# Crosslinking degree and storage modulus

Increased crosslinking duration resulted in changes in storage modulus values originating from the effect of crosslinking in restricted chain mobility and reduced crystallinity. DSC was adopted to evaluate the variations of crystallinity, and it was confirmed that prolonged crosslinking time led to declined degree of crystallinity.

The Young"s modulus increases as the cross-linking degree increases, as the increase in the network connectivity makes the material harder. The ESO20 system exhibits the highest Young"s modulus at different cross-linking degree except 85%. At 85% cross-linking degree, ESO0 exhibits the highest Young"s modulus of 1645.2 MPa.

Crosslinking with 4Bx resulted in an extension of the elastic regime (i.e., linear elasticity, resilience, and yield stress) of the film with little difference in modulus. In the J51:N2200 bulk heterojunction, one significant ...

Depending on the temperature at crosslinking, the storage moduli for GelMA derived from pigs, cows, and cold-water fish range from 723-7340 Pa, 516-3484 Pa, and 294-464 Pa, respectively. ... Piscine GelMA had the lowest storage moduli for all degrees of substitution, with non-significant differences in storage moduli for high and mid degrees of ...

Consistent with the storage modulus trend, PEG/PAA-IPN hydrogels demonstrated superior mechanical properties compared to PEG-SN hydrogels. ... Moreover, the moduli of PEG/PAA-IPN5 surpassed those of PEG/PAA-IPN1 under the same pH conditions, indicating that the degree of crosslinking in network strands [29,40], a dominant factor affecting ...

Tan d is the ratio of loss modulus to storage modulus. Under the same condition, the lower the Tan d value is, the less internal loss of the material. Moreover, the peak width at half-height of Tan d for three cured natural flavonoid-based epoxy resins are much broader than that of DGEBA/MAH, indicating the lower segmental mobility in the ...

The final lamination quality and degree of crosslinking strongly depend on the peroxide concentration, additive formulation, lamination ... Upon onset of the crosslinking reaction, the storage modulus increases and crosses the loss modulus curve. This crossover point (M? = M?) is called gelation and was used to evaluate the gelation time (t ...

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