Supporting Information for

Construction of Tensile Strength and Density Prediction Models for Semi-Interpenetrating Polymer Network from Fluoroelastomer and Poly(dimethylsiloxane)

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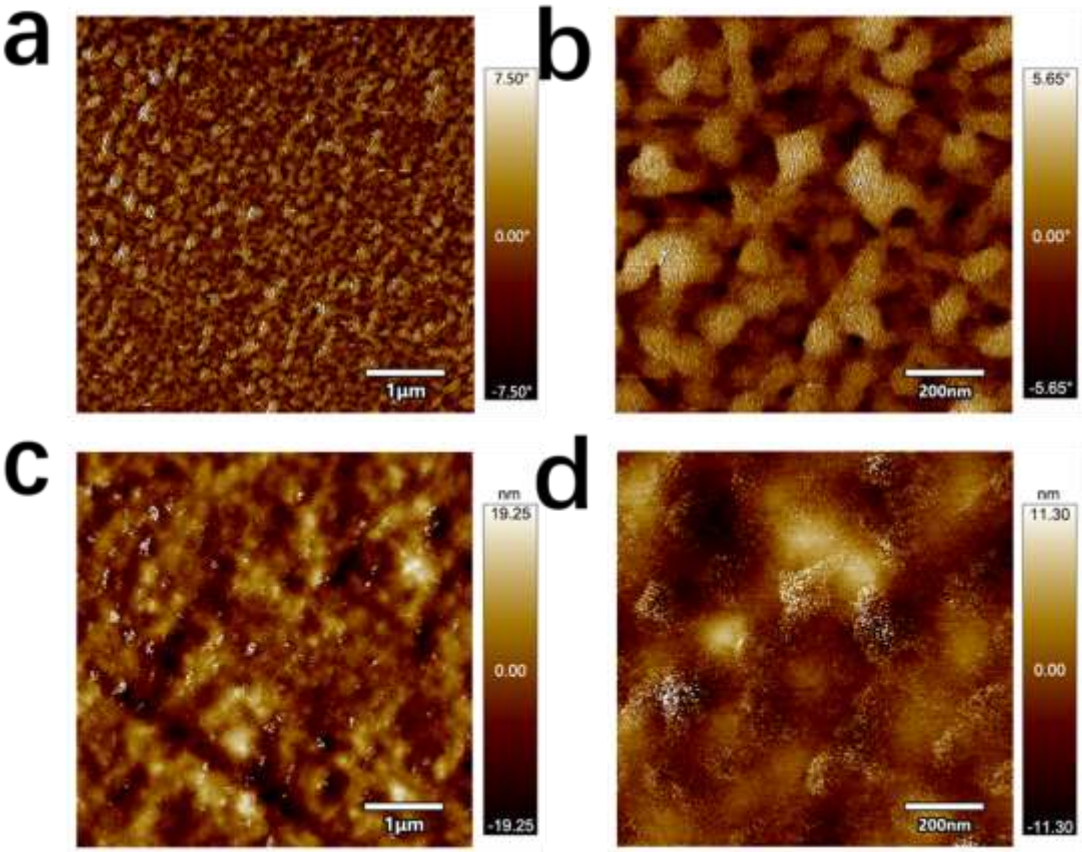

Figure S1. The AFM phase image and corresponding topographical image (a-c, b-d) of semi-IPN

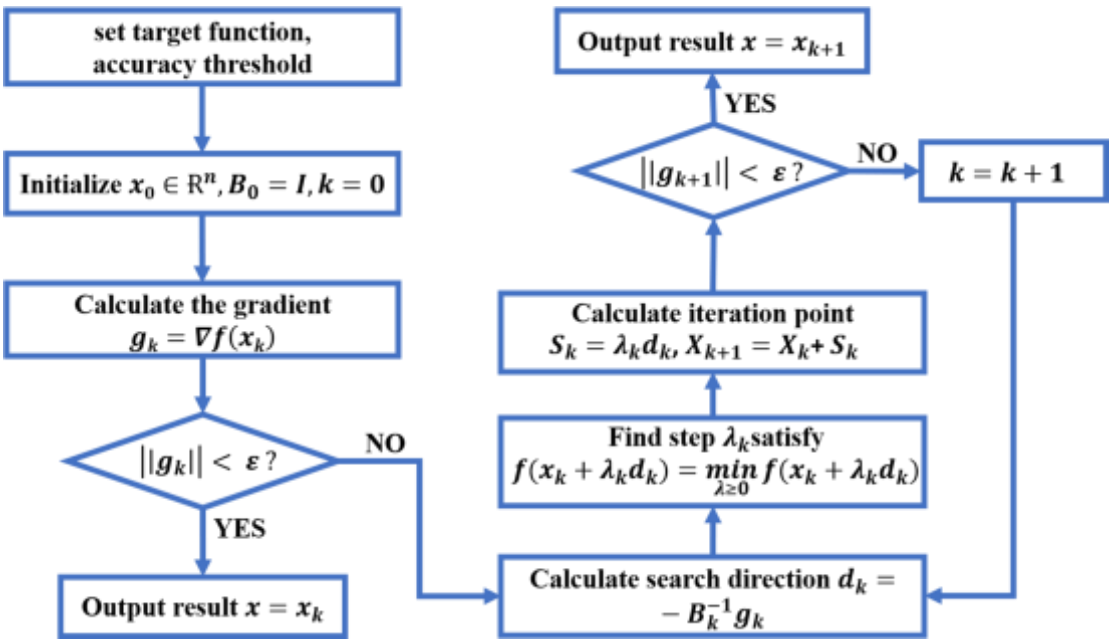

Figure S2. Flow chart of BFGS Quasi-Newton algorithm

Table S1. Data of tensile strength used to calculate model parameters

No.	x_1	x_2	[NCO]/[OH]	M_c (g/mol)	σ_{exp} (Mpa)
1	0.60	0.40	1.00	6823.3	3.01
2	0.60	0.40	1.00	6823.3	2.97
3	0.60	0.40	1.00	6823.3	2.88
4	0.70	0.30	1.00	6823.3	4.09
5	0.70	0.30	1.00	6823.3	3.94
6	0.70	0.30	1.00	6823.3	4.13
7	0.80	0.20	1.00	6823.3	3.51
8	0.80	0.20	1.00	6823.3	3.53
9	0.80	0.20	1.00	6823.3	3.74
10	0.70	0.30	0.98	7073.5	3.64
11	0.70	0.30	0.98	7073.5	3.92
12	0.70	0.30	0.98	7073.5	3.87
13	0.70	0.30	1.04	7605.7	3.68
14	0.70	0.30	1.04	7605.7	3.57
15	0.70	0.30	1.04	7605.7	3.48
16	0.70	0.30	1.06	7786.6	3.42
17	0.70	0.30	1.06	7786.6	3.62
18	0.70	0.30	1.06	7786.6	3.58
19	0.70	0.30	1.10	8248.4	3.31
20	0.70	0.30	1.10	8248.4	3.24

21	0.70	0.30	1.10	8248.4	3.49
22	0.65	0.35	1.00	6823.3	3.81
23	0.65	0.35	1.00	6823.3	3.78
24	0.65	0.35	1.00	6823.3	3.69
25	0.75	0.25	1.00	6823.3	3.74
26	0.75	0.25	1.00	6823.3	3.59
27	0.75	0.25	1.00	6823.3	3.83
28	0.70	0.30	1.02	7150.4	3.86
29	0.70	0.30	1.02	7150.4	3.71
30	0.70	0.30	1.02	7150.4	3.67
31	0.70	0.30	1.08	8071.2	3.59
32	0.70	0.30	1.08	8071.2	3.42
33	0.70	0.30	1.08	8071.2	3.32

Table S2. Data of density used to calculate model parameters

No.	x_1	x_2	ρ_{exp} (g/cm^3)
1	0.60	0.40	1.3893
2	0.60	0.40	1.3920
3	0.70	0.30	1.4740
4	0.70	0.30	1.4804
5	0.70	0.30	1.4726
6	0.70	0.30	1.4789

7	0.80	0.20	1.6153
8	0.80	0.20	1.6248
9	0.65	0.35	1.4364
10	0.65	0.35	1.4174
11	0.75	0.25	1.5286
12	0.75	0.25	1.5158
13	0.70	0.30	1.4855
14	0.70	0.30	1.4813
15	0.70	0.30	1.4819