

Supplement Information

Fabrication of nano/micro-structured electrospun detection card for the detection of pesticide residues

Kun Feng^a, Meng-Yu Zhai^a, Yun-Shan Wei^a, Min-Hua Zong^a, Hong Wu^{a*}, Shuang-Yan Han^{b*}

^a School of Food Science and Engineering, Guangdong Province Key Laboratory for Green Processing of Natural Products and Product Safety, South China University of Technology
Guangzhou 510640, China

^b College of Biosciences and Bioengineering, South China University of Technology
Guangzhou 510640, China

*Corresponding authors. E-mail addresses: bbhwu@scut.edu.cn (H. Wu), syhan@scut.edu.cn (S.-Y. Han).

Table S1 Effect of PCL concentration and volume ratio of CHCl₃ to CH₃OH on the properties of electrospinning solution (**n=3**).

| PCL (g/L) | CH ₃ OH:CHCl ₃ | Viscosity (mPa·s) | Conductivity (μs/cm) |
|-----------|--------------------------------------|-------------------|----------------------|
| 100 | 3:7 | 23.1±0.2 | 1.163±0.006 |
| 125 | 3:7 | 45.4±0.3 | 1.302±0.014 |
| 150 | 3:7 | 84.5±0.2 | 1.417±0.007 |
| 125 | 0 | 28.2±0.4 | 0.002±0 |
| 125 | 1:9 | 35.9±0.4 | 0.178±0.004 |
| 125 | 3:7 | 45.4±0.1 | 1.417±0.011 |
| 125 | 5:5 | 59.9±0.3 | 1.734±0.007 |

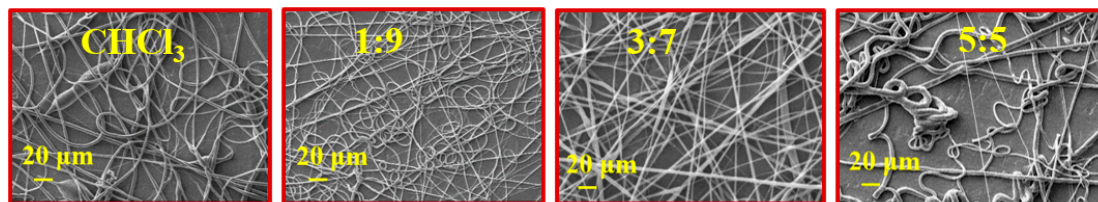


Figure S1. SEM images of electrospun fibers at different ratios of CH₃OH to CHCl₃ (the electrospinning conditions were: voltage of 13 kV, flow rate of 2.5 mL/h and distance of 13 cm).

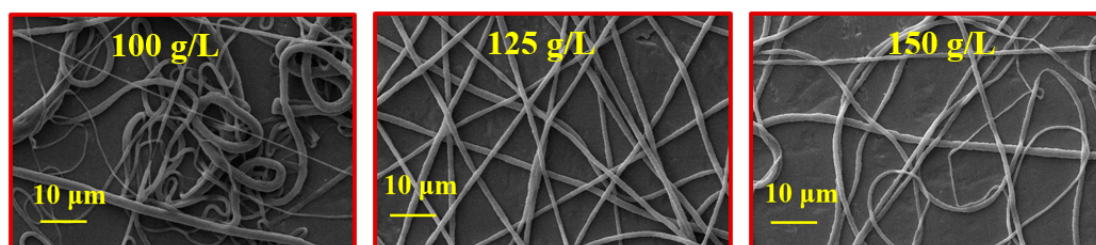


Figure S2. SEM images of electrospun fibers at different concentrations of PCL (the electrospinning conditions were: voltage of 13 kV, flow rate of 2.5 mL/h and distance of 13 cm).

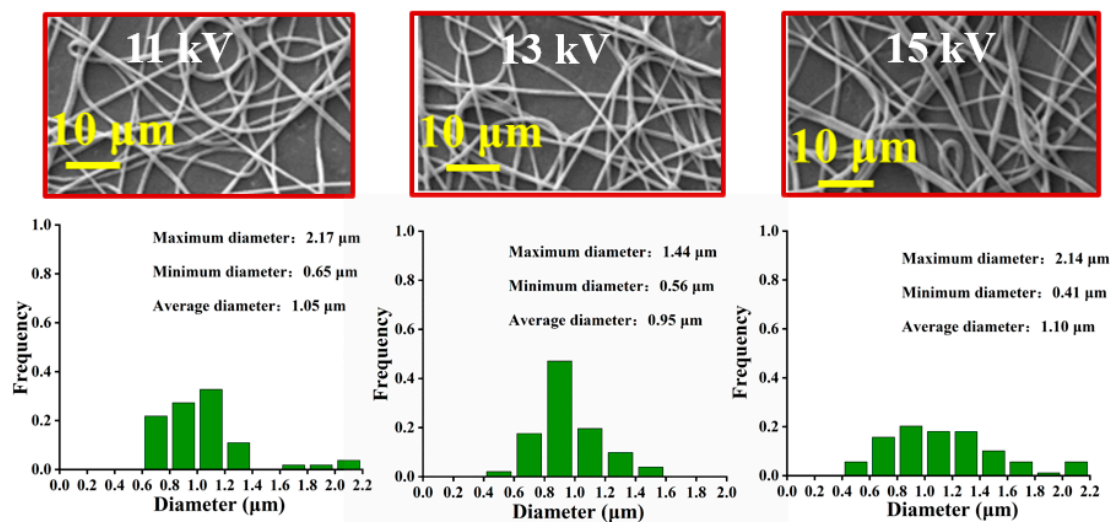


Figure S3. SEM images and fiber diameter distributions of PCL fibers under different electrospinning voltages (the electrospinning conditions were: flow rate of 2.5 mL/h and distance of 13cm).

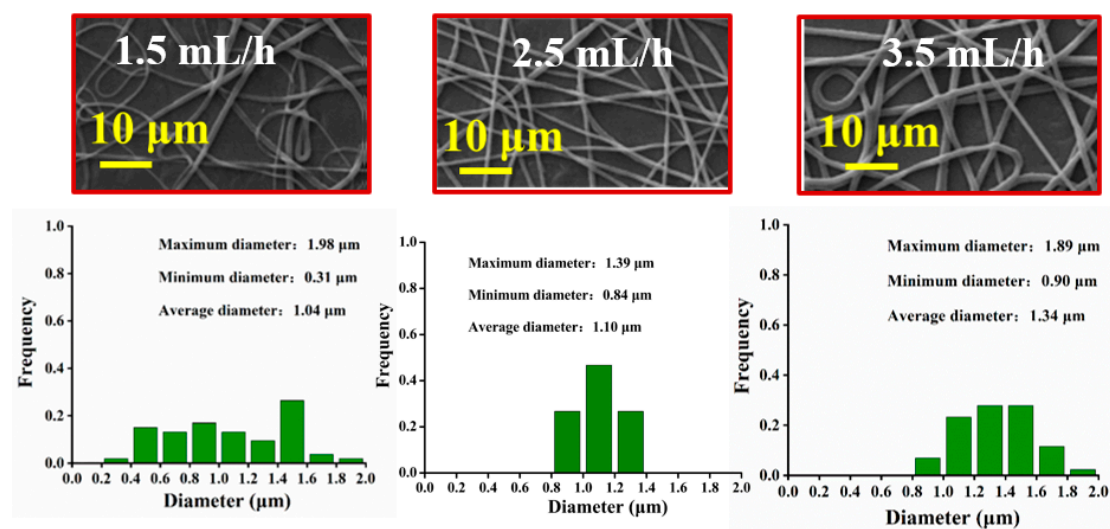


Figure S4. SEM images and fiber diameter distributions of electrospun PCL fibers under different flow rates (the electrospinning conditions were: voltage of 13 kV and distance of 13 cm).

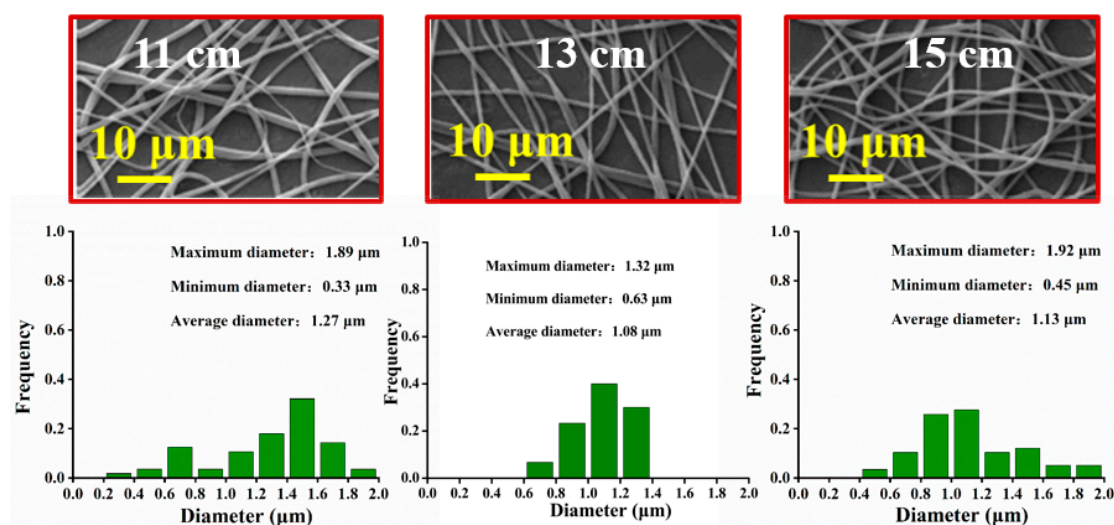


Figure S5. SEM images and fiber diameter distributions of electrospun PCL fibers under different distances (the electrospinning conditions were: voltage of 13 kV and flow rate of 2.5 mL/h).