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## Supplementary Information:

# Overlap Concentration in Salt-Free Polyelectrolyte Solutions

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Table of end-to-end distance  $R$  as a function of the number of monomers in a chain  $N$  and monomer concentration  $c$ . All in Lennard-Jones units.

N: 10		20		50		100	
c	R	c	R	c	R	c	R
0.500	1.8	0.100	3.3	0.500	4.7	0.200	7.8
0.300	1.9	0.050	3.5	0.300	5.0	0.100	8.7
0.200	1.9	0.020	3.7	0.200	5.3	0.050	9.7
0.100	2.0	0.010	3.9	0.100	5.9	0.020	11.3
0.050	2.1	0.005	4.0	0.050	6.5	0.005	14.2
0.020	2.1			0.020	7.3	0.002	16.3
				0.010	7.9	0.001	17.7
				0.005	8.5	0.0005	18.8
				0.002	9.2	0.0002	20.1
				0.001	9.6	0.00005	21.4
				0.0005	10.0	0.00002	21.9
				0.0002	10.3	0.000005	22.5
				0.0001	10.5		
				0.00005	10.7		
				0.00002	10.9		
				0.000005	11.0		
				0.000002	11.0		

N: 200		400		800		1200	
c	R	c	R	c	R	c	R
0.075	13.3	0.010	28.9	0.0500	29.6	0.0002	150
0.050	14.4	0.010	29.0	0.0200	36.6	0.0002	151
0.050	14.3	0.005	34.0	0.0050	49.9	0.00005	213
0.020	17.0	0.005	34.0	0.0020	63.6	0.00005	211
0.020	17.0	0.002	42.1	0.0010	75.1	0.00002	237
0.010	19.5	0.002	42.2	0.0010	76.1	0.000005	269
0.010	19.5	0.001	49.6	0.0005	90.0	0.000002	284
0.005	22.5	0.001	49.7	0.0005	90.8	0.000001	287
0.002	27.1	0.0005	57.8	0.0002	115		
0.0005	34.3	0.0002	68.8	0.0002	115		
0.0002	38.1	0.0001	75.9	0.0001	135		
0.0001	40.5	0.00005	81.6	0.00005	151		
0.00005	42.2	0.00002	86.8	0.00002	168		
0.00002	43.9	0.00001	89.7	0.00001	176		
0.000005	45.6	0.000005	92.8	0.000005	183		
		0.000002	93.9	0.000002	189		
				0.000001	191		

N: 1600

c	R
0.0001	226
0.00005	250
0.00005	267
0.000005	371
0.000002	371
0.000001	383