Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

Supplementary Information

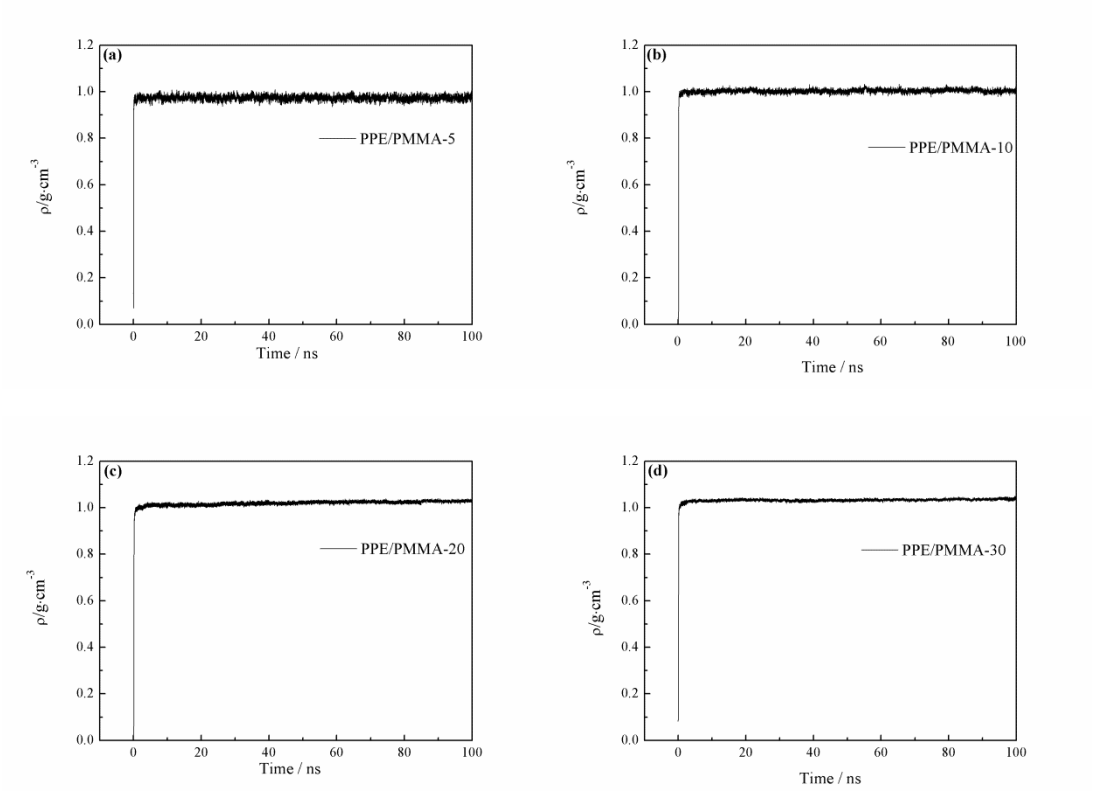


Figure S1: The densities of PPE/PMMA with different DPs during equilibration

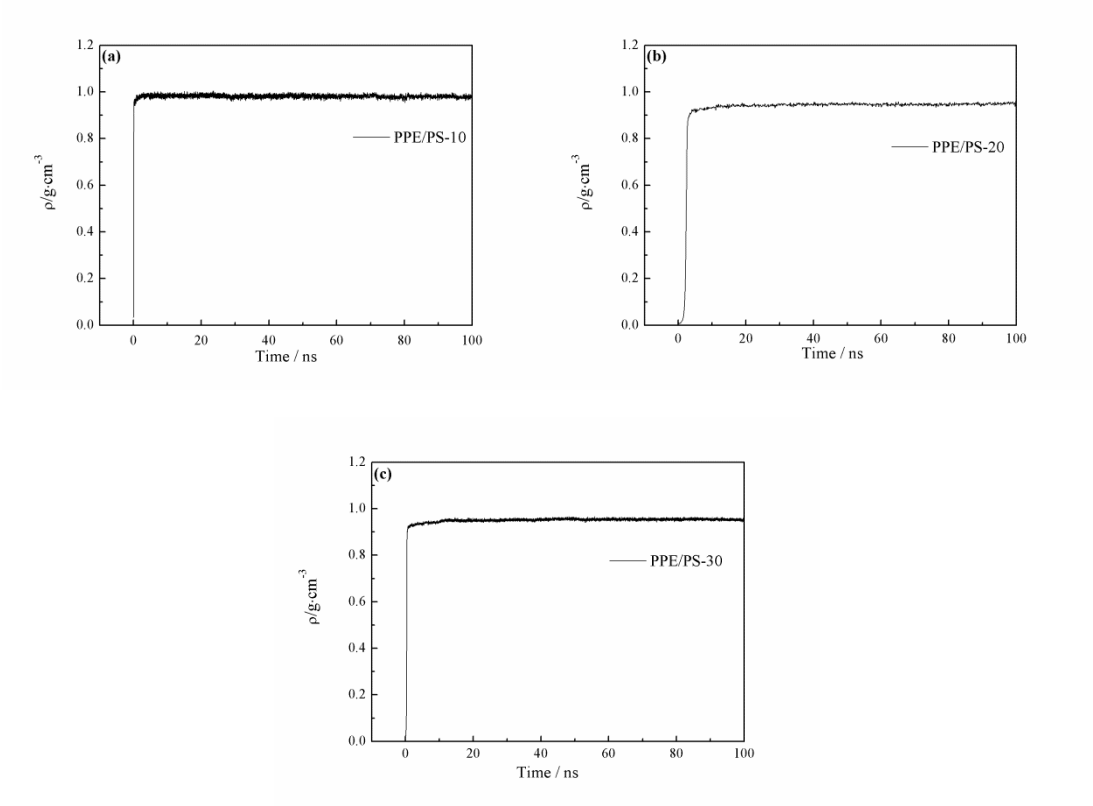


Figure S2: The densities of PPE/PS with different DPs during equilibration

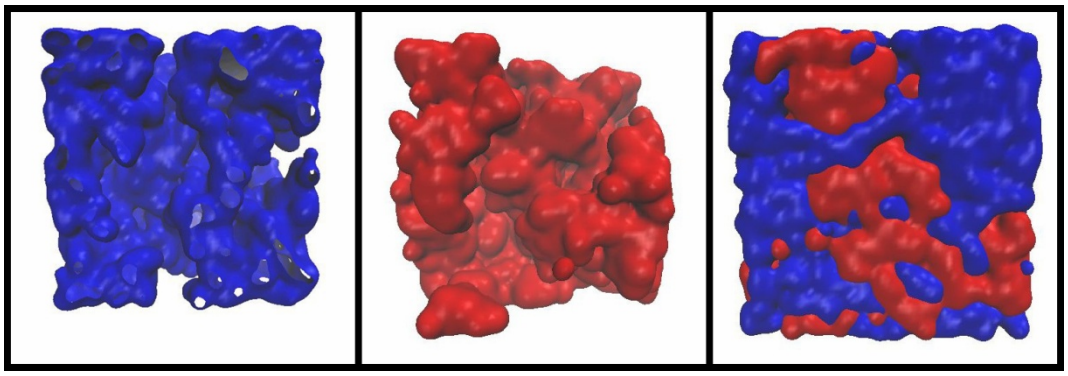
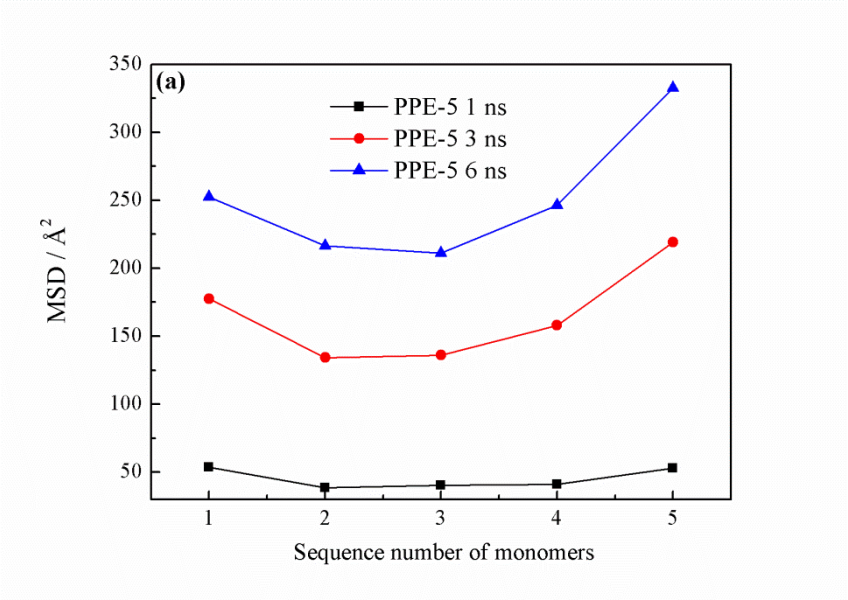
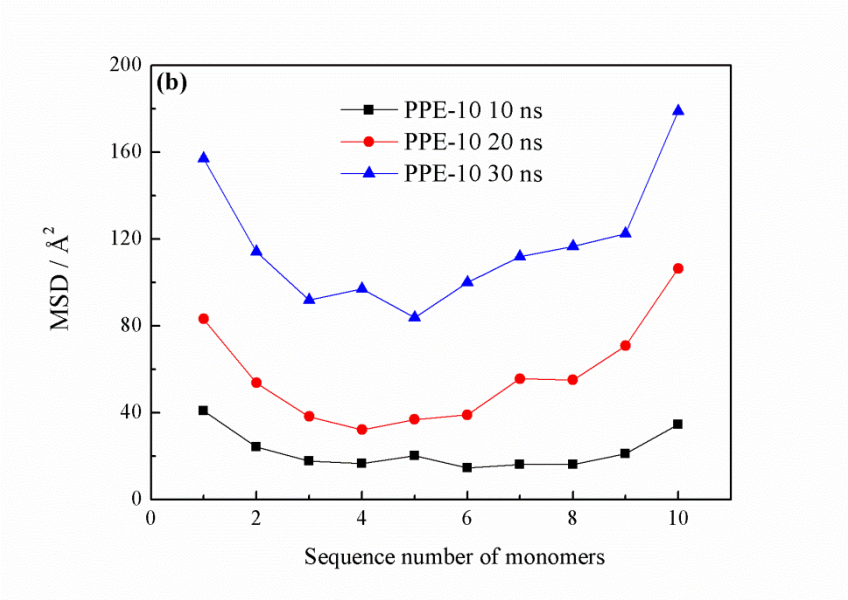


Figure S3: Snapshots of PPE/PMMA after 100ns equilibration (PPE=blue and PMMA=red)


(a)
PPE-5 1 ns
PPE-5 3 ns
PPE-5 6 ns
MSD / Å^2
Sequence number of monomers
350
300
250
200
150
100
50
1
2
3
4
5


(b)
PPE-10 10 ns
PPE-10 20 ns
PPE-10 30 ns
MSD / Å^2
Sequence number of monomers
200
160
120
80
40
0
0
2
4
6
8
10

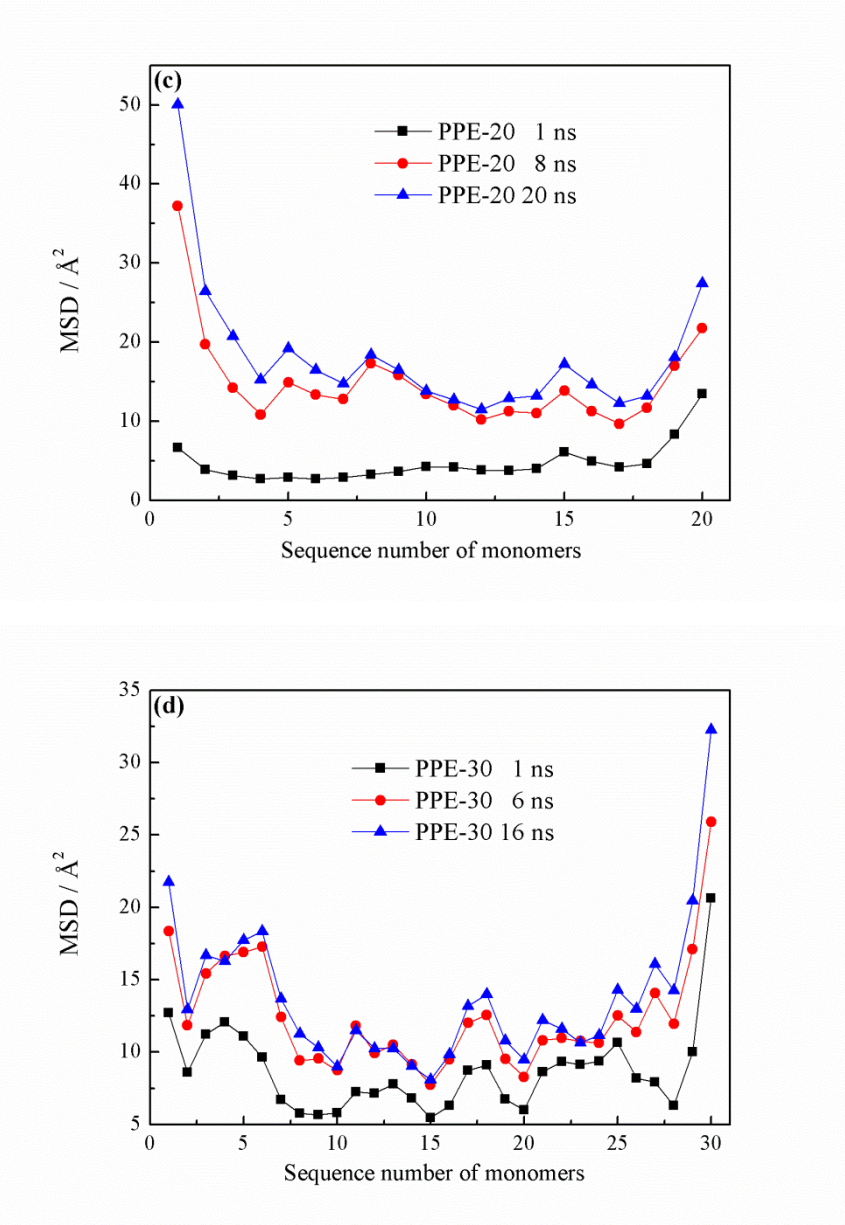
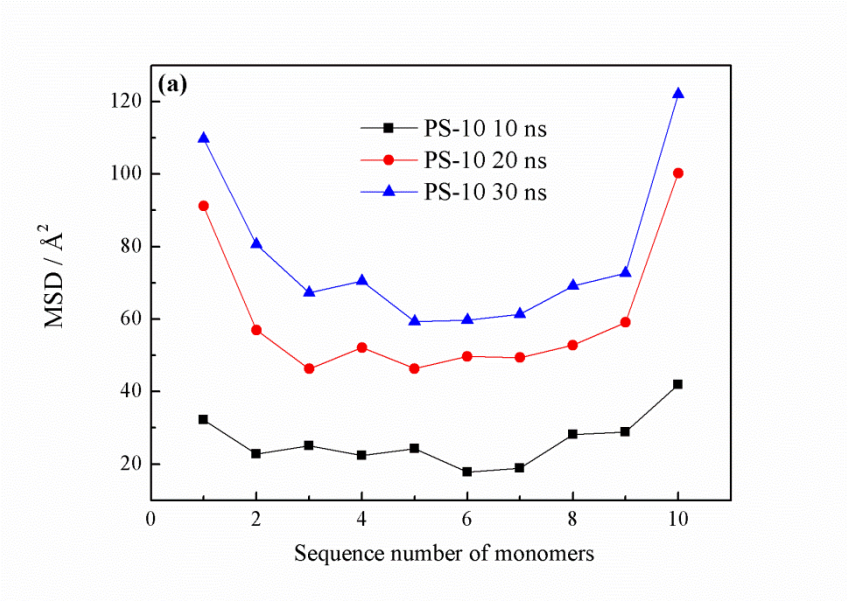
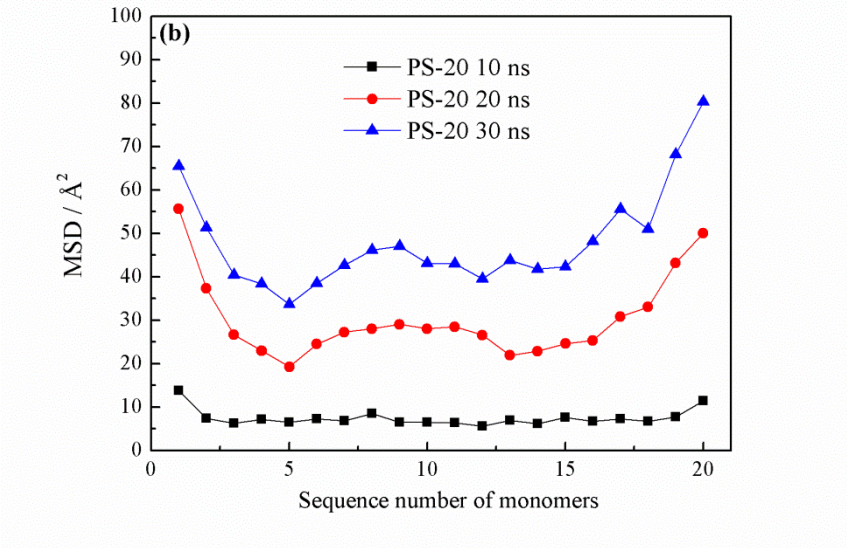


Figure S4: Mean squared displacements of all monomers along the polymer chains with different DP in pure PPE


(a)
PS-10 10 ns
PS-10 20 ns
PS-10 30 ns
MSD / Å^2
Sequence number of monomers
0
2
4
6
8
10
20
40
60
80
100
120


(b)
PS-20 10 ns
PS-20 20 ns
PS-20 30 ns
MSD / Å^2
Sequence number of monomers
0
5
10
15
20
0
10
20
30
40
50
60
70
80
90
100

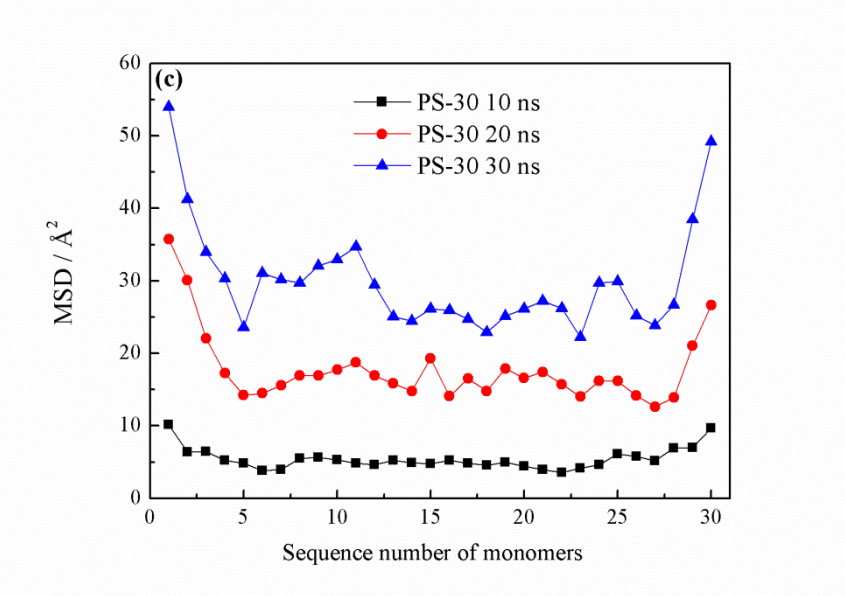
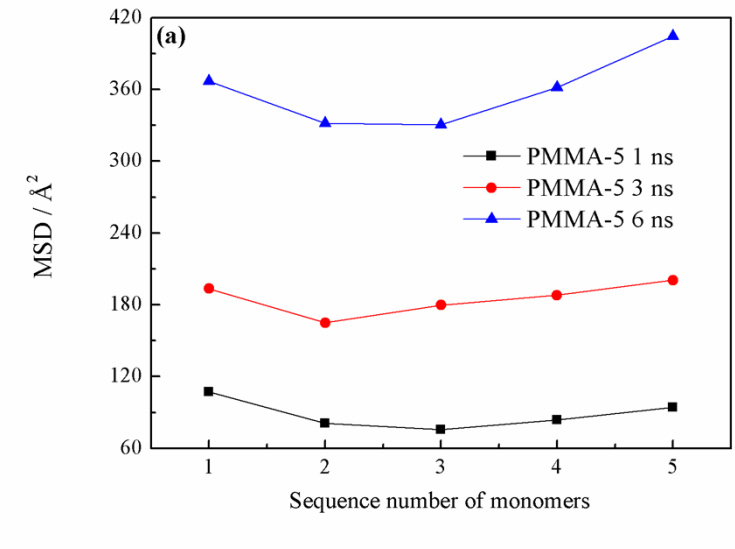
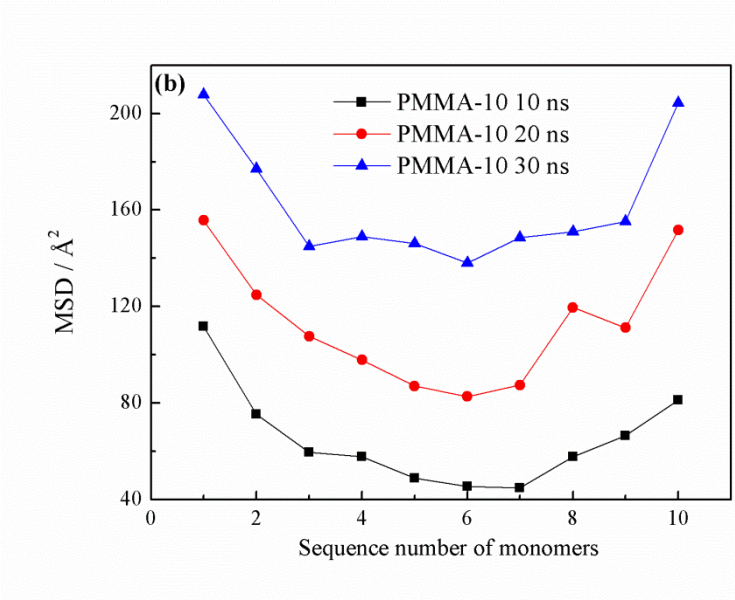
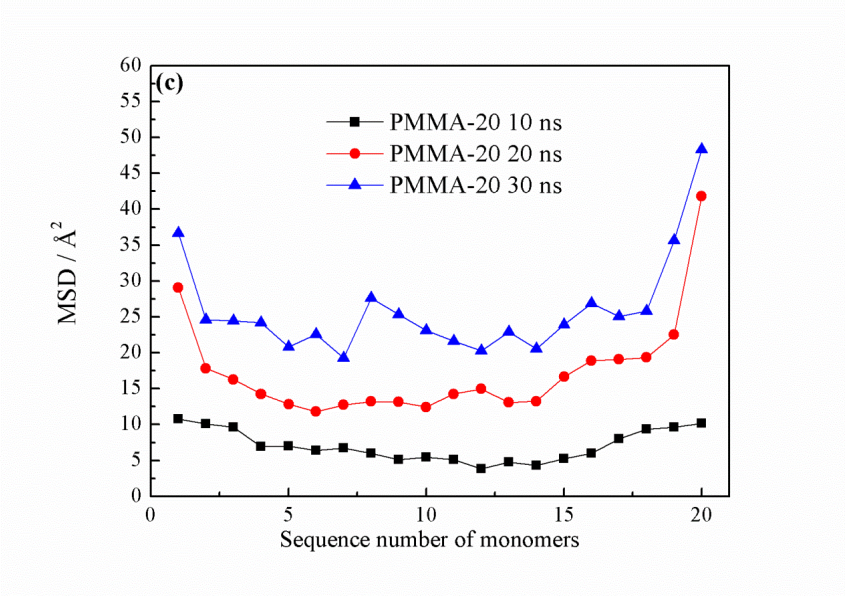


Figure S5: Mean squared displacements of all monomers along the polymer chains with different DP in pure PS


(a)
MSD / Å^2
Sequence number of monomers
PMMA-5 1 ns
PMMA-5 3 ns
PMMA-5 6 ns
420
360
300
240
180
120
60
1
2
3
4
5


(b)
MSD / Å^2
Sequence number of monomers
PMMA-10 10 ns
PMMA-10 20 ns
PMMA-10 30 ns
200
160
120
80
40
0
2
4
6
8
10



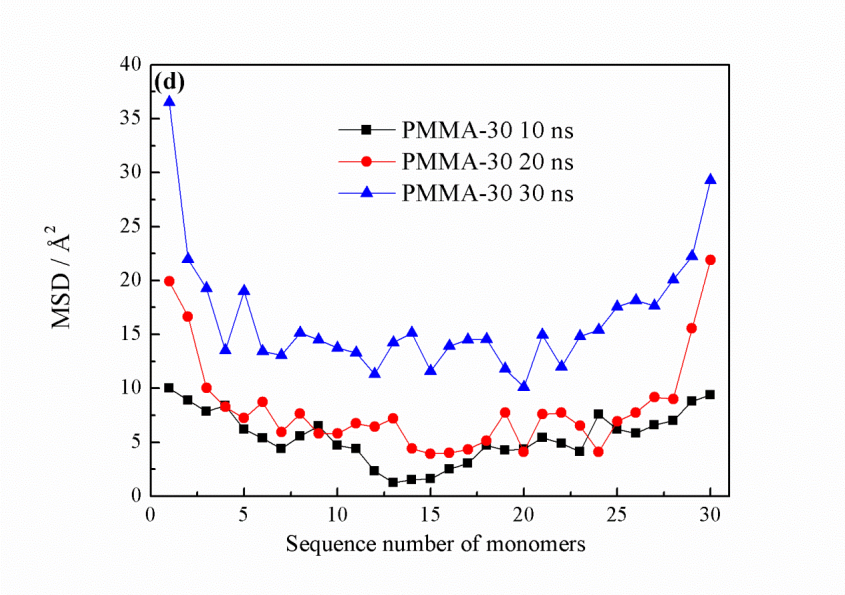
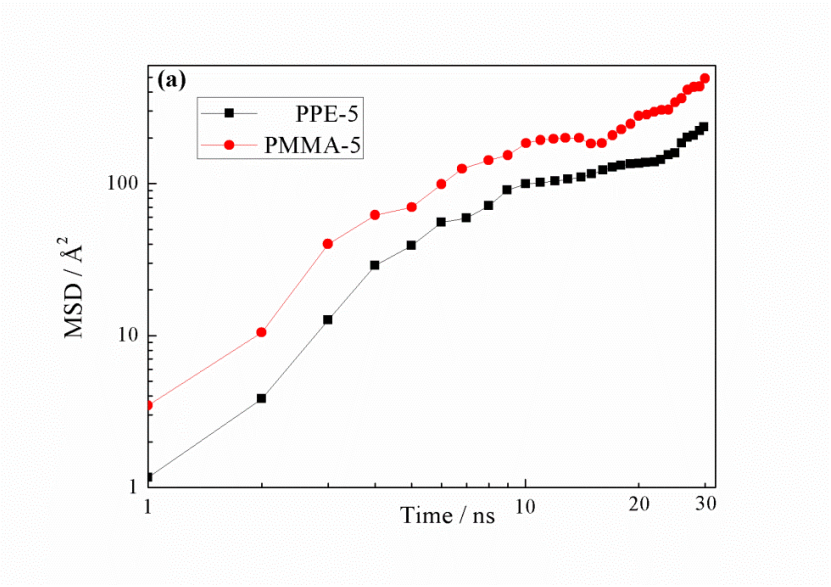
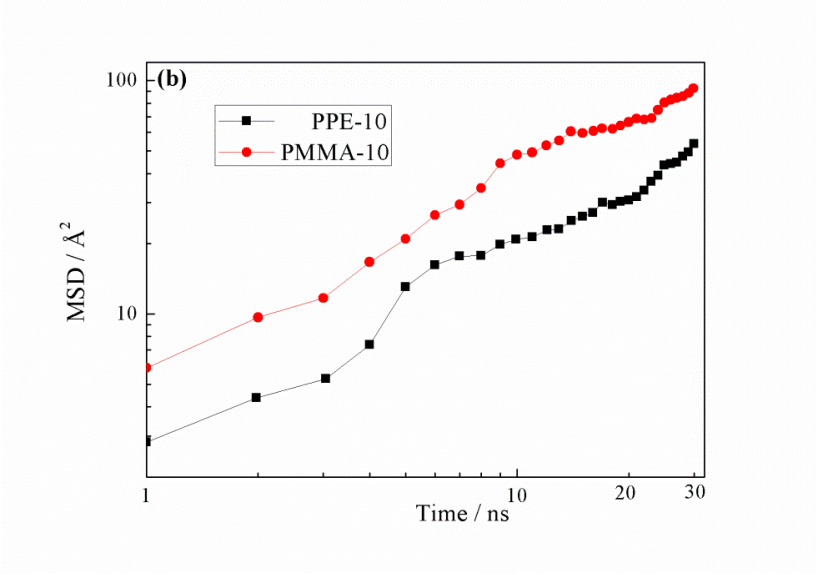
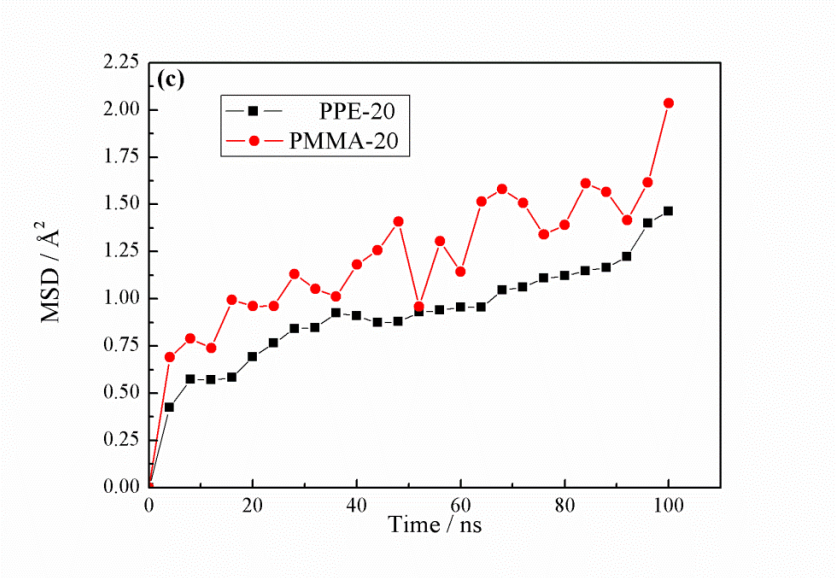


Fig S6: Mean squared displacements of all monomers along the polymer chains with different DP in pure PMMA


(a)
PPE-5
PMMA-5
MSD / Å²
Time / ns
1
10
100
1
10
20
30


(b)
PPE-10
PMMA-10
MSD / Å²
Time / ns
10
100
1
10
20
30


(c)
PPE-20
PMMA-20
MSD / Å²
Time / ns
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00
2.25
0
20
40
60
80
100

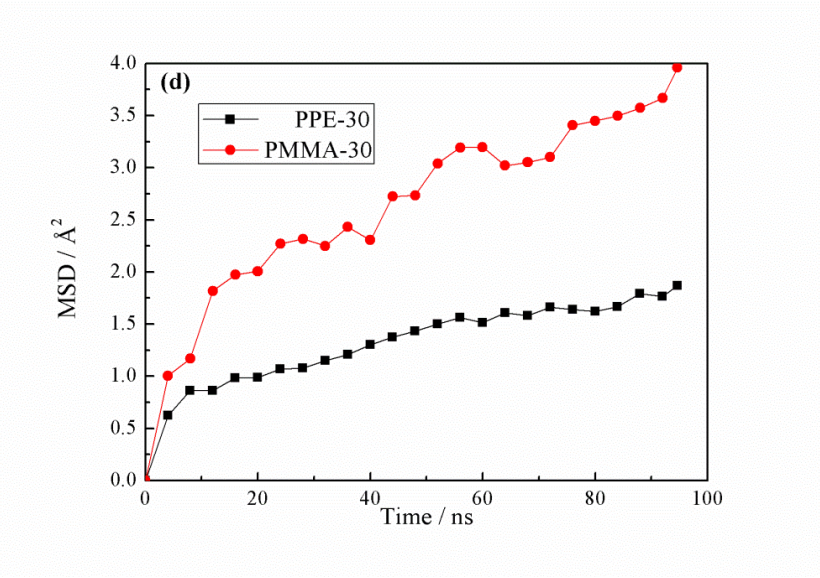
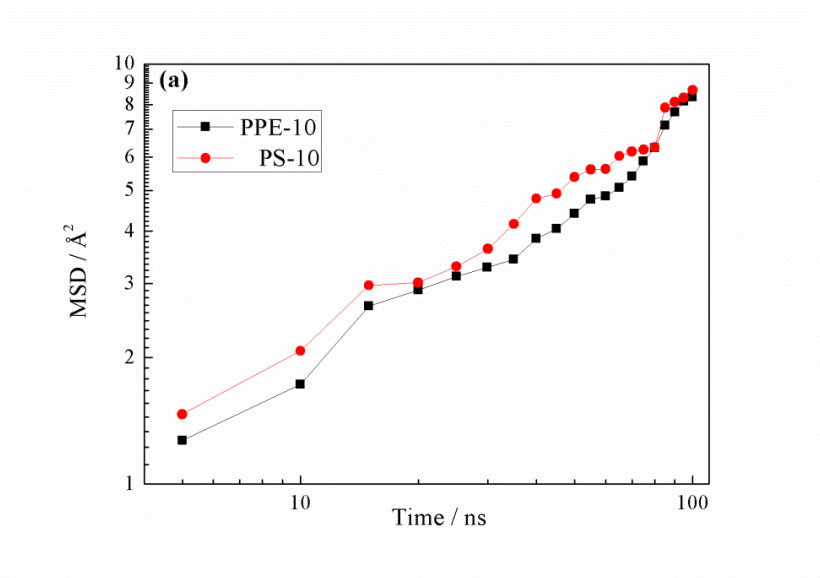


Fig S7: Mean squared displacements of the central monomers of PPE and PMMA with different polymerization degrees in PPE/PMMA



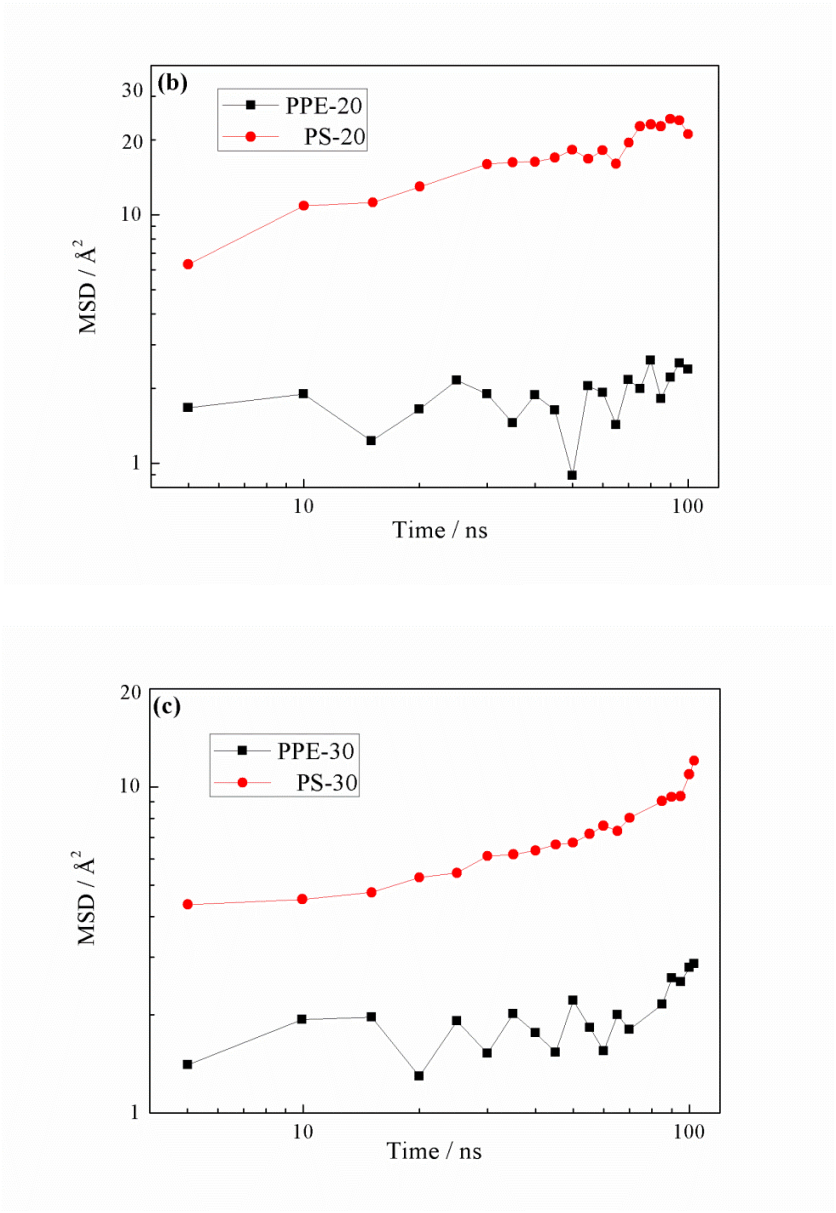


Fig S8: Mean squared displacements of the central monomers of PPE and PS with different polymerization degrees in PPE/PS

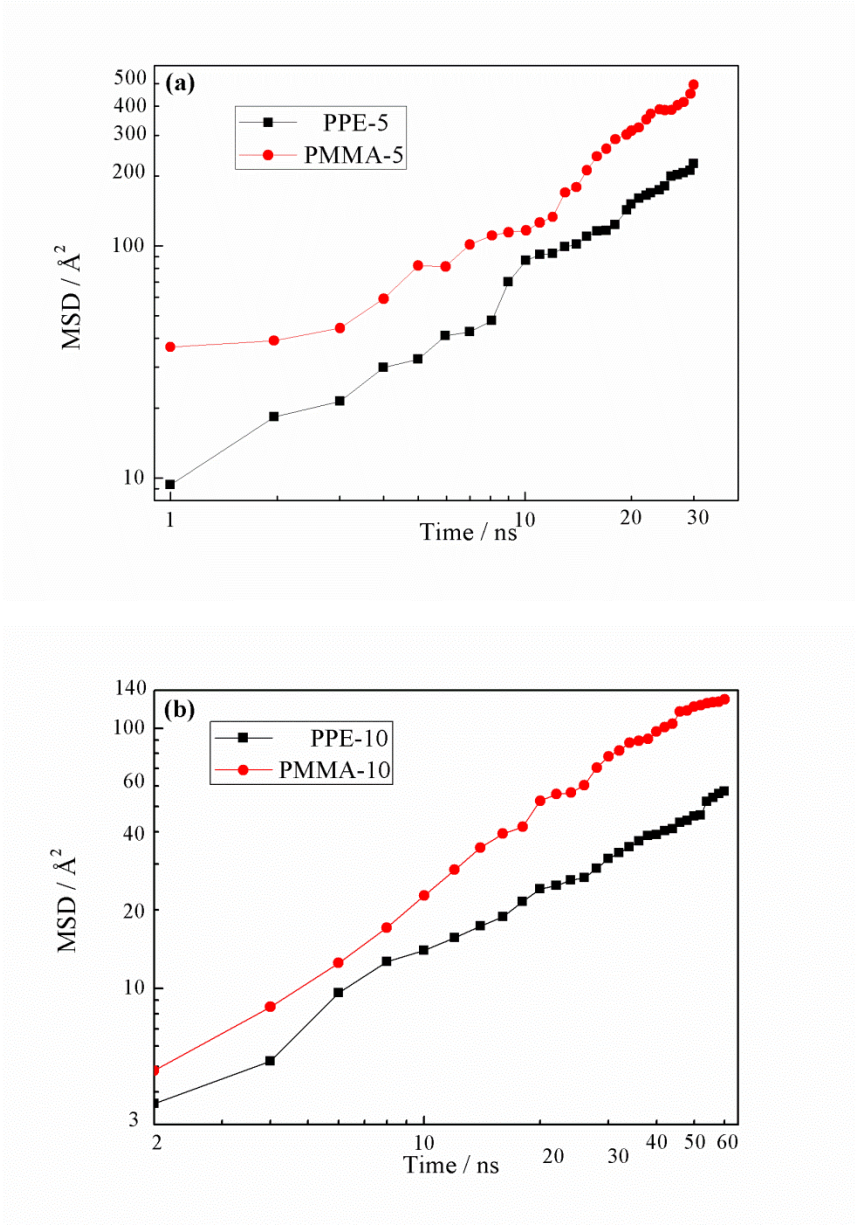


Fig S9: Molecular mean squared displacements of PPE and PMMA with polymerization degree=5 and 10 in PPE/PMMA

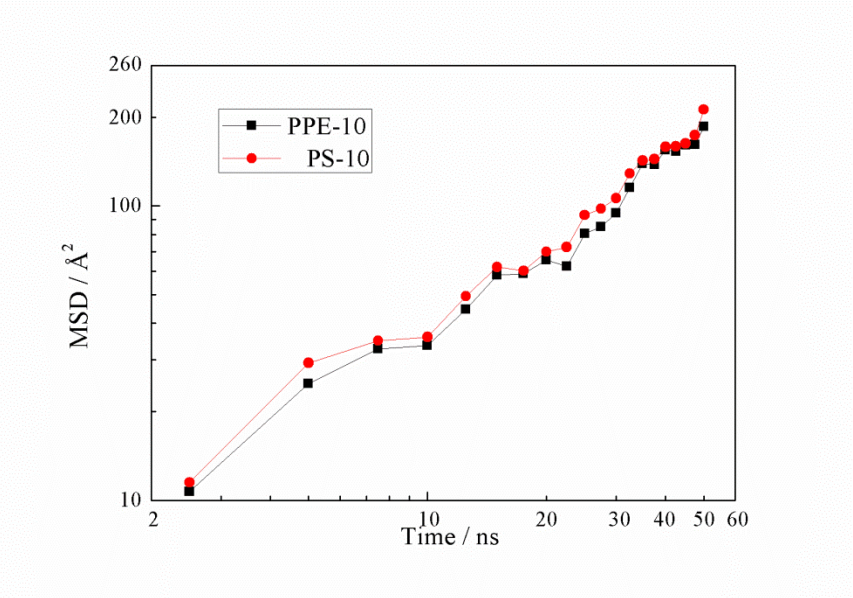


Fig S10: Molecular mean squared displacements of PPE and PS with polymerization degree =10 in PPE/PS