Figure S1. Salinity scans at 25, 50 and 83 °C for 2 %wt [C₄mim][AOT] (left) and its parent compound Na-AOT (right), WOR~1, n-octane, NaCl brine.
Figure S2. Blend scan at 25 °C for 2 %wt [C_{12}mim]Br / [C_{4}mim]AOT WPR~1, n-octane, 5 %wt NaCl brine.

Figure S3. Blend scans at 25, 50 and 83 °C for 2 %wt [C_{12}mim]Br / [C_{4}mim]AOT, WOR~1, n-octane, 5 %wt NaCl brine.
Figure S4. Blend scans at 25, 50 and 83 °C for 2 %wt [C_{12}mim]Br/[C_{4}mim]AOT, WOR~1, n-octane, seawater.
Figure S5. Solubilization parameters (Vw/Vs, Vo/Vs) from blend scans at 25, 50 and 83 °C for 2 %wt [C12mim]Br/[C4mim]AOT, WOR~1, n-octane, seawater.
Figure S6. Blend scans at 25, 50 and 83 °C for 2 wt% IOS$_{15-18}$/[C$_4$mim]AOT (left) and IOS$_{15-18}$/Na-AOT (right), WOR~1, n-octane, 5 %wt NaCl brine.

Figure S7. Blend scans at 25°C for 2 %wt IOS$_{15-18}$/[C$_4$mim]AOT (left) and IOS$_{15-18}$/Na-AOT (right), WOR~1, n-octane, seawater.
Figure S8. Blend scans at 25, 50 and 83 °C for 2 %wt IOS_{15-18} /[\text{C}_4\text{mim}]\text{AOT}, \text{WOR}≈1, \text{n-octane, seawater.}
Figure S9. Blend scans at 25, 50, 83 and 100 °C for 2 %wt IOS_{15-18} / [P_{44434}Cl], WOR~1, n-octane, seawater.
Figure S10. Blend scans at 25, 50 and 83 °C for 2 %wt IOS$_{15-18}$/ [C$_{12}$mim]Br (left) and IOS$_{15-18}$/ C$_{12}$TAB (right), WOR~1, n-octane, seawater.