

## Supporting Information

### **Molar Mass and Composition Effects on the Thermal Stability of Functional P(S-*r*-MMA) Random Copolymers for Nanolithographic Applications**

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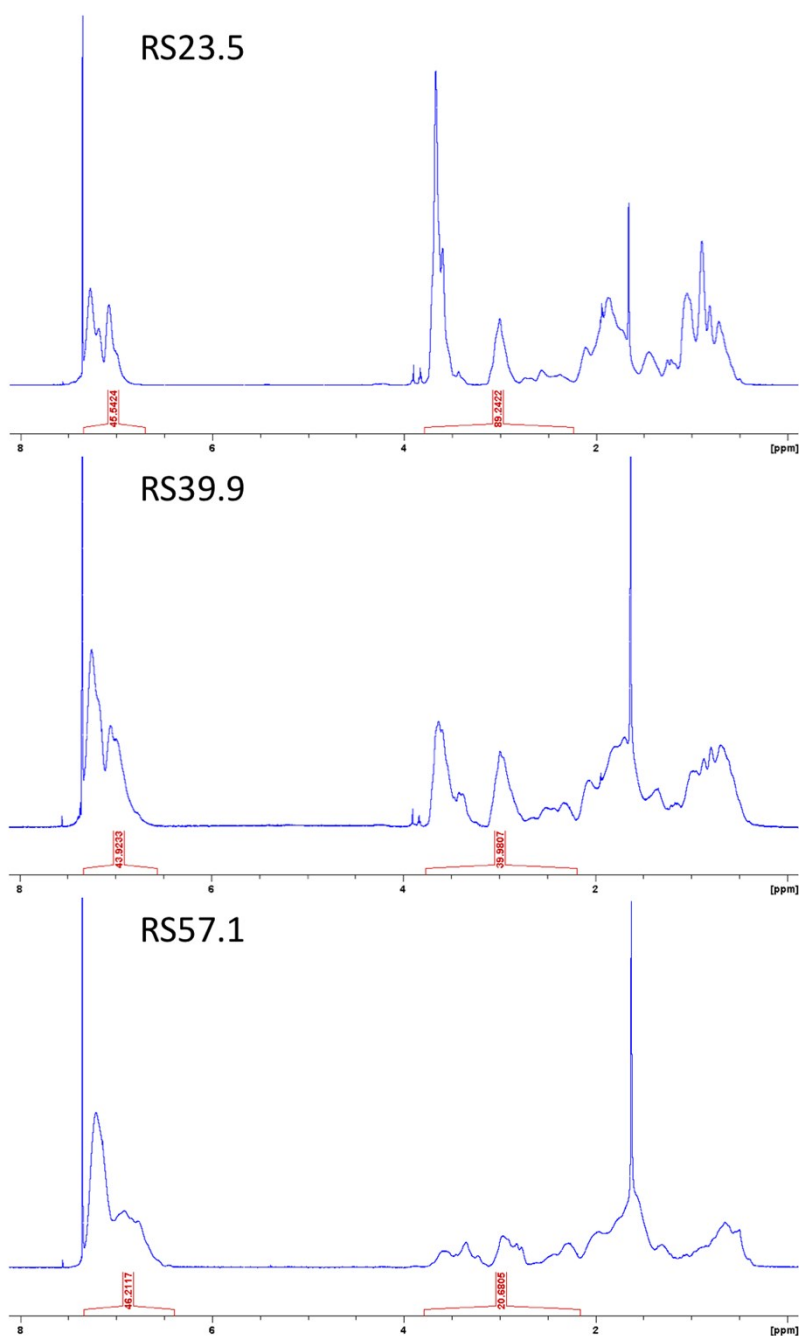


Figure S1.  $^1\text{H}$  NMR spectra of samples R23.5, RS39.9 and RS57.1 in  $\text{CDCl}_3$ .

The copolymer composition was evaluated by  $^1\text{H}$  NMR in  $\text{CDCl}_3$ . As a typical example Figure S1 reports the  $^1\text{H}$  NMR spectra of samples R23.5 (Mn 13100, PDI 1.23), RS39.9 (Mn 14400, PDI 1.33) and RS57.1 (Mn 13200, PDI 1.36). The molar fraction of styrene was obtained from the peak intensity of the aromatic protons (6.5-7.3 ppm, 5H, integral value = S2) for styrene units and of the -OCH<sub>3</sub> protons (2.5-3.8 ppm, 3H, integral value = S1) for methyl methacrylate units using the following equation:

$$S(\%) = \frac{S2/5}{S2/5 + S1/3}$$

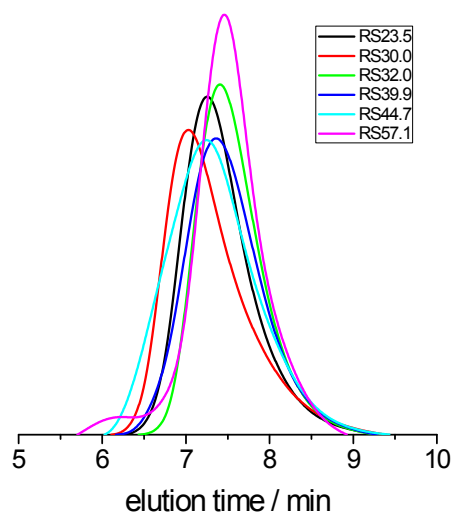


Figure S2. SEC curves of random copolymers RSn prepared by ARGET-ATRP.