Supporting Information

Monte Carlo Simulations of Multigraft Homopolymers in Good Solvent

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We here present graphical material on the end-to-end distance corresponding, and qualitatively equal, to those of the radius of gyration presented in Figures 3, 4, 6, 7, and 8 of the main article. Furthermore, selected data of fits to eq 13 of the radius of gyration and end-to-end distance are also provided.

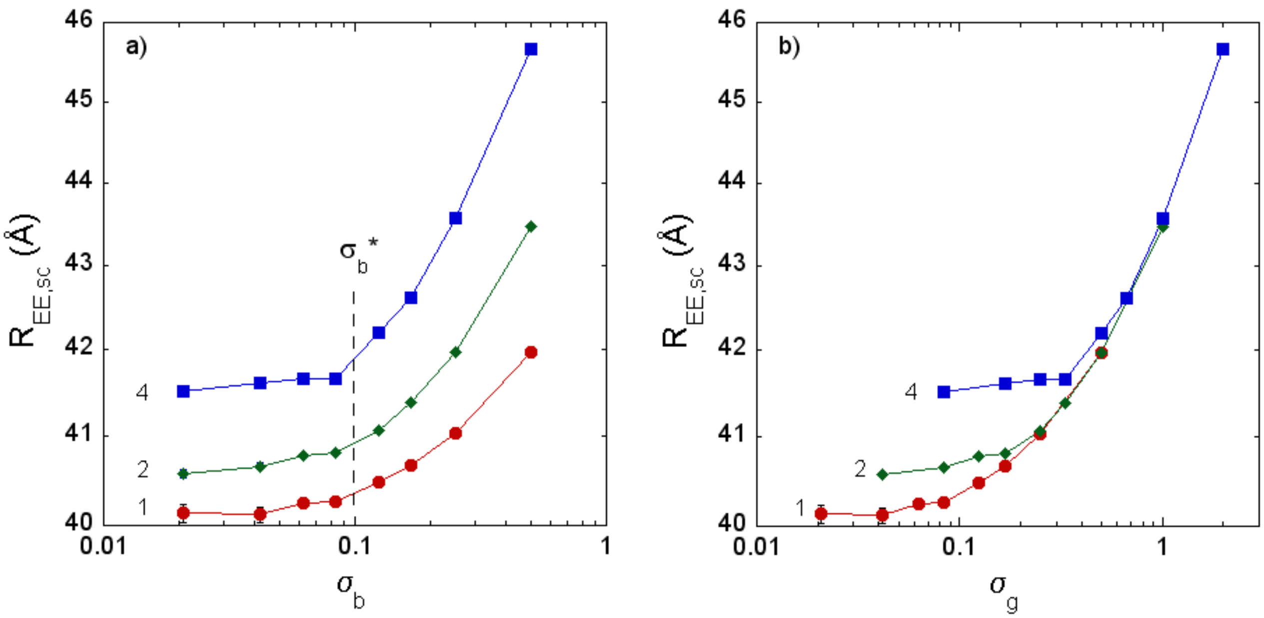

Figure S1. (a) End-to-end distance of side chains as $R_{EE,sc}$ as a function of (a) the branching density σ_b and (b) the grafting density σ_g in a log-log representation for side-chain length N_{sc} = 24 and branching multiplicity m = 1 (●), m = 2 (♦), and m = 4 (■) (*cf.* Figure 3).

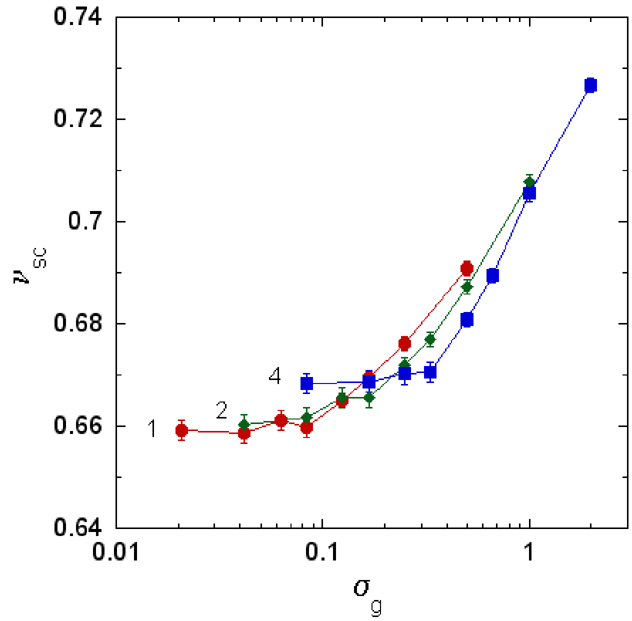

Figure S2. Exponent ν_{sc} as fitted from $R_{EE,sc} \sim N_{sc}^{\nu_{sc}}$ as a function of the grafting density σ_g in a log-lin representation for branching multiplicity m = 1 (●), m = 2 (♦), and m = 4 (■) (*cf.* Figure 4).

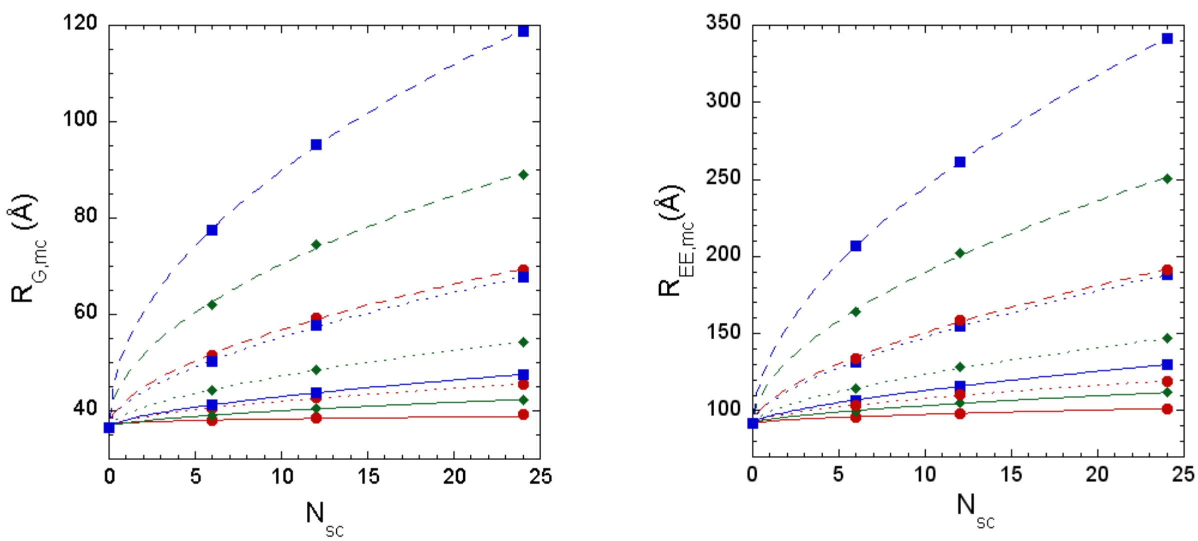

Figure S3. Root-mean-squared (a) radius of gyration $R_{G,mc}$ and (b) end-to-end distance of the main chain $R_{EE,mc}$ as a function of side-chain length N_{sc} in a lin-log representation for branching multiplicity m = 1 (●), m = 2 (♦), and m = 4 (■) at branching density σ_b = 0.041 (solid curves), σ_b = 0.125 (dotted curves), and σ_b = 0.5 (dashed curves) and the best fits to eq 13 (curves).

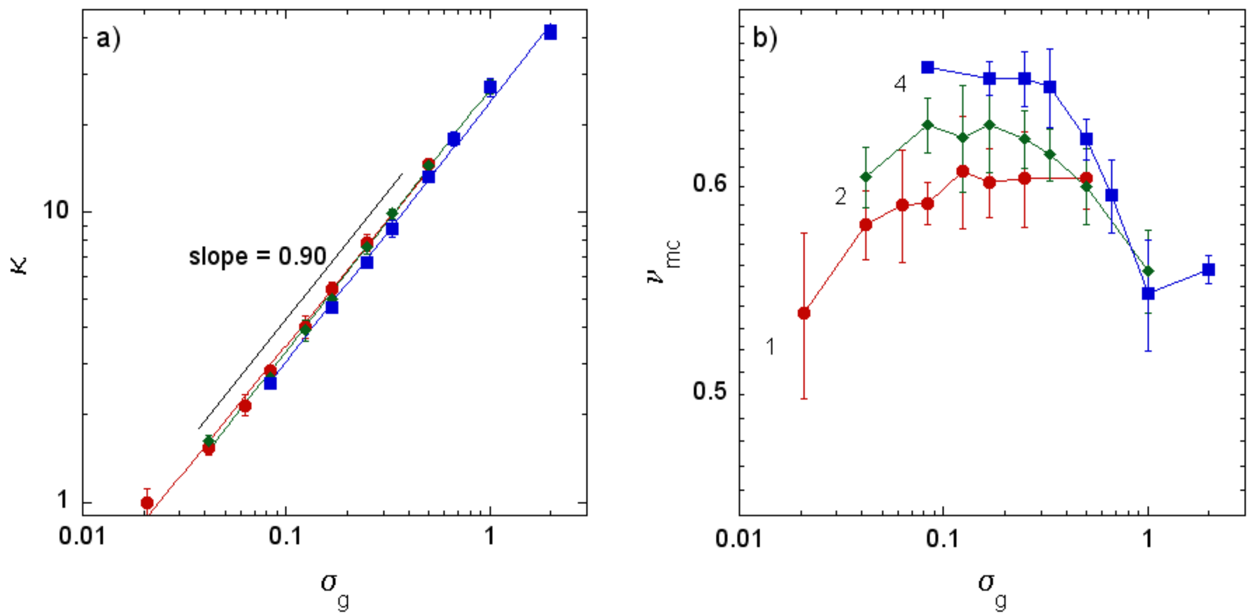

Figure S4. (a) Pre-exponential factor κ and (b) the exponential factor ν_{mc} as a function of the grafting density σ_g in a log-log representation for branching multiplicity m = 1 (●), m = 2 (♦), and m = 4 (■) (*cf.* Figure 6).

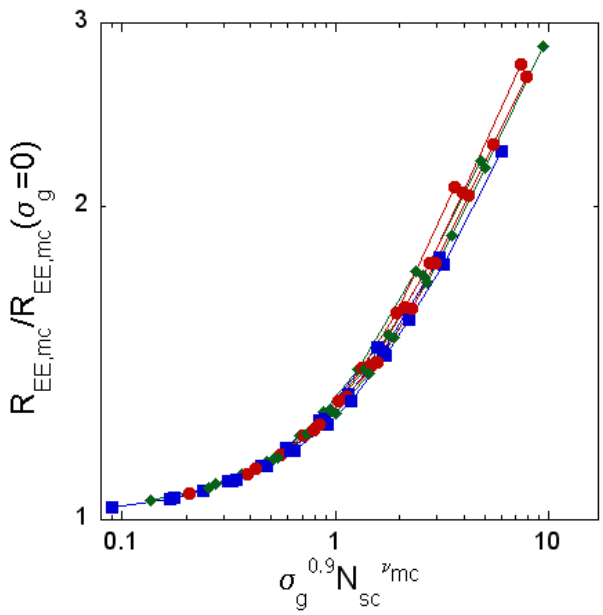

Figure S5. Normalized rms end-to-end distance of the main chain in a log-log representation as a function of $\sigma_g^{0.9} N_{sc}^{\nu_{mc}}$ for side-chain length (■) N_{sc} = 6, (♦) N_{sc} = 12, and (●) N_{sc} = 24 and (m, ν_{mc}) = (1, 0.60), (2, 0.63), and (4, 0.65) (*cf.* Figure 7).

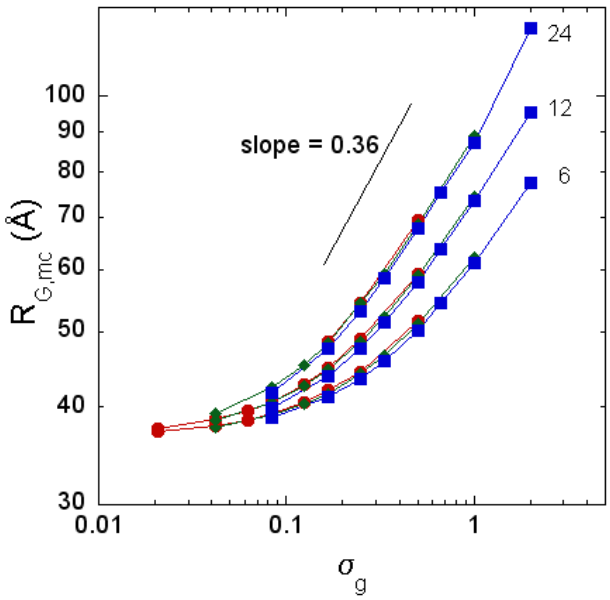

Figure S6. Radius of gyration of the main chain $R_{G,mc}$ as function of the grafting density σ_g in a log-log representation for branching multiplicity m = 1 (●), m = 2 (♦), and m = 4 (■) at indicated side-chain length N_{sc} (*cf.* Figure 8).