Electronic Supplementary Material (ESI) for Polymer Chemistry.

Self-healing and reprocessable bromo butylrubber based on combined ionic cluster formation and hydrogen bonding

Sebastian Stein,[1,2] Anton Mordvinkin,[3] Brigitte Voit,[1,2] Gert Heinrich,[1] Hartmut Komber,[1] Kay Saalwächter,[3] Frank Böhme[1]*

[1] Leibniz-Institut für Polymerforschung Dresden e.V., Hohe Straße 6, Dresden, Germany
[2] Organische Chemie der Polymere, Technische Universität Dresden, D-01062 Dresden, Germany
[3] Martin-Luther-Universität Halle-Wittenberg, Institut für Physik – NMR, Betty-Heimann-Str. 7, 06120 Halle (Saale), Germany

Boehme@ipfdd.de

Content

NMR Spectra

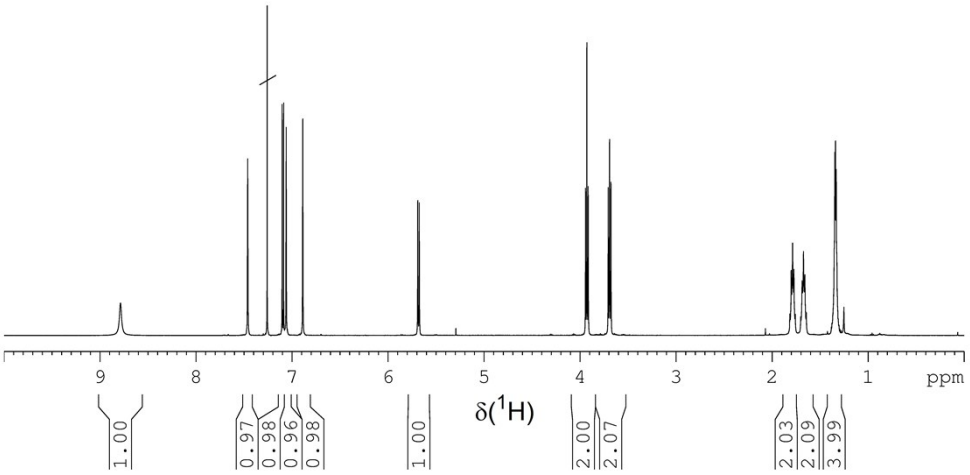

Figure S1 ^{1}H NMR spectrum of **2a** in $CDCl_3$

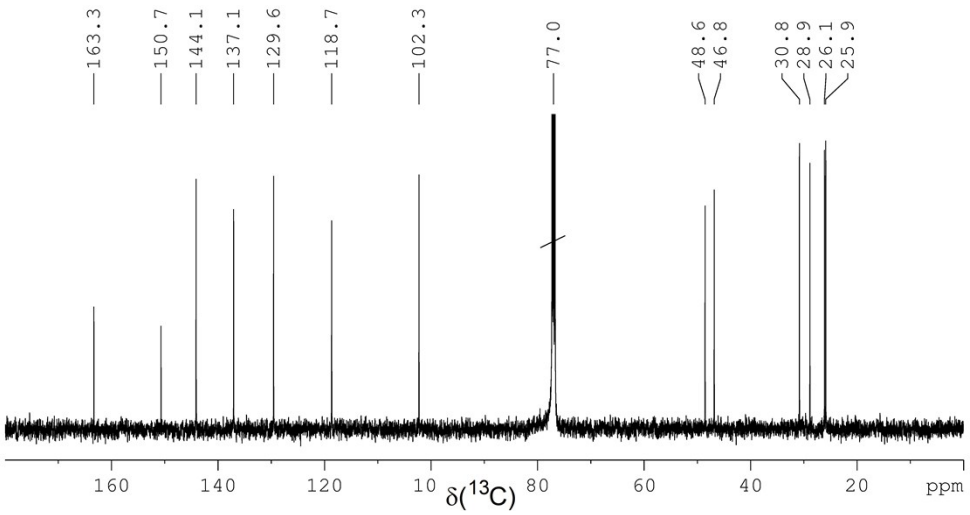

Figure S2 ^{13}C NMR spectrum of **2a** in $CDCl_3$

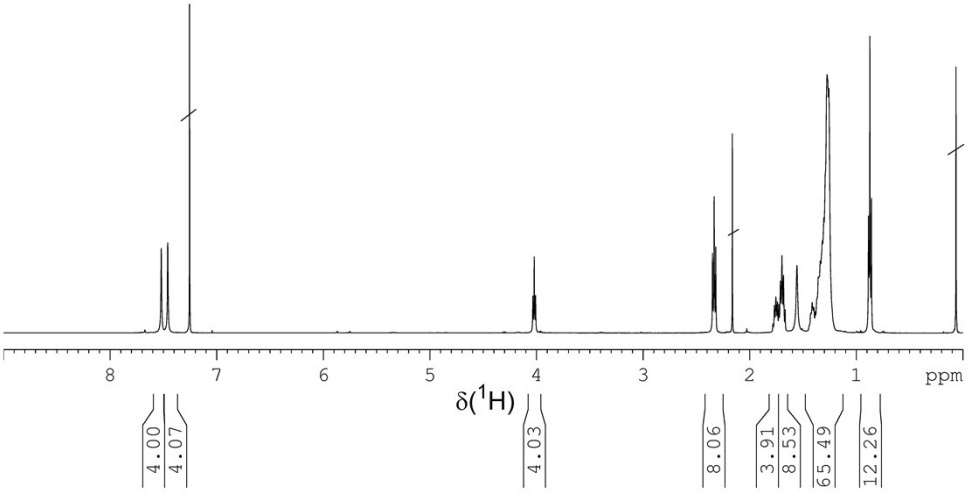

Figure S3 ^{1}H NMR spectrum of **5** in $CDCl_3$

Self-healing tests

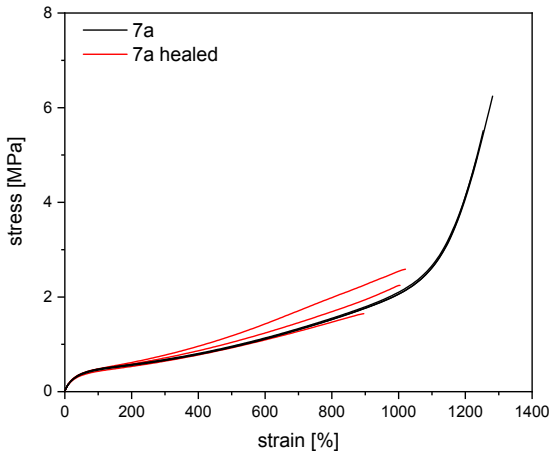

Figure S4 Stress strain curve of **7a**, black: virgin sample, red: healed sample

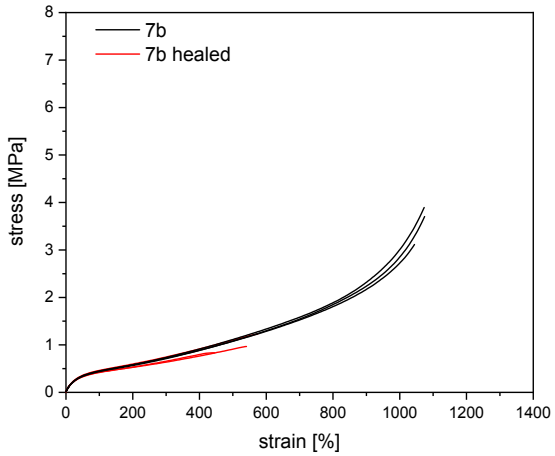

Figure S5 Stress strain curve of **7b**, black: virgin sample, red: healed sample

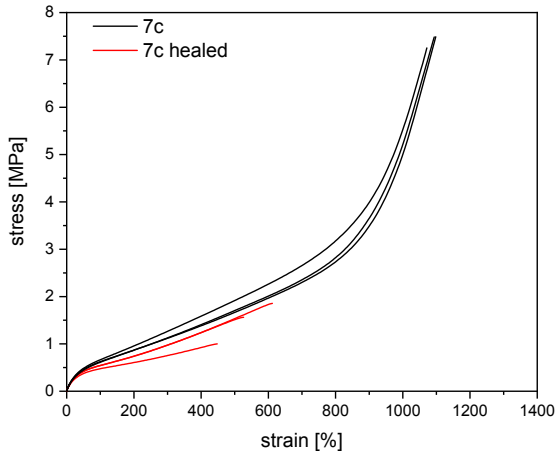

Figure S6 Stress strain curve of **7c**, black: virgin sample, red: healed sample