## Taking advantage of $\beta$ -hydroxy amine enhanced reactivity and functionality for the synthesis of dual covalent adaptable networks

Dimitri Berne,<sup>a</sup> Guilhem Coste,<sup>a</sup> Roberto Morales,<sup>a</sup> Marine Boursier,<sup>a</sup> Julien Pinaud,<sup>a</sup> Vincent Ladmiral\*<sup>a</sup>, Sylvain Caillol\*<sup>a</sup>

<sup>&</sup>lt;sup>a.</sup> ICGM, Univ Montpellier, CNRS, ENSCM, Montpellier, France

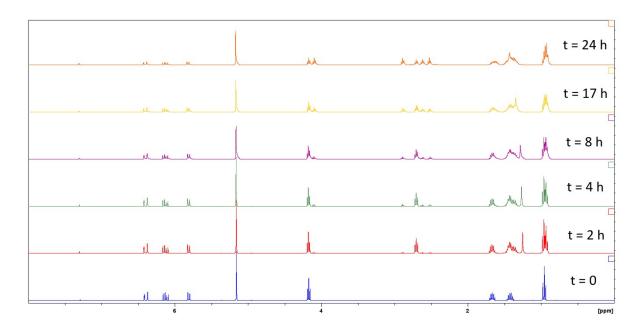


Figure S1. Stacked view of  $^1$ H NMR (CDCl $_3$ , 400 MHz) spectra of the kinetic study of butylacrylate and n-butylamine (entry 4, 1:1 butylacrylate:n-butylamine)

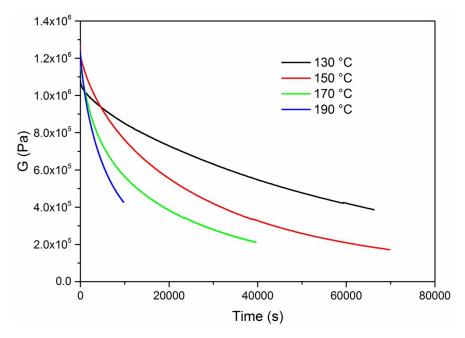


Figure S2. Non-normalized stress-relaxation curves at temperatures ranging from 130 to 190  $^{\circ}$ C for **BHAN** 

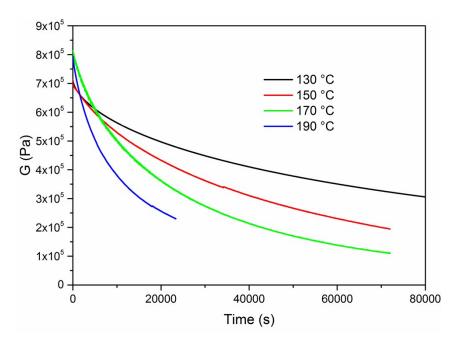


Figure S3. Non-normalized stress-relaxation curves at temperatures ranging from 130 to 190  $^{\circ}$ C for **AN** 

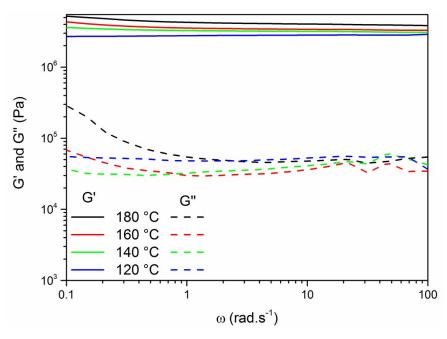


Figure S4. Measurement of G' (full line) and G'' (dotted line) in frequency sweep from 120 °C to 180 °C of  ${\bf AN}$ 

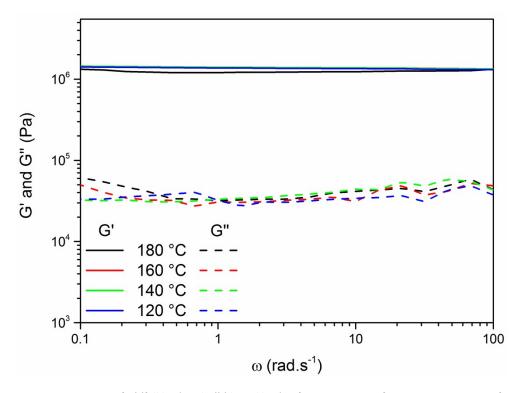


Figure S5. Measurement of G' (full line) and G'' (dotted line) in frequency sweep from 120 °C to 180 °C of **BHAN** 

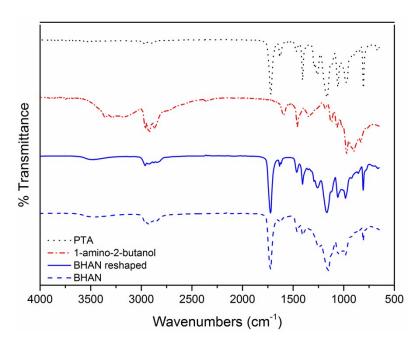


Figure S6. FTIR of **BHAN** (dashed blue line), **BHAN** reshaped (full blue line), 1-amino-2-butanol (red dash-dotted line) and PTA (black dotted line)

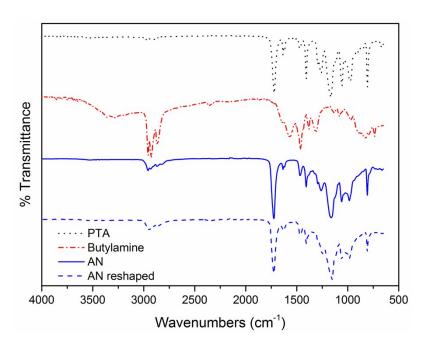


Figure S7. FTIR of **AN** (dashed blue line), **AN** reshaped (full blue line), butylamine (red dash-dotted line) and PTA (black dotted line)

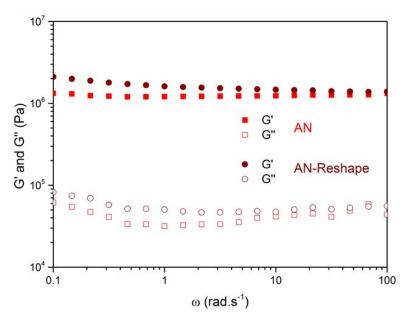


Figure S8. Measurement of G' (full symbol) and G'' (open symbol) in frequency sweep at 180 °C of **AN** (red square curve) and **AN** reshape (brown circle curve)