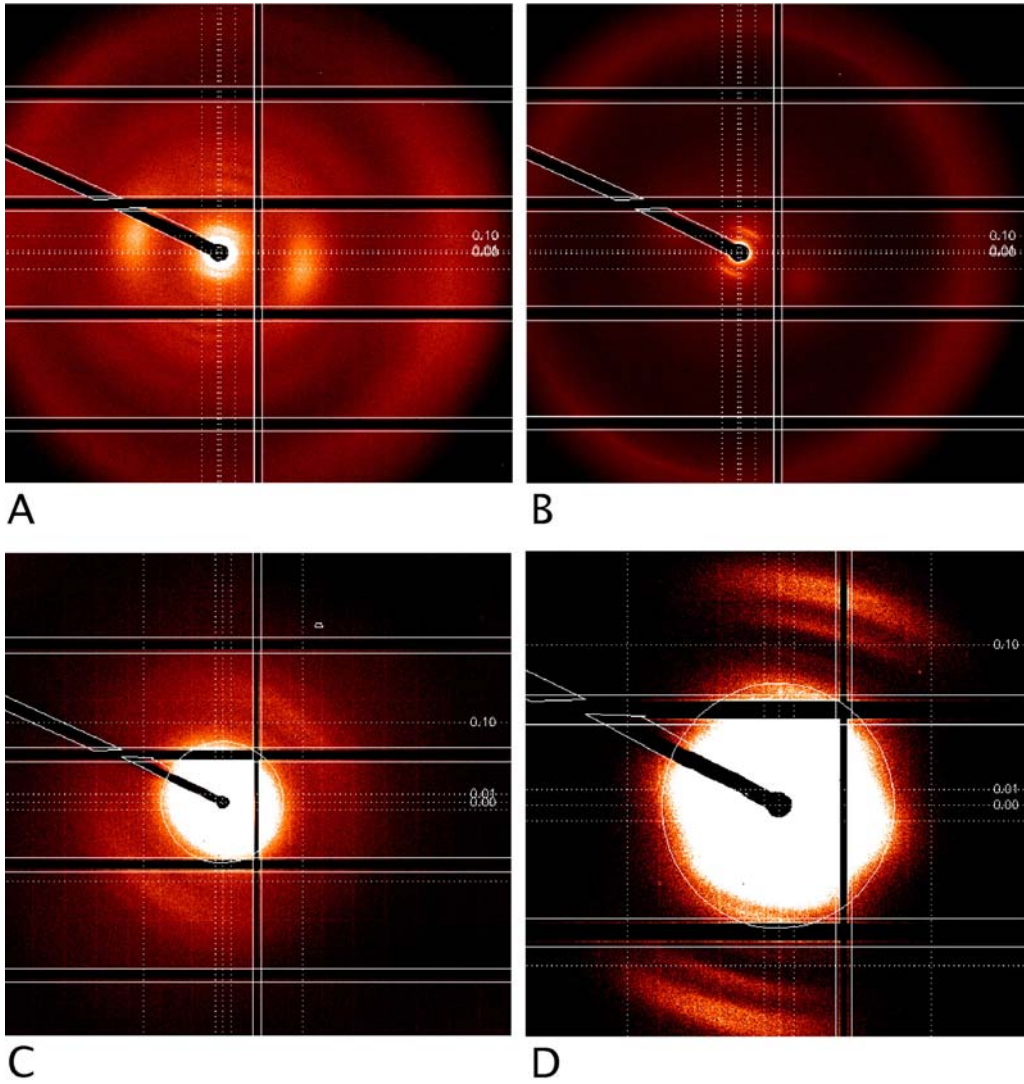
Figure S2. Comparison of packing geometries in control and strongly reduced lens capsules. A. a typical 2D diffraction pattern for PBS lens capsule; B. a typical 2D diffraction pattern for SR lens capsule; C. a typical 2D diffraction pattern for PBS lens capsule at 1336 mm from detector distance; D. a typical 2D diffraction pattern for SR lens capsule at 1336 mm from detector and zoomed in to show detail.