

## Supporting Information

### Interfacial Strengthening and Self-Monitoring in Carbon Fiber-Reinforced

#### Composites via Carbon Nanotube-Based Damage Sensors

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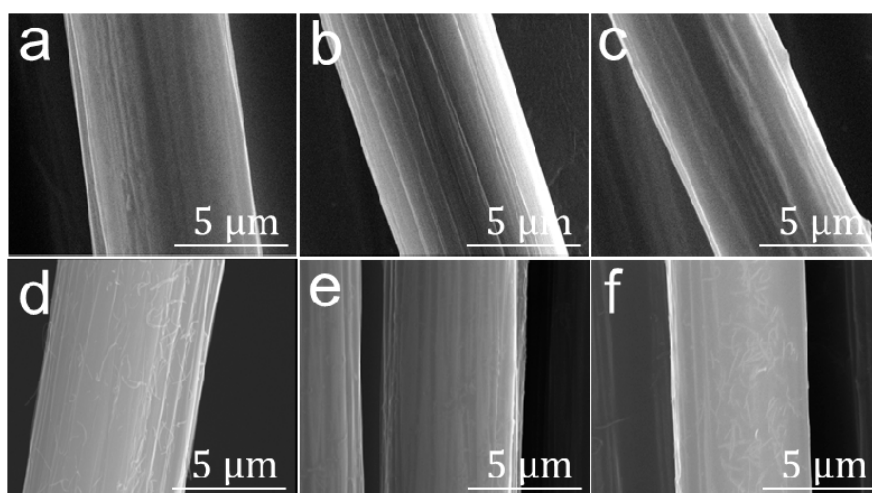


Figure S1. SEM images of (a) 1%-K@CF, (b) 3%-K@CF, (c) 5%-K@CF, (d) M@CF, (e) M-1%-K@CF, and (f) M-3%-K@CF.

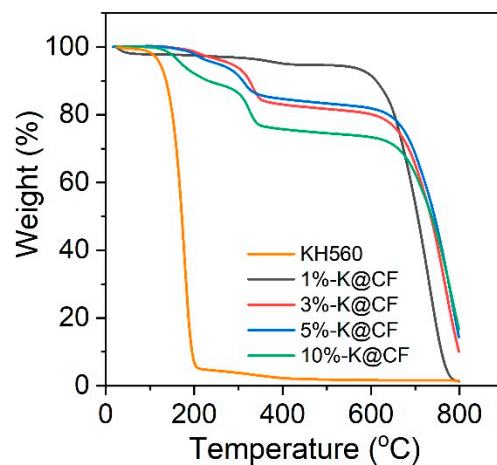


Figure S2. Weight fraction as a function of temperature for CF with and without KH560.

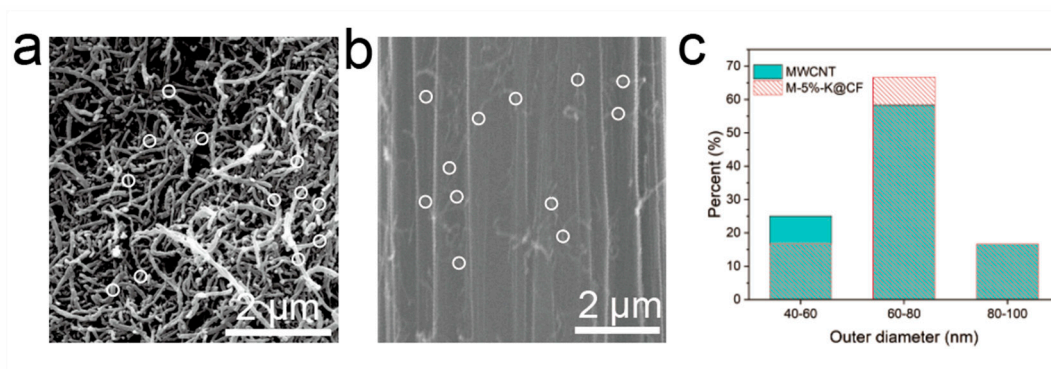


Figure S3. SEM images of (a) dispersed MWCNTs and (b) M-5%-K@CF, where the MWCNTs marked with white circles are selected and measured its outer diameter. The corresponding outer diameter distribution (outer diameter vs. probability) is shown in (c).

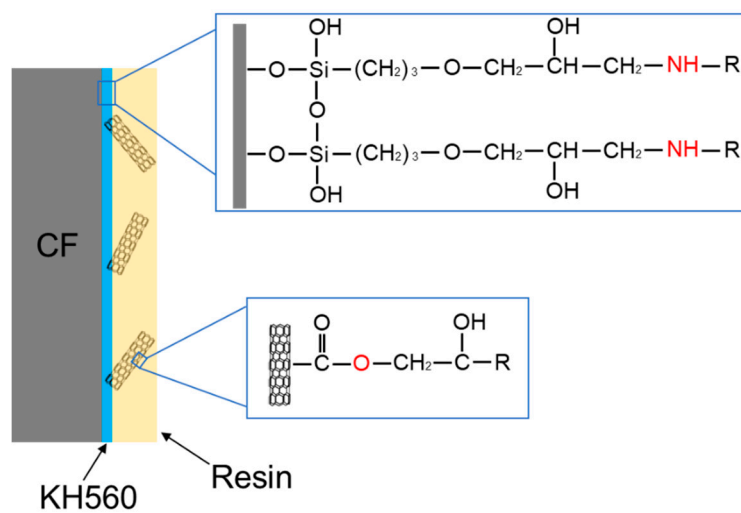


Figure S4. Schematic of chemical bonding formation between CF and matrix.