GLOSSARY OF SYMBOLS

\( \varepsilon_0, \varepsilon_s \)  Static dielectric constant or static permittivity.

\( \varepsilon_\infty \)  Dielectric constant at high frequency.

\( \varepsilon^* \)  Complex Permittivity.

\( \varepsilon' \)  Dielectric dispersion.

\( \varepsilon'' \)  Dielectric loss.

\( \mu \)  Dipole moment.

\( h \)  Plank's constant

\( n \)  Refractive index.

\( d \)  Effective pin length.

\( M \)  Molecular weight.

\( R \)  Universal gas constant.

\( T \)  Temperature in K.

\( c \)  Velocity of Light

\( N \)  Number of molecules per mole.

\( K \)  Boltzmann constant

\( T_c \)  Curie temperature.

\( \omega \)  Angular frequency.

\( \delta \)  Surface density.

\( \alpha_0 \)  Polarizability of the molecule.
\( \tau \)
Relaxation time in pico seconds.

ps
pico second

ns
nano second

\( \alpha, \beta \)
Distribution parameters

\( \varepsilon^E \)
Excess permittivity.

\( (1/\tau)^E \)
Excess inverse relaxation time.

\( g_{\text{eff}} \)
Kirkwood effective angular correlation factor.

\( f_B \)
Bruggeman factor

\( R_1(t) \)
Reflected pulse without sample.

\( R_x(t) \)
Reflected pulse with sample.

\( p(t) \)
Subtracted pulse \([R_1(t) - R_x(t)]\).

\( q(t) \)
Added pulse \([R_1(t) + R_x(t)]\).

\( p(\omega) \)
Fourier transform of \(p(t)\)

\( q(\omega) \)
Fourier transform of \(q(t)\)

\( X \)
Weight fraction

FMD
Formamide

DMF
N,N-dimethylformamide

DMA
N,N-dimethylacetamide

ETA
Ethanolamine

DMAE
N,N-dimethylaminoethanol