

## Supplementary Information

### Modification of polylactide nonwovens with carbon nanotubes and ladder poly(silsesquioxane)

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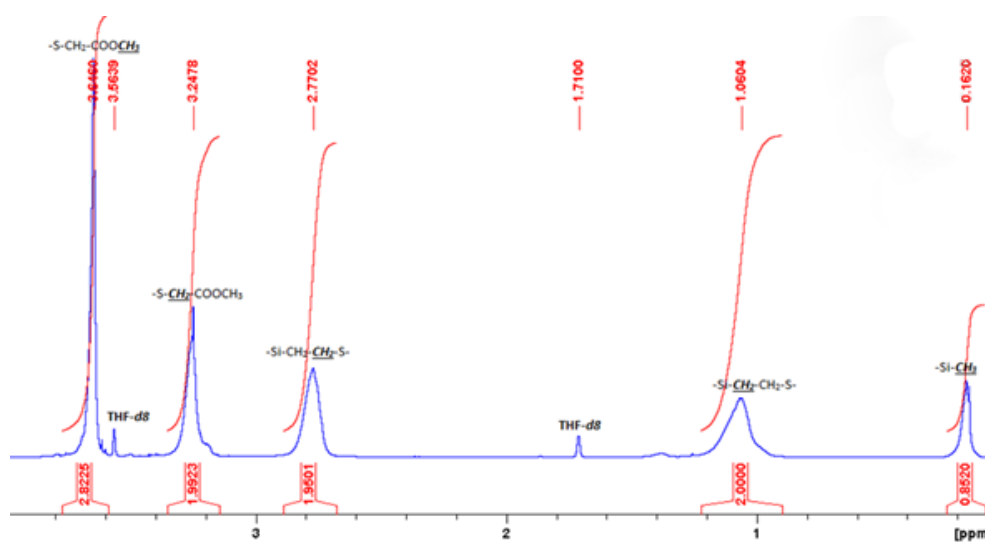


Figure S1. <sup>1</sup>H NMR spectrum of LPSQ-COOMe, recorded in THF-d<sub>8</sub> on a Bruker 200 spectrometer.

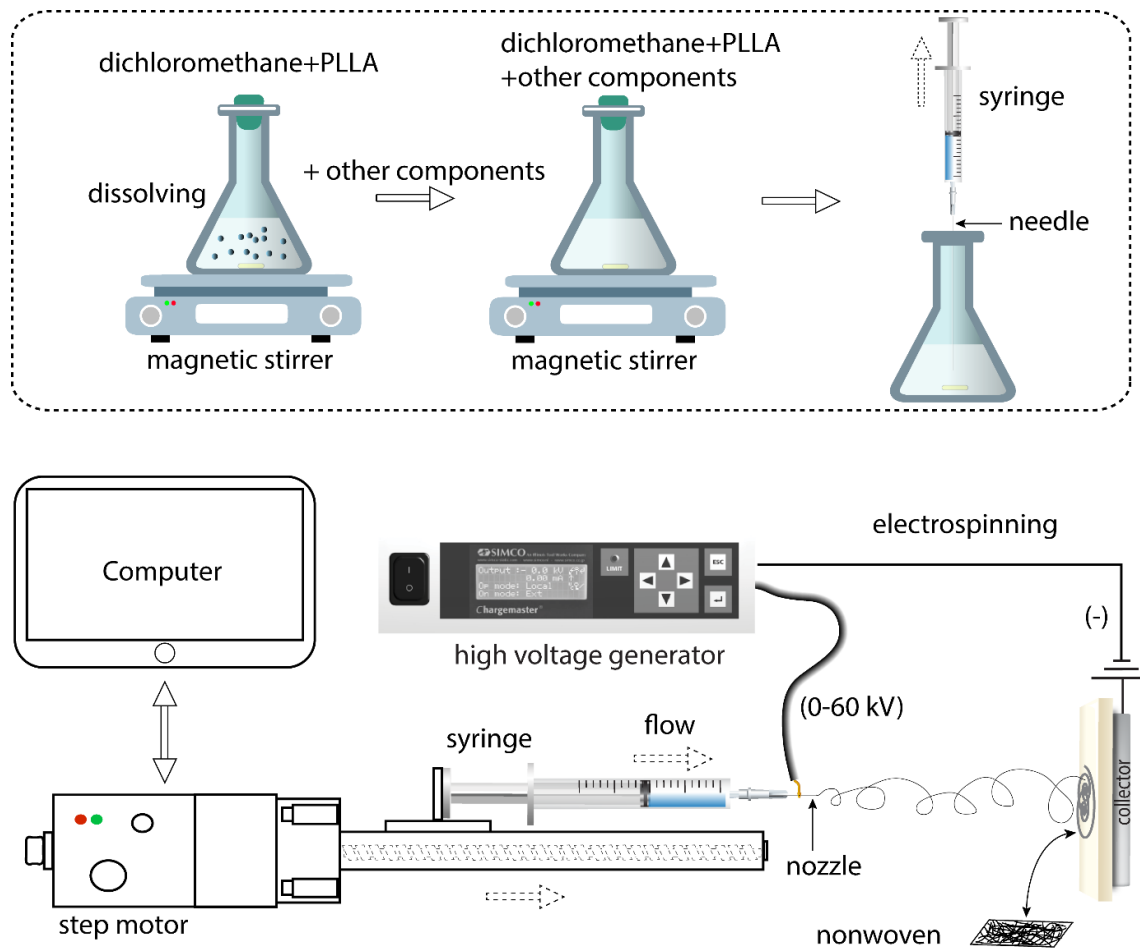


Figure S2. Preparation scheme of PLLA-based nonwovens.

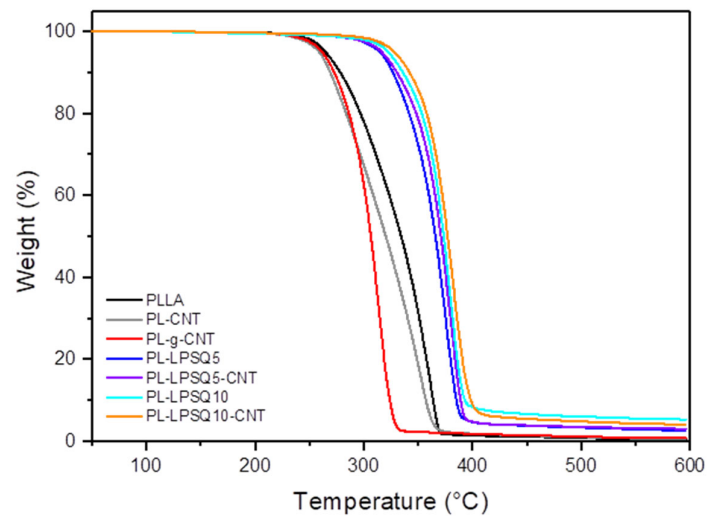


Figure S3. TGA thermograms of PLLA-based nonwovens in a nitrogen atmosphere at a heating rate of 20 °C/min.

Table S1. Thermogravimetric data of PLLA-based nonwovens:  $T_1$  – 1% weight loss temperature;  $T_5$  – 5% weight loss temperature,  $T_{10}$  – 10% weight loss temperature,  $T_d$  – peak temperature of weight loss derivative with respect to temperature.

Sample code	T <sub>1</sub> (°C)	T <sub>5</sub> (°C)	T <sub>10</sub> (°C)	T <sub>d</sub> (°C)
PLLA	238	265	278	365
PL-CNT	229	259	269	355
PL-g-CNT	232	261	272	314
PL-LPSQ5	265	314	327	374
PL-LPSQ5-CNT	264	316	330	377
PL-LPSQ10	260	322	336	380
PL-LPSQ10-CNT	281	328	342	382

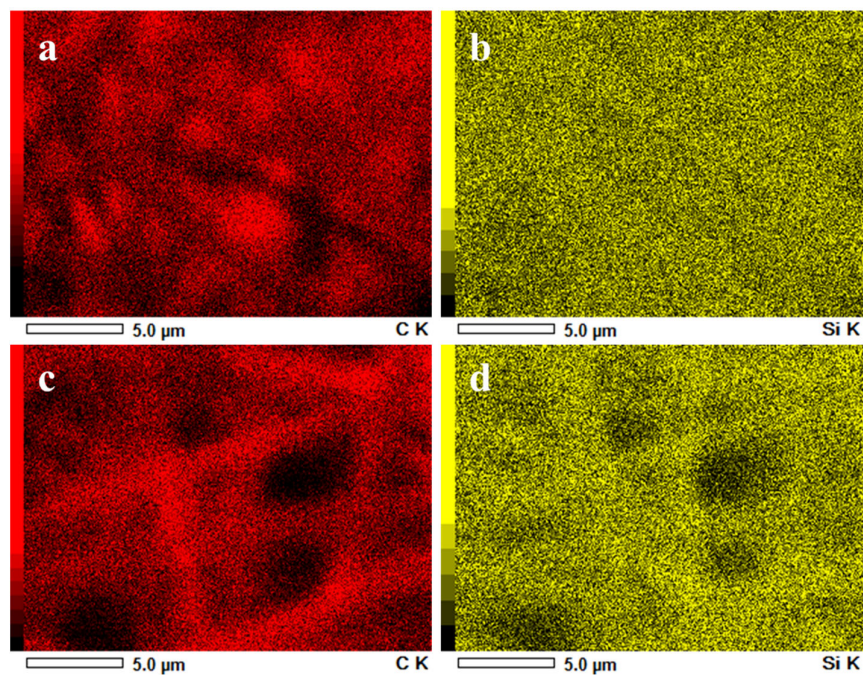


Figure S4. EDS carbon and silicon mapping of (a,b) PL-LPSQ5 and (c,d) PL-LPSQ10 nonwovens.