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LIST OF ABBREVIATIONS

RIS	Rotational isomeric state
MC	Monte Carlo
PVF	Poly(vinyl fluoride)
PVC	Poly(vinyl chloride)
2nnd	Second nearest neighbor diamond lattice
PE	Polyethylene
k	Chain stiffness parameter
SPEs	Solid polymer electrolytes
PEO	Poly(ethylene oxide)
S	Siemen
cm	Centimeter
ILs	Ionic liquids
PILs	Polymer ionic liquids
MD	Molecular dynamic
Bmim-TFSI	1-butyl-3-methylimidazolium bis(trifluoromethanesulfonyl)imide
Pbvim-TFSI	Poly(1-butyl-3-vinylimidazolium bis(trifluoromethanesulfonyl)imide
GPEs	Gel polymer electrolytes
P_m	Probability for a meso
m	*Diads*
r	*Racemo*
°C	Degree Celsius
$\langle r^2 \rangle_0$,	Mean-square unperturbed end-to end distance
C_n	Characteristic ratio
U	Statistical weight matrices
g^+	Gauche plus
g^-	Gauche minus

LIST OF ABBREVIATIONS (Continued)

t	*trans*
C_m	Dipole moment ratio
LJ	Lennard–Jones energy
B_2	Second virial coefficient
ε	Potential well depth
σ	Ionic conductivity
Br^-	Bromide ion
BF_4^-	Boron fluoride
PF_6^-	Hexafluorophosphate
Tf_2N^-	Bis(trifluoromethane)sulfonimide
Å	Angstroms
MCS	Monte Carlo Step
K	Kelvin
PCFF	Polymer consistent force-field
NVT	Canonical ensemble
NPT	Isobaric-isothermal ensemble
NMR	Nuclear magnetic resonance spectroscopy
T_g	Glass transition temperature
OPLS-AA	Optimized potentials for liquid simulations-all atom
R_g	Radius of gyration
R_{ee}	Average end-to-end distance
MSD	Mean squared displacement
D	Diffusion coefficient
ACF	Orientational autocorrelation functions
RDF	Radial Distribution Functions
CN	Coordination Number
PCF	Pair correlation function
S_b	Bond order parameter

LIST OF ABBREVIATIONS (Continued)

$\langle \boldsymbol{r}^2 \rangle^{1/2}$	Mean square end-to-end vector
$\langle \boldsymbol{s}^2 \rangle^{1/2}$	Mean square radius of gyration
S_G	Orientation order parameter of polymer chains
$M_1(j)$	First-order intramolecular bond order parameter
S_L	Intermolecular bond orientation order