

## Supporting Information (SI)

### “Thermoresponsive Catechol based Polyelectrolyte Complex Coatings for Controlled Release of Bortezomib”

Berthold Reis <sup>1,2</sup>, David Vehlow <sup>1,2</sup>, Tarik Rust <sup>3</sup>, Dirk Kuckling <sup>3</sup> and Martin Müller <sup>1,2</sup>

<sup>1</sup>Leibniz-Institut für Polymerforschung Dresden e.V., Department Polyelectrolytes and Dispersions, Hohe Straße 6, 01069 Dresden

<sup>2</sup> Technische Universität Dresden, Department of Chemistry and Food Chemistry, 01062 Dresden, Germany

<sup>3</sup> Universität Paderborn, Department of Chemistry, Warburger Str. 100, 33106 Paderborn

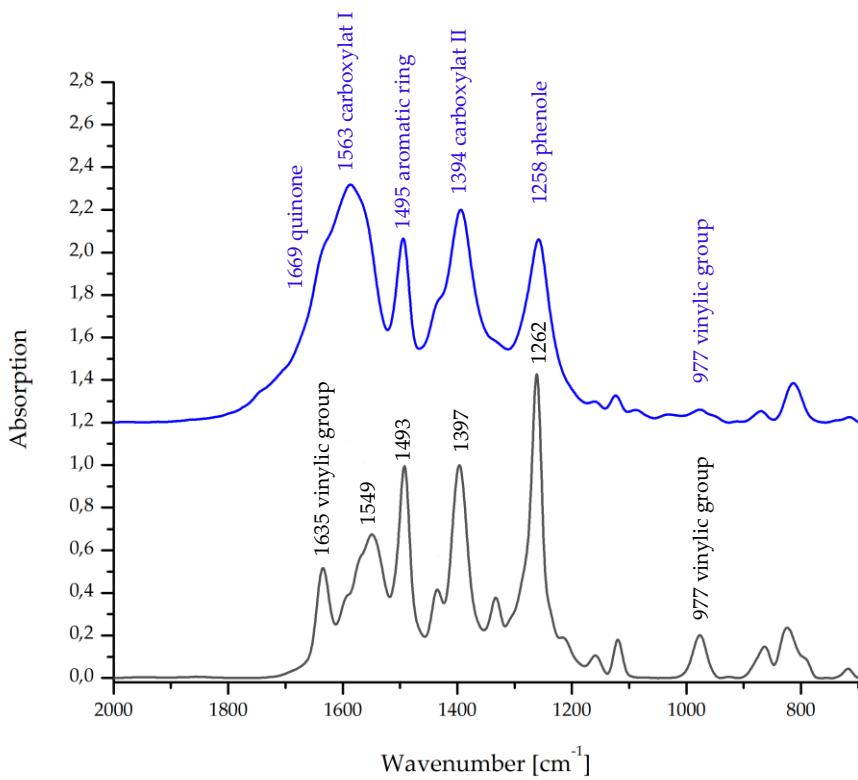


Figure S1. FTIR-spectra of the monomer CA (black) and the PCA (blue). Films were deposited onto Germanium substrates from 0,01 M solutions at pH = 9,0 and dried.

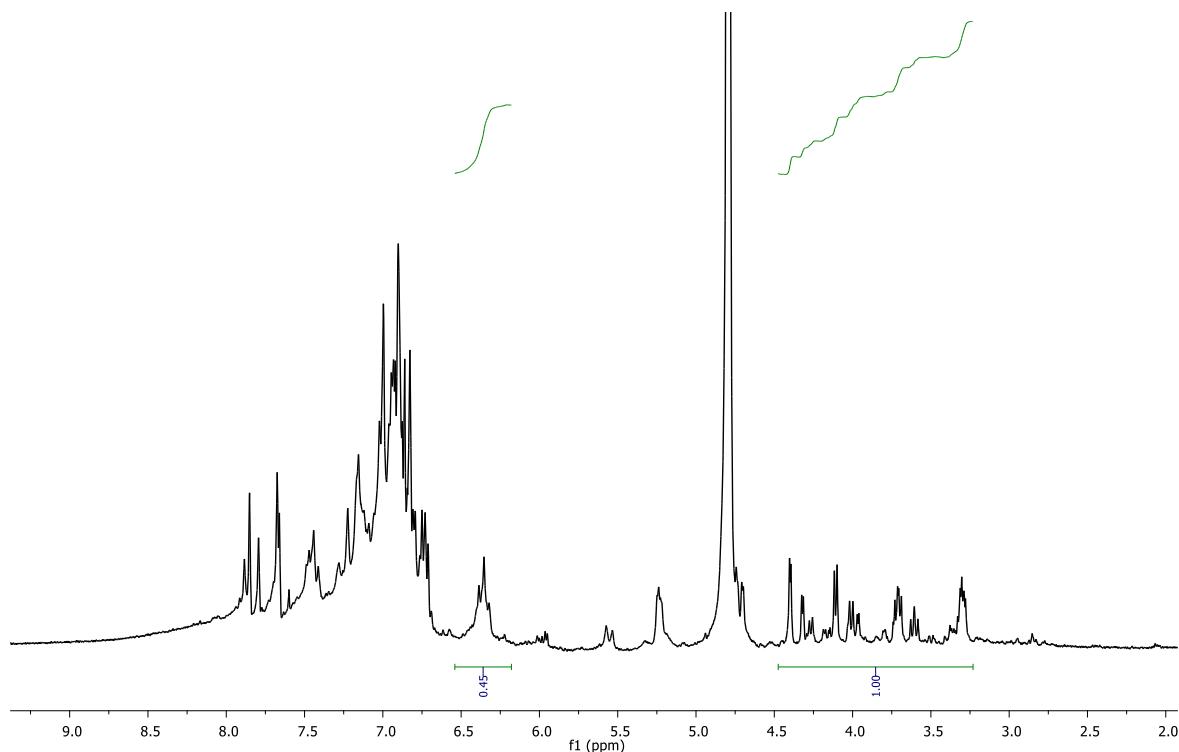


Figure S2. <sup>1</sup>H NMR (500 MHz,  $\text{D}_2\text{O}$ ) spectra of PCA.

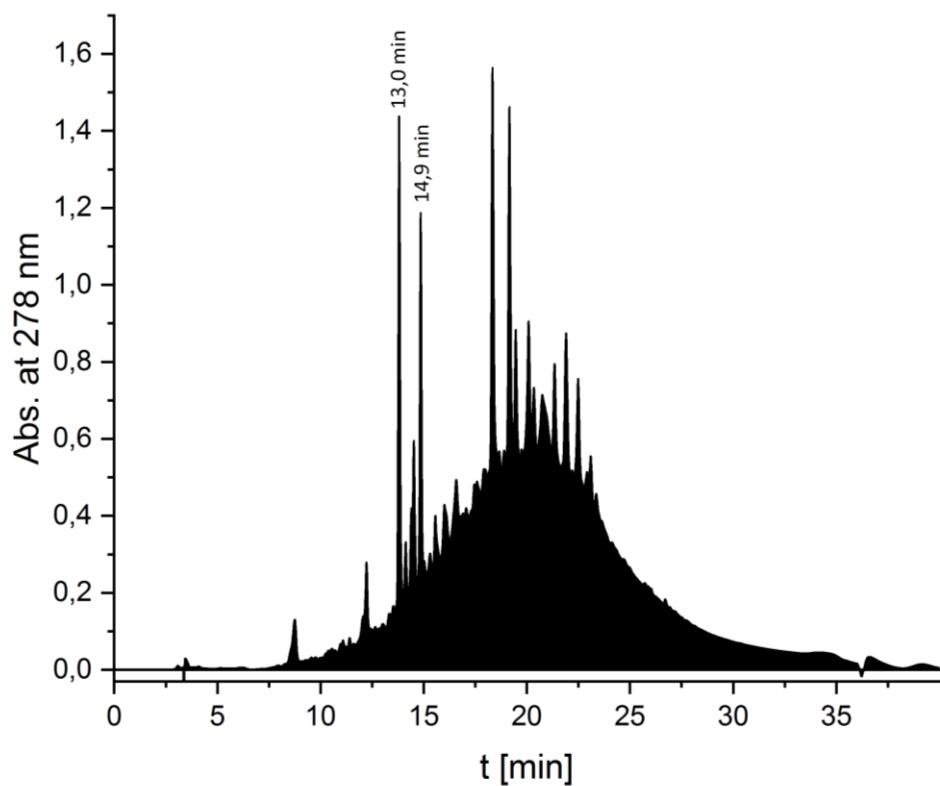


Figure S3. Chromatogram of reverse phase liquid chromatography of PCA, preferentially formed products at 13,0 min; 14,9 min; 18,4 min; 19,2 min and 22,0 min.

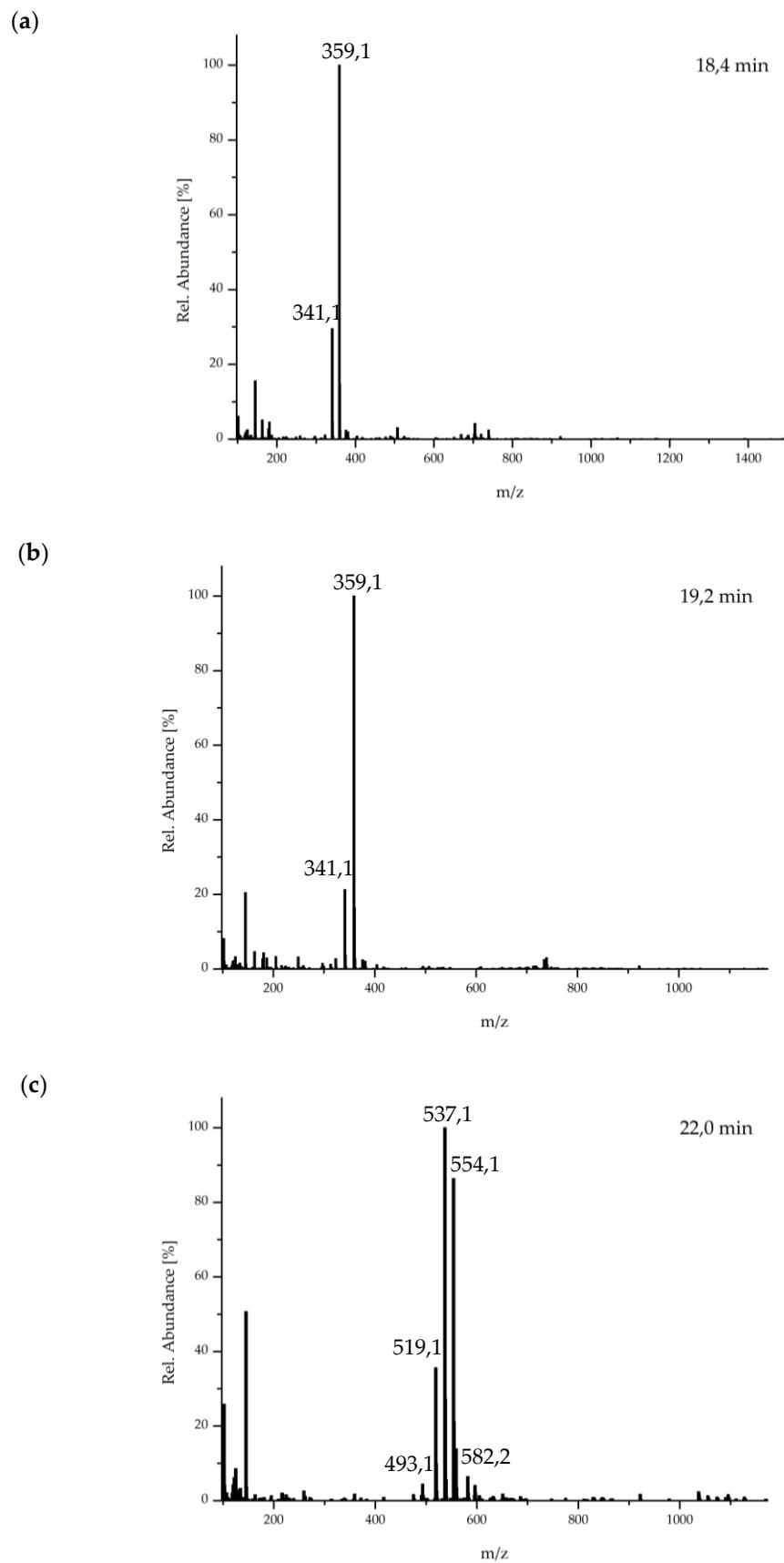


Figure S4. ESI mass spectra of the elution peaks (see Fig. SI3) at (a) 18,4; (b) 19,2 and (c) 22,0 min.

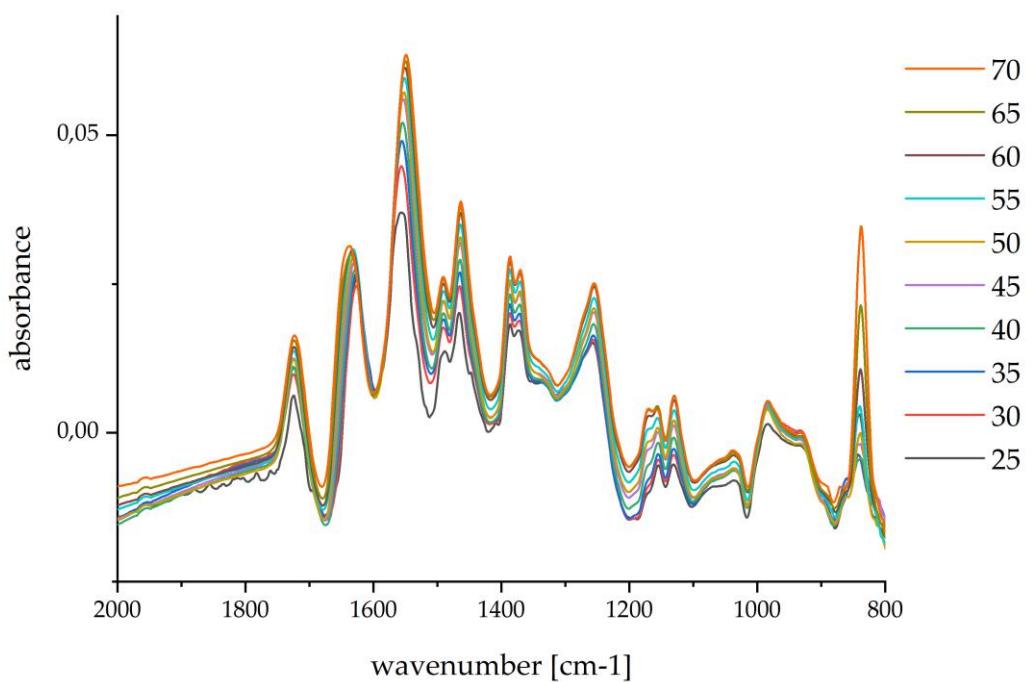


Figure S5. ATR-FTIR spectra of a P(NIPAM-*co*-DMAEMA)/PCA complex film at different temperatures. An increase is visible, especially of the amid II band ( $1560\text{ cm}^{-1}$ ), from  $25\text{ }^{\circ}\text{C}$  (black) to  $70\text{ }^{\circ}\text{C}$  (orange).

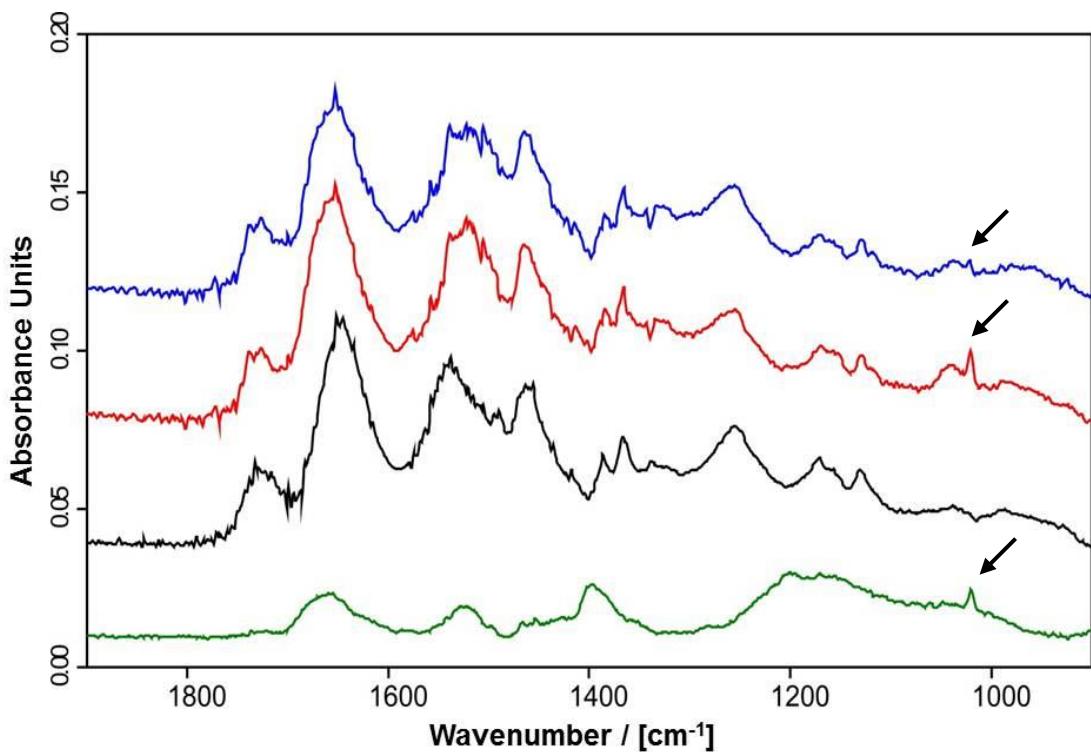


Figure S6. ATR-FTIR spectra of BZM film (100  $\mu\text{l}$  from 0.25mM), P(NIPAM-*co*-DMAEMA)/PCA complex films before BZM loading (black), after BZM loading (red) and

rinsing in pure water (blue). Note the diagnostic band (arrow) of BZM (boron moiety) at around  $1020\text{ cm}^{-1}$ .