Supplementary Information for
“Accurate Determination of Ion Polarizabilities in Aqueous Solutions”

Minglun Li,†‡ Bilin Zhuang,¶ Yuyuan Lu,*† Zhen-Gang Wang,*¶ and Lijia An†

†State Key Laboratory of Polymer Physics and Chemistry, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun 130022, People’s Republic of China
‡University of Chinese Academy of Sciences, Beijing 100049, People’s Republic of China
¶Division of Chemistry and Chemical Engineering, California Institute of Technology, Pasadena, CA 91125, United States

E-mail: yylu@ciac.ac.cn; zgw@caltech.edu
Phone: +86-0431-85262138; +1-626-395-4647. Fax: +86-0431-85262126; +1-626-568-8743
Figure S1: Polarizability $\alpha_{25}^{DE}$ vs. concentration $c_{salt}$ (mol/L) data for (a) KF, (b) NaCl (c) NaNO$_3$, (d) CaCl$_2$, (e) Li$_2$SO$_4$ and (f) MgSO$_4$. This figure is a comparison of the traditional extrapolation method using our data (in red) and Heydweiller’s (in blue).$^1$ The numbers refer to the extrapolated values from the direction extrapolation (DE) method. There is no data for (d) CaCl$_2$ and (f) MgSO$_4$ in Heydweiller’s data.
Figure S2: Volume ratio $V_{ss}/V_s$ vs. salt mole fraction $x_{salt}$ for (a) KF, (b) NaCl (c) NaNO$_3$, (d) CaCl$_2$, (e) Li$_2$SO$_4$ and (f) MgSO$_4$ at 25°C. The parameters $\gamma'$ and $\eta$ are also indicated.

References