## ERRATUM

Oppermann, W. and G. Rehage:

Elasticity and structure of crosslinked polymers. Part I: Networks with tetrafunctional crosslinks, Colloid & Polymer Sci. 259, 1177 (1981). After line 6

## Summary

The subject oft this work is to determine the dynamic and static elastic properties of polymer networks and to compare the experimental results with theoretical predictions.

It is found that poly(dimethylsiloxane) (PDMS) networks on the one hand and polyisoprene (IR) and natural rubber (NR) networks on the other hand show different behaviour in both dynamic and static experiments. With PDMS no frequency dependence of the storage modulus G' is observed in the range  $10^{-3} - 1$  Hz, contrary to IR or NR. The reason for this is the absence of entanglements in PDMS.

Comparing the measured static moduli with those calculated by rubber elasticity theory, we found that the front factor  $A \cdot \langle r^2 \rangle / \langle r^2 \rangle_0$  is near to 0.5 in case of PDMS, but near to 1 for IR/NR networks. Both parts of the front factor may possibly cause this difference. As the PDMS chains possess a relatively high mobility we can assume that fluctuations of the junction points are less restricted than in IR/NR. This causes a structure factor A smaller than 1 in agreement with Flory's recent theory.

According to James and Guth, the network chains tend to contract during the crosslinking process. This will be more likely in the networks of entanglement-free, highly mobile PDMS chains than in IR or NR rubbers. Hence the memory term  $\langle r^2 \rangle / \langle r^2 \rangle_0$  is smaller for PDMS than for IR/NR.

Both alternative explanations are based on the different mobility of the chains considered. It may be assumed that the front factor is influenced by both effects and not only by the fluctuations of crosslinks. of the summary, one line was skipped. The summary should read as follows:

Berichtigung zu den Veröffentlichungen "NMR study of rubber crosslinking in model networks" in Colloid & Polymer Sci. 259, 990 (1981) von K. Bergmann und K. Gerberding und "A rapid method for the NMR-measurement of two-phase polymers" in Colloid & Polymer Sci. 258, 24 (1980) von K. Bergmann und H. Schmiedberger.

Durch ein bedauerliches Versehen wurden die beiden obengenannten Arbeiten sinnentstellend verändert. Auf Seite 991 der ersten Arbeit, rechte Spalte, Zeile 10, muß es heißen: "Again  $T_{22}$  increases . . . ", und 10 Zeilen weiter: ". . . the relaxation time decreases . . . ". In der zweiten Arbeit lautet der erste Satz des zweiten Abschnitts: "Figure 1 shows the FID signal of a two-phase material". Wir bitten das Versehen zu entschuldigen.