Supporting Information

Broadband Dielectric Spectroscopy of Micelles and Microemulsions Formed in a Hydrophilic Ionic Liquid: Relaxation Mechanism and Interior Parameters

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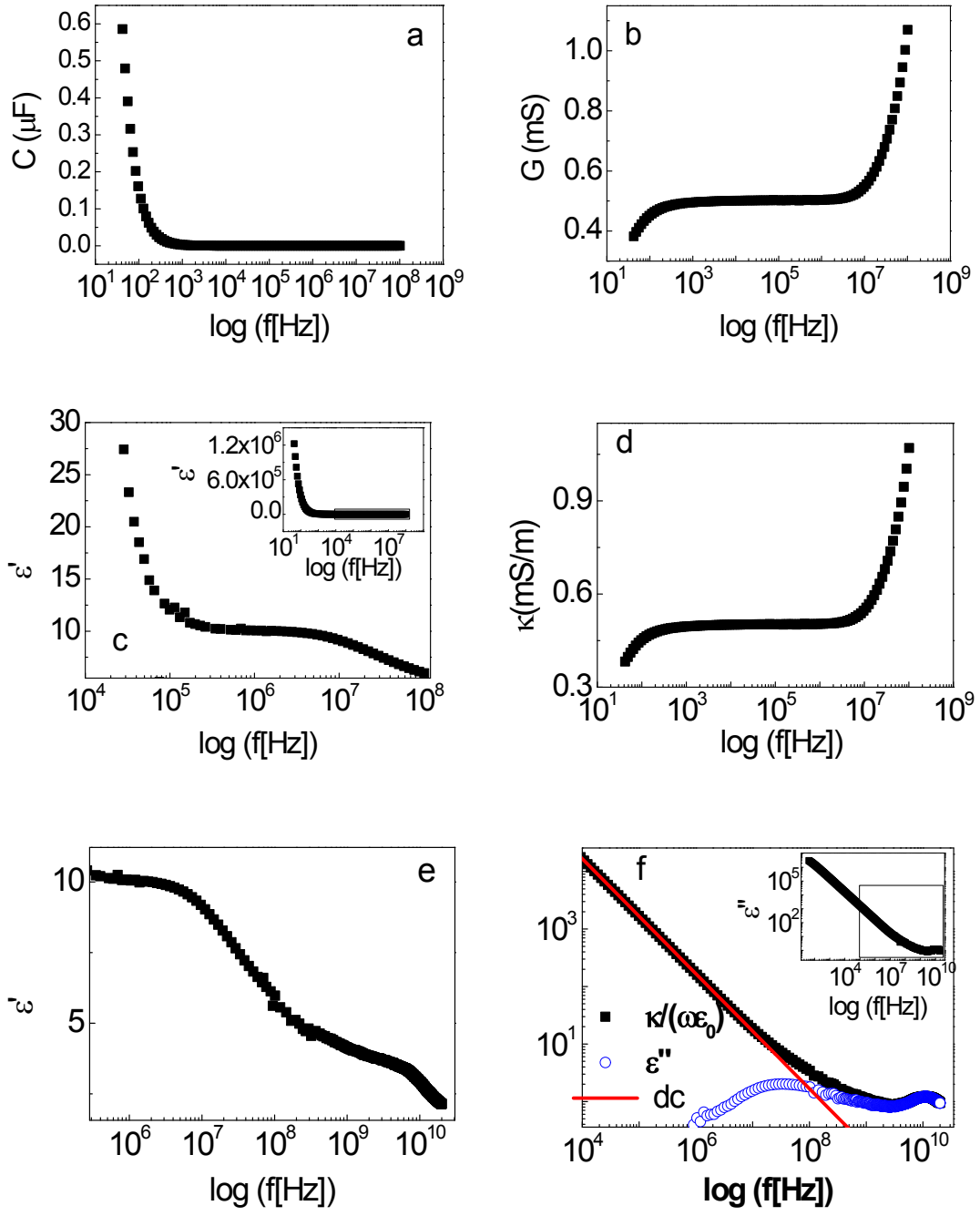
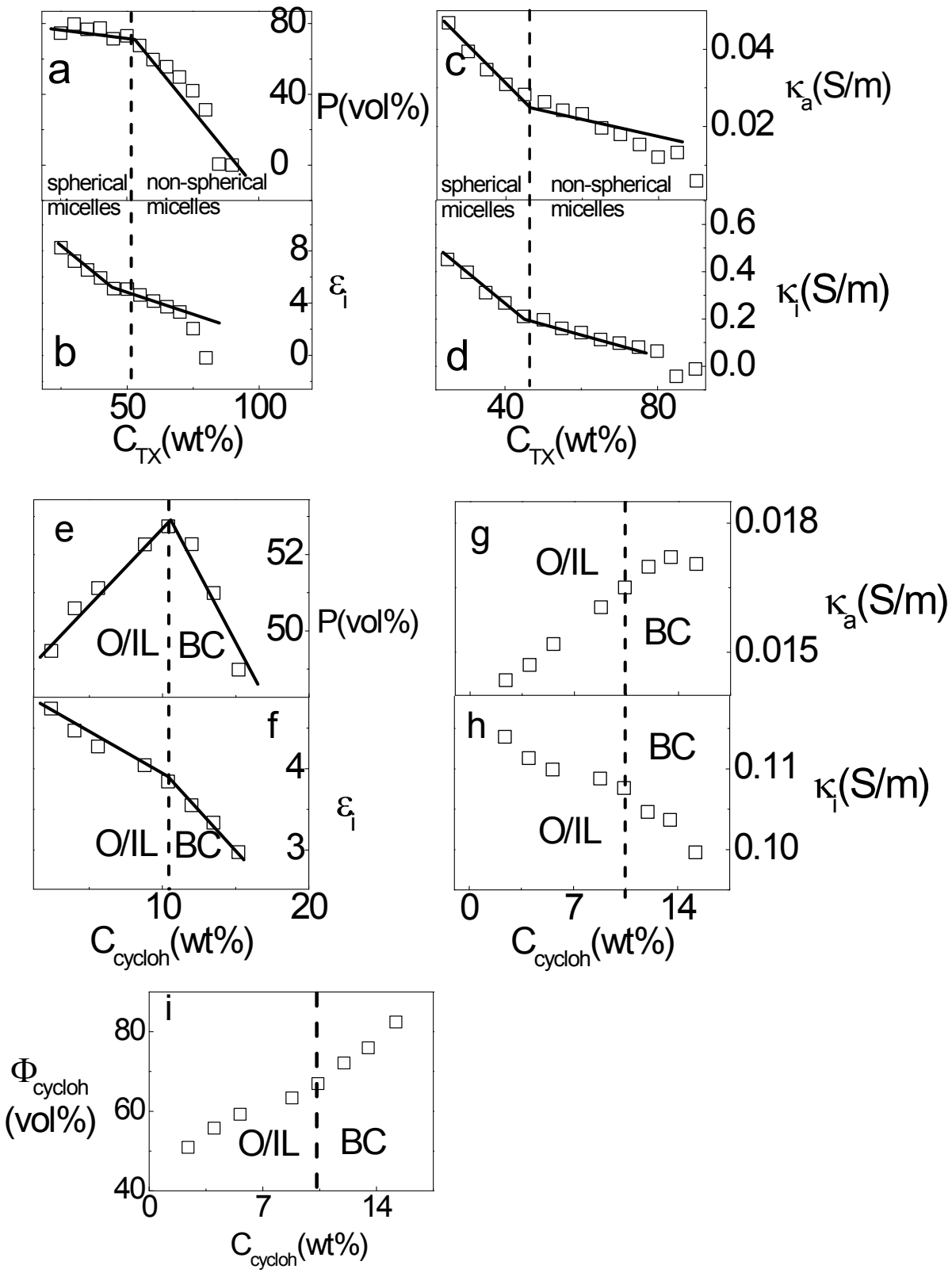


Figure S1. An example of the data in the whole measured frequency range: The directly measured (a) capacitance and (b) conductance, transferred data (c) dielectric constant and (d) conductivity in the whole measured range of low-frequency measuring instrument (40Hz-110MHz); (e) and the insert of (f) are the dielectric constant and dielectric loss in the whole measured frequency range.


a
b
c
d
e
f
g
h
i
spherical micelles
non-spherical micelles
P(vol%)
ε_i
κ_a(S/m)
κ_i(S/m)
C_{TX}(wt%)
O/IL
BC
C_{cycloh}(wt%)
Φ_{cycloh} (vol%)

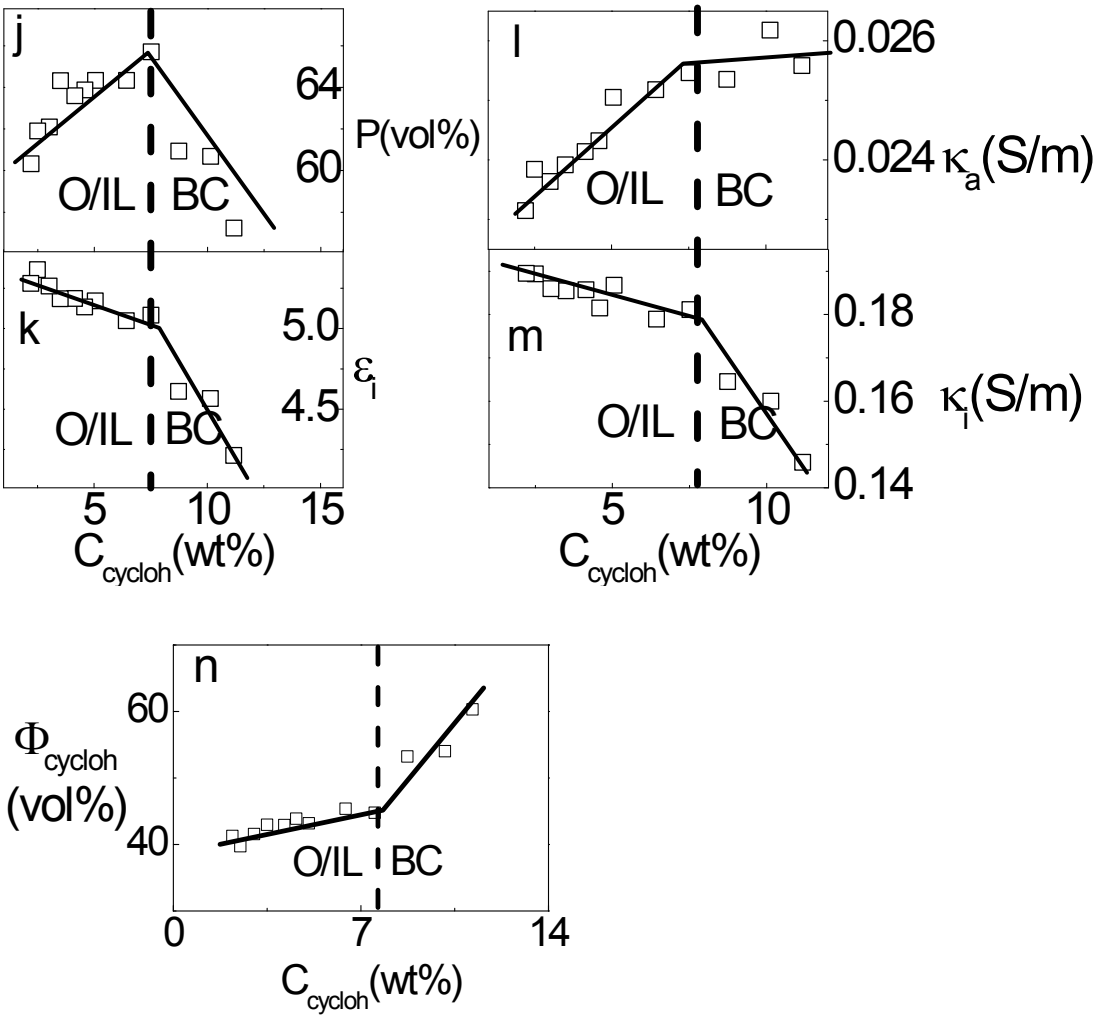


Figure S2. Phase parameters of non-spherical micelles and B.C. sub-region: (a)-(d) non-spherical micelles; (e)-(i) B.C. sub-region in the experiment path of IL-based microemulsion with a fixed weight ratio of IL/TX-100; (j)-(n) B.C. sub-regions in the experiment path of IL-based microemulsion with a fixed weight fraction of TX-100.