# Supporting information to the manuscript, Solvation Energy of Ions in Polymers: Effects of Chain Length and Connectivity on Saturated Dipoles near Ions

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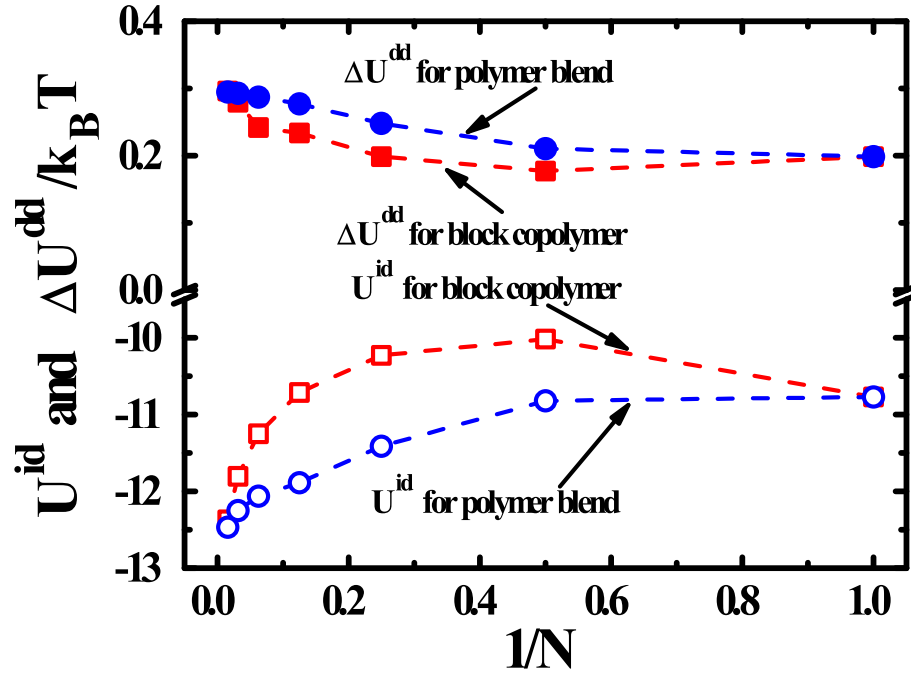
Figure S1: Dependence of the intermolecular interactions for the polymer blends and block copolymers on the chain length $N$. The total ion-dipole interaction $U^{id}$ and the difference in the total dipole-dipole interaction between the pure and ion-containing liquids $\Delta U^{dd}$. The monomeric units of polymers A and B have the dipole moments with $\mu_A = 0.3$ D and $\mu_B = 0.5$ D. Colored symbols correspond to $U^{id}$ for the polymer blends (blue empty circles) and the block copolymers (red empty squares), and $\Delta U^{dd}$ for the polymer blends (blue filled circles) and block copolymers (red filled squares).
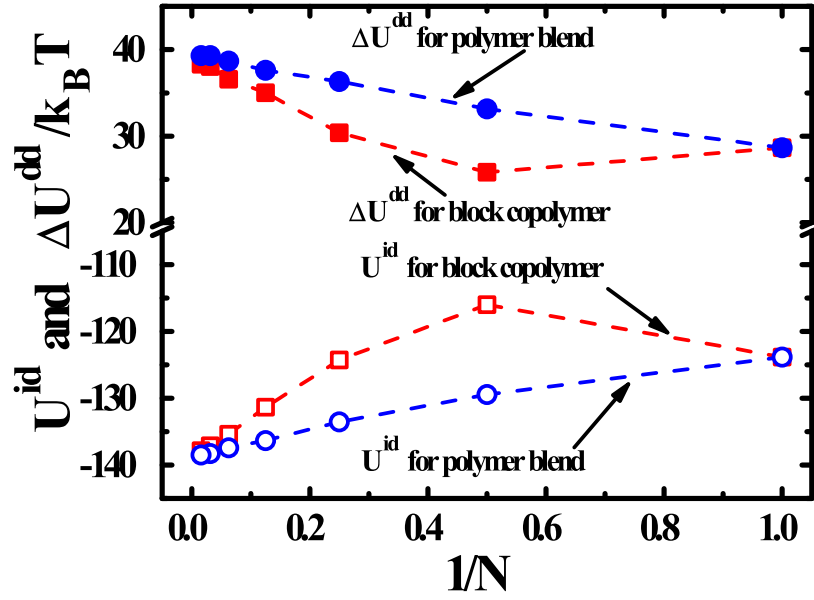
Figure S2: Dependence of the intermolecular interactions for the polymer blends and block copolymers on the chain length $N$. The total ion-dipole interaction $U^{id}$ and the difference in the total dipole-dipole interaction between the pure and ion-containing liquids $\Delta U^{dd}$. The monomeric units of polymers A and B have the dipole moments with $\mu_A = 1$ D and $\mu_B = 2$ D. Colored symbols correspond to $U^{id}$ for the polymer blends (blue empty circles) and the block copolymers (red empty squares), and $\Delta U^{dd}$ for the polymer blends (blue filled circles) and block copolymers (red filled squares).
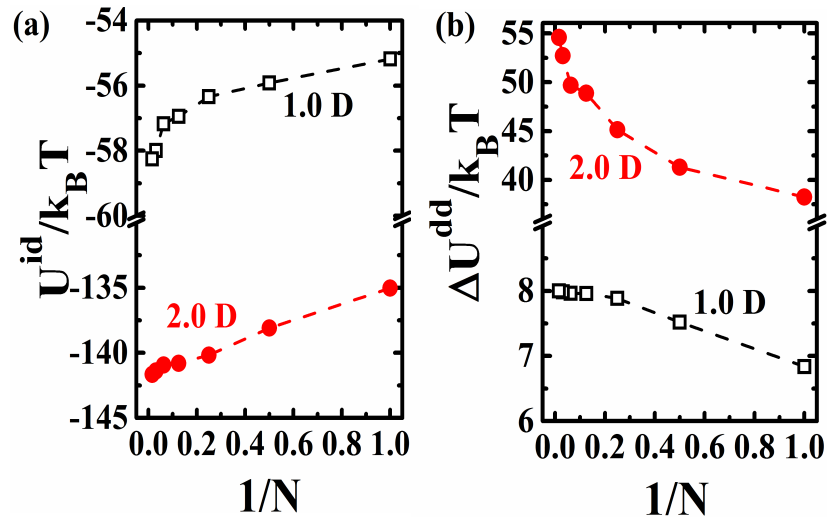


Figure S3: Dependence of the intermolecular interactions for the single-component polymers on the chain length $N$. (a) The total ion-dipole interaction $U^{id}$ and (b) the difference in the total dipole-dipole interaction between the pure and ion-containing liquids $\Delta U^{dd}$. The dipole moments are $\mu = 1$ D (black empty squares) and $\mu = 2$ D (red filled circles).