

Supplementary Information

Table S1: Tensile and Flexural parameters

| Composite | Tensile Strength | Elastic Modulus | Flexural Strength | Flexural Modulus |
|------------------------------|------------------|-----------------|-------------------|------------------|
| | | | | |
| Pure PC | 66.5±2.0 | 1356±120 | 95.8±3.0 | 2154±53 |
| 2 wt. % MWCNT/PC | 79.5±3.0 | 1564±97 | 110.2±1.4 | 2410±59 |
| 2 wt. % aMWCNT/PC | 81.3±2.5 | 1613±77 | 113.1±1.7 | 2494±78 |
| 2 wt. % CF/PC | 85.0±3.0 | 2074±140 | 115.0±1.2 | 2736±74 |
| 1wt. % CF/1 wt. % MWCNT/PC | 85.7±1.8 | 2142±113 | 115.6±1.2 | 2809±63 |
| 1wt. % CF/1 wt. % aMWCNT/PC | 86.4±1.7 | 2220±124 | 116.3±0.9 | 2896±88 |
| 5 wt. % CF/PC | 86.8±2.5 | 2289±97 | 119.0±1.9 | 3041±68 |
| 10 wt. % CF/PC | 87.5±1.6 | 2537±84 | 123.0±1.3 | 3740±84 |
| 15 wt. % CF/PC | 89.5±1.9 | 2964±110 | 128.0±1.7 | 4129±59 |
| 20 wt. % CF/PC | 91.3±1.1 | 3149±91 | 134.0±2.6 | 4920±83 |
| 18wt. % CF/2 wt. % MWCNT/PC | 92.6±1.8 | 3219±110 | 135.2±1.5 | 5098±96 |
| 18wt. % CF/2 wt. % aMWCNT/PC | 93.6±1.3 | 3304±89 | 136.1±1.3 | 5233±79 |

Table S2: Storage Modulus and Glass transition temperature parameters

| Composite | E' at 40°C (MPa) | E' at 180°C (MPa) | Tg from E' (°C) | Tg from tanδ (°C) |
|------------------------------|------------------|-------------------|-----------------|-------------------|
| Pure PC | 1050 | 3 | 145.3 | 160.2 |
| 2 wt. % MWCNT/PC | 1380 | 10 | 143.8 | 158.4 |
| 2 wt. % aMWCNT/PC | 1680 | 13 | 141.7 | 158 |
| 2 wt. % CF/PC | 1750 | 14 | 145 | 160 |
| 1wt. % CF/1 wt. % MWCNT/PC | 1870 | 18 | 144.7 | 159.6 |
| 1wt. % CF/1 wt. % aMWCNT/PC | 2080 | 21 | 144.1 | 158.8 |
| 5 wt. % CF/PC | 2130 | 22 | 141.6 | 159 |
| 10 wt. % CF/PC | 2450 | 26 | 139.7 | 158.5 |
| 15 wt. % CF/PC | 2720 | 34 | 138.3 | 158.6 |
| 20 wt. % CF/PC | 2904 | 39 | 137 | 158.2 |
| 18wt. % CF/2 wt. % MWCNT/PC | 3040 | 42 | 136.3 | 157.3 |
| 18wt. % CF/2 wt. % aMWCNT/PC | 3185 | 45 | 134.3 | 156.2 |

Table S3: C Factor and Degree of Entanglement parameters

| Composites | C Factor | Degree of Entanglement | | |
|-------------------|----------|------------------------|-----------|-------|
| | | 40°C | 180°C | 130°C |
| 2 wt. % MWCNT/PC | 0.39429 | 88383.96454 | 442.52777 | 1.27 |
| 2 wt. % aMWCNT/PC | 0.36923 | 107597.86987 | 575.28610 | 1.54 |

| | | | | |
|------------------------------|---------|--------------|-----------|------|
| 2 wt. % CF/PC | 0.35714 | 112081.11445 | 619.53888 | 1.72 |
| 1wt. % CF/1 wt. % MWCNT/PC | 0.29683 | 119766.67658 | 796.54998 | 1.80 |
| 1wt. % CF/1 wt. % aMWCNT/PC | 0.28299 | 133216.41031 | 929.30831 | 1.94 |
| 5 wt. % CF/PC | 0.27662 | 136418.72787 | 973.56109 | 2.00 |
| 10 wt. % CF/PC | 0.26923 | 156913.56023 | 1150.5722 | 2.20 |
| 15 wt. % CF/PC | 0.22857 | 174206.07503 | 1504.5944 | 2.78 |
| 20 wt. % CF/PC | 0.21275 | 185990.60363 | 1725.8583 | 2.98 |
| 18wt. % CF/2 wt. % MWCNT/PC | 0.20680 | 194700.90738 | 1858.6166 | 3.12 |
| 18wt. % CF/2 wt. % aMWCNT/PC | 0.20222 | 203987.62829 | 1991.3749 | 3.26 |

Table S4: Adhesion Factor parameters

| Composites | Adhesion Factor |
|------------------------------|-----------------|
| 2 wt. % CF/PC | 0.0100 |
| 2 wt. % MWCNT/PC | 0.0051 |
| 2 wt. % aMWCNT/PC | 0.0124 |
| 20 wt. % CF/PC | 0.15297 |
| 18wt. % CF/2 wt. % MWCNT/PC | 0.14734 |
| 18wt. % CF/2 wt. % aMWCNT/PC | 0.13932 |

Figure S1: Optical micrographs of Flexural and Tensile specimens: (a) 5 wt. % CF/PC flexural sample (b) 5 wt. % CF/PC tensile sample, (c) 10 wt. % CF/PC flexural sample, (d) 10 wt. % tensile sample, (e) 15 wt. % CF/PC flexural sample and (f) 15 wt. % CF/PC tensile sample.

