

Supplementary Material

U-ES microfibers of PVA 21% as a function of flow rate and voltage

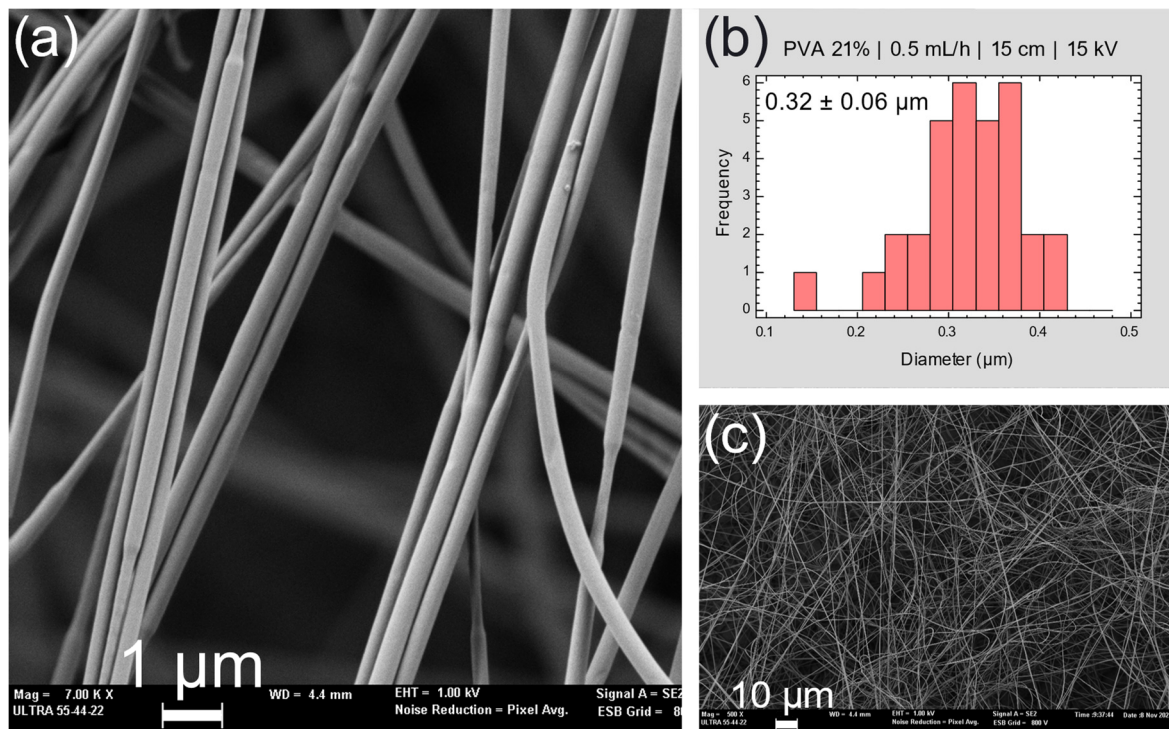


Figure S1. Microfibers of PVA 21% manufactured with flow 0.5 mL/h at 15 cm and 15 kV by FESEM (a, c) and histogram diameter results (mean ± SD = $0.32 \pm 0.06 \mu\text{m}$; range from 0.149 to 0.427) (b).

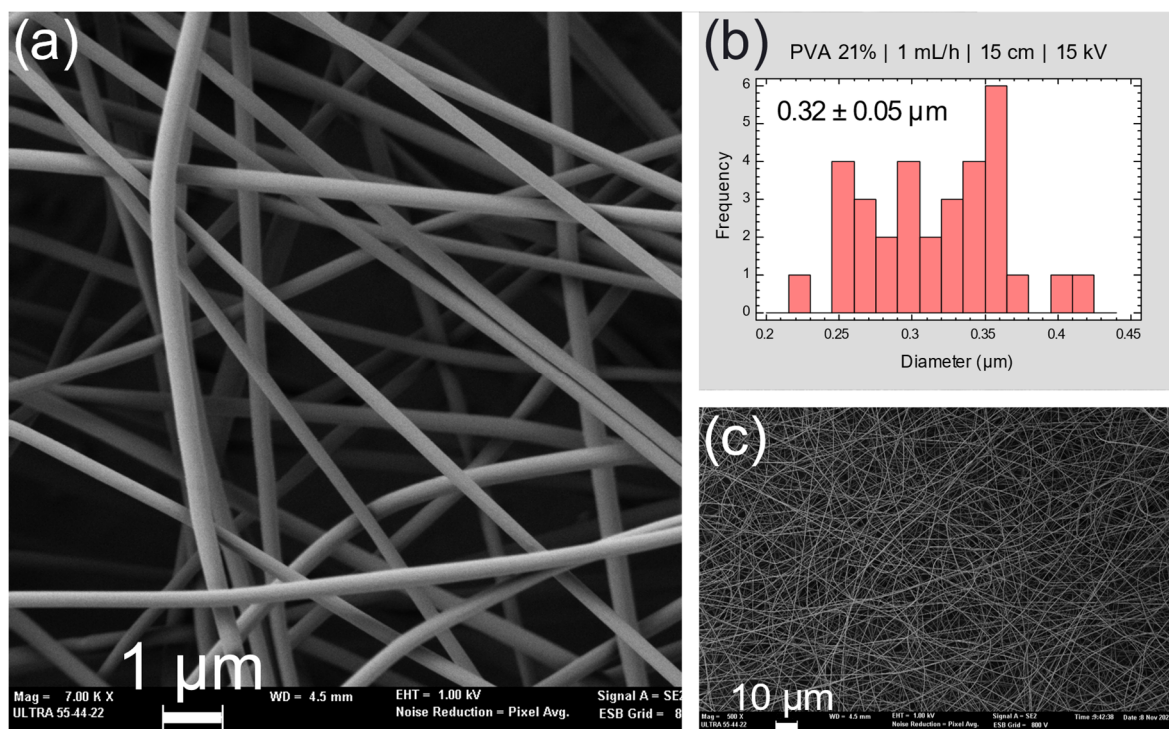


Figure S1. Microfibers of PVA 21% manufactured with flow 1 mL/h at 15 cm and 15 kV by FESEM (a, c) and histogram diameter results (mean ± SD = $0.32 \pm 0.05 \mu\text{m}$; range from 0.217 to 0.415) (b).

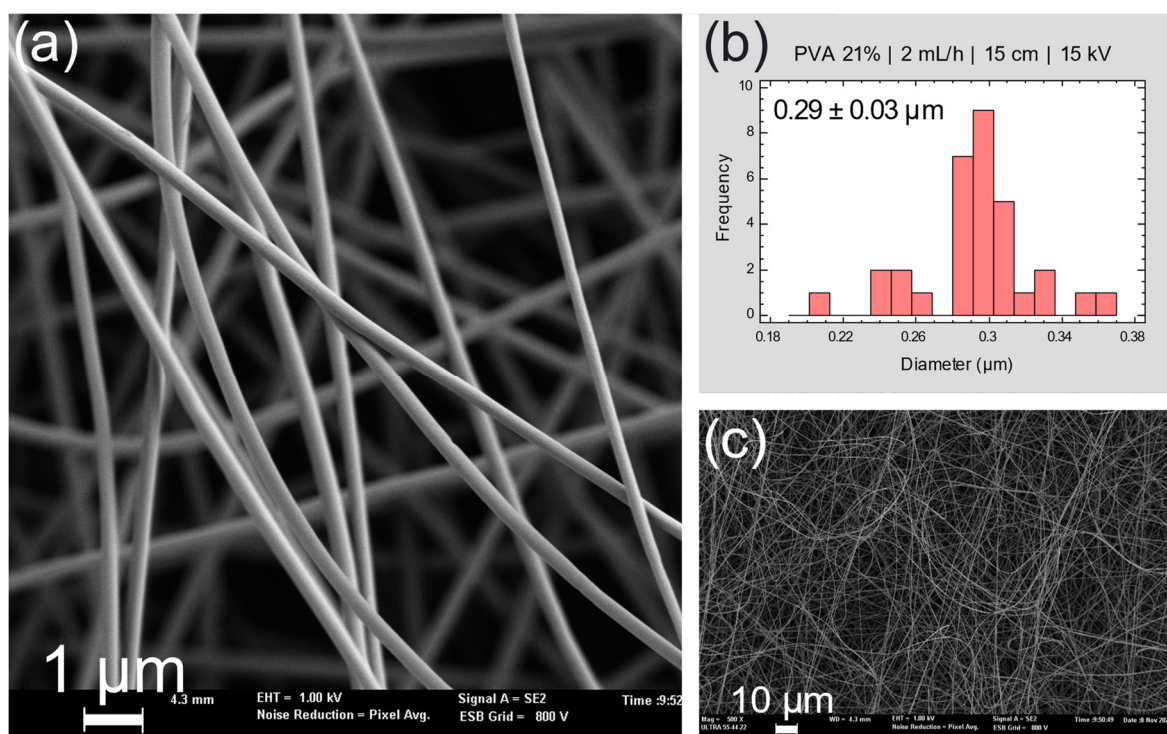


Figure S3. Microfibers of PVA 21% manufactured with flow 2 mL/h at 15 cm and 15 kV by FESEM (a, c) and histogram diameter results (mean \pm SD = $0.29 \pm 0.03 \mu\text{m}$; range from 0.203 to 0.361) (b).

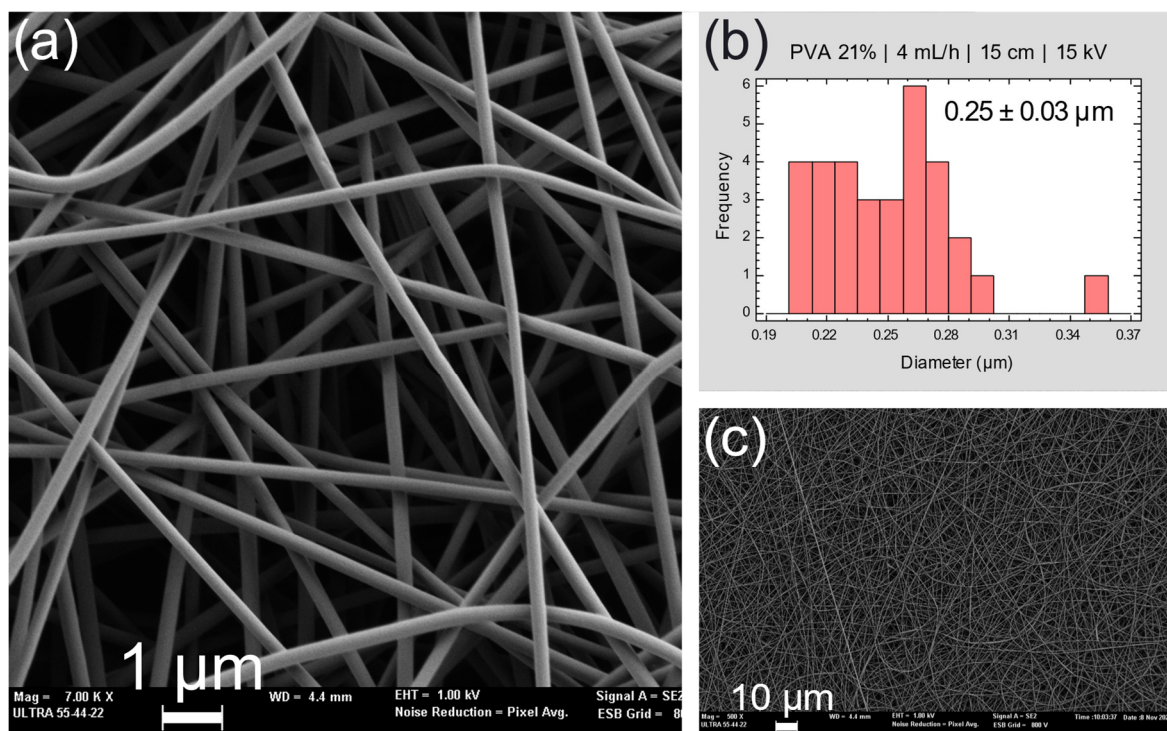


Figure S4. Microfibers of PVA 21% manufactured with flow 4 mL/h at 15 cm and 15 kV by FESEM (a, c) and histogram diameter results (mean \pm SD = $0.25 \pm 0.03 \mu\text{m}$; range from 0.206 to 0.357) (b).

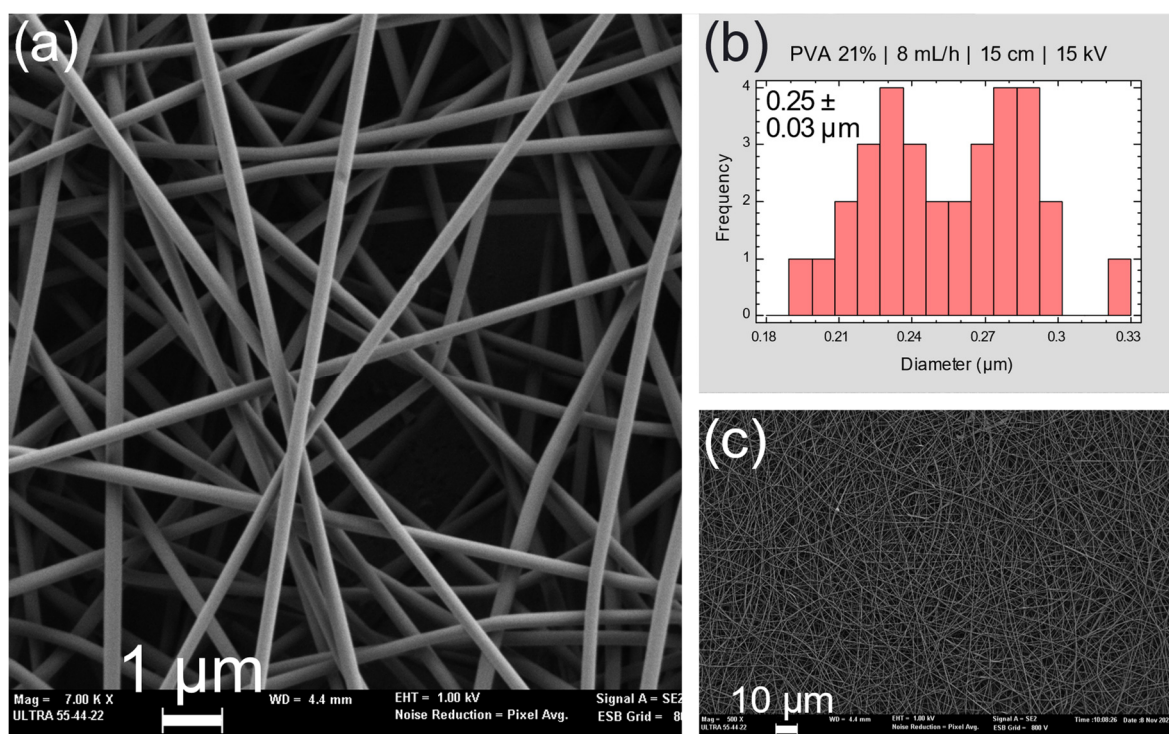


Figure S5. Microfibers of PVA 21% manufactured with flow 8 mL/h at 15 cm and 15 kV by FESEM (a, c) and histogram diameter results (mean \pm SD = $0.26 \pm 0.03 \mu\text{m}$; range from 0.194 to 0.322) (b).

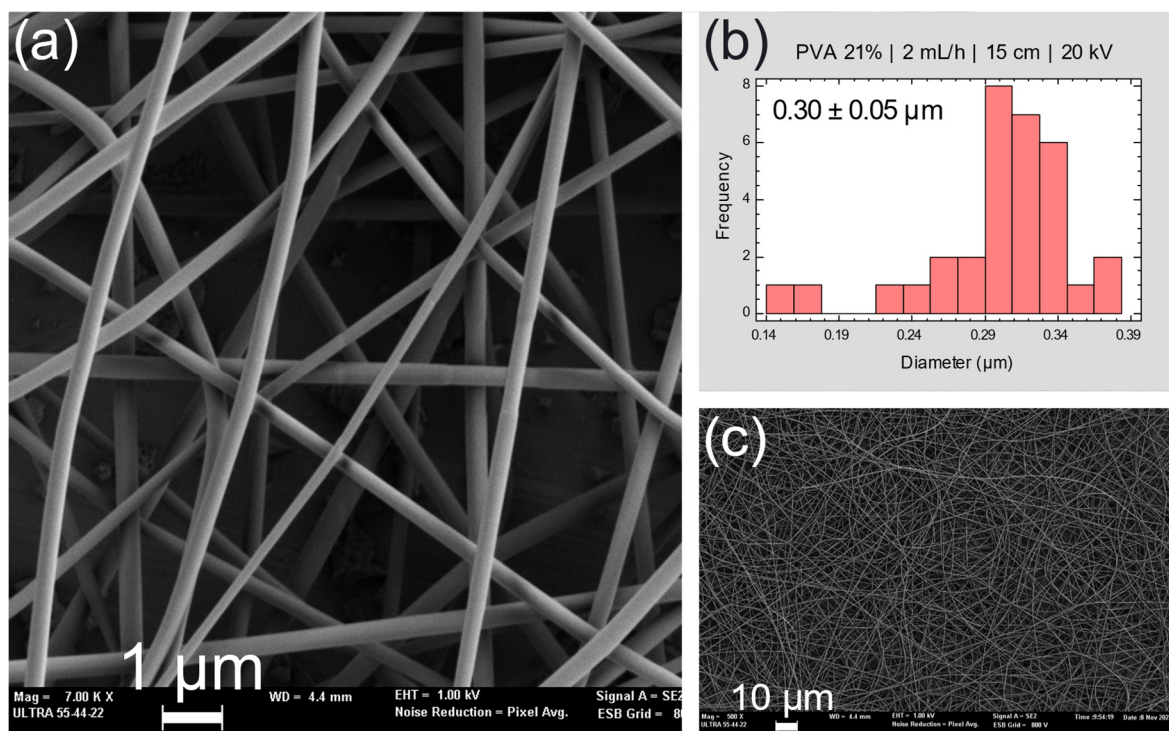


Figure S6. Microfibers of PVA 21% manufactured with flow 2 mL/h at 15 cm and 20 kV by FESEM (a, c) and histogram diameter results (mean \pm SD = $0.30 \pm 0.05 \mu\text{m}$; range from 0.155 to 0.38) (b).

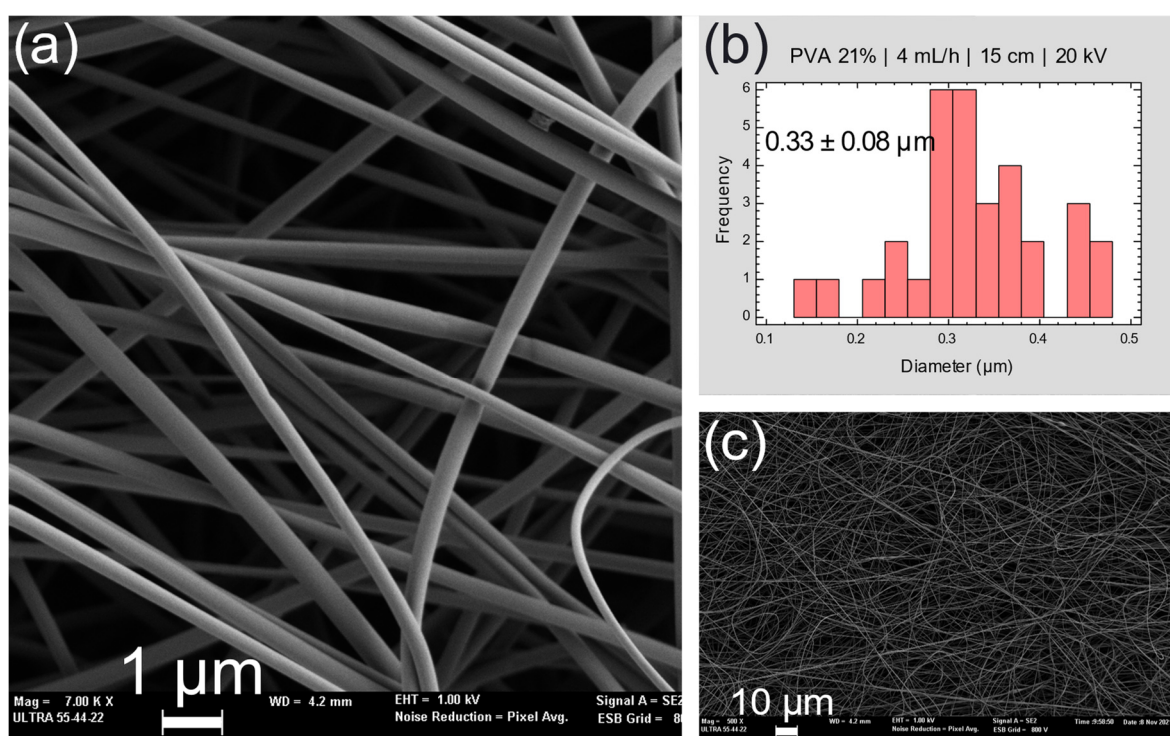


Figure S7. Microfibers of PVA 21% manufactured with flow 4 mL/h at 15 cm and 20 kV by FESEM (a, c) and histogram diameter results (mean ± SD = $0.33 \pm 0.08 \mu\text{m}$; range from 0.152 to 0.464) (b).

C-ES microfibers of PLLA 6% 80:20 with core of mQ water as a function of inner flow rate

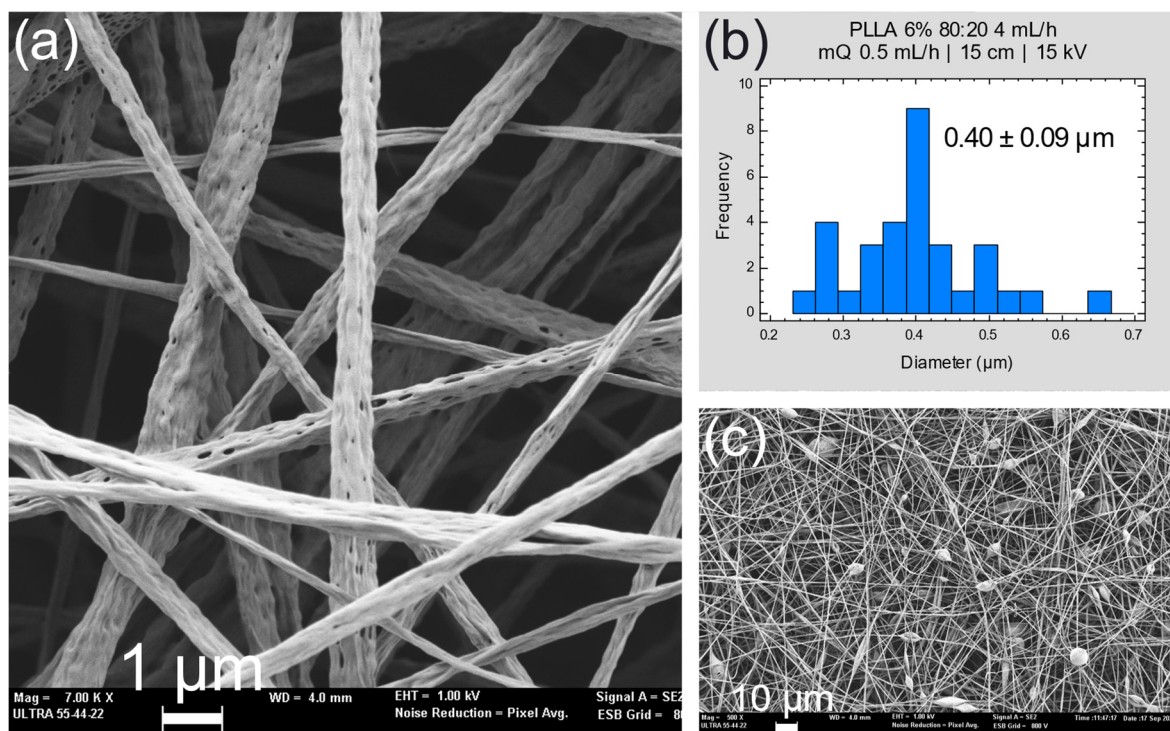


Figure S8. Coaxial microfibers of PLLA 6% chloroform:DMF 80:20 shell and mQ water core manufactured with shell - core flow 4 - 0.5 mL/h at 15 cm and 15 kV by FESEM (a, c) and histogram diameter results (mean ± SD = $0.40 \pm 0.09 \mu\text{m}$; range from 0.255 to 0.664) (b).

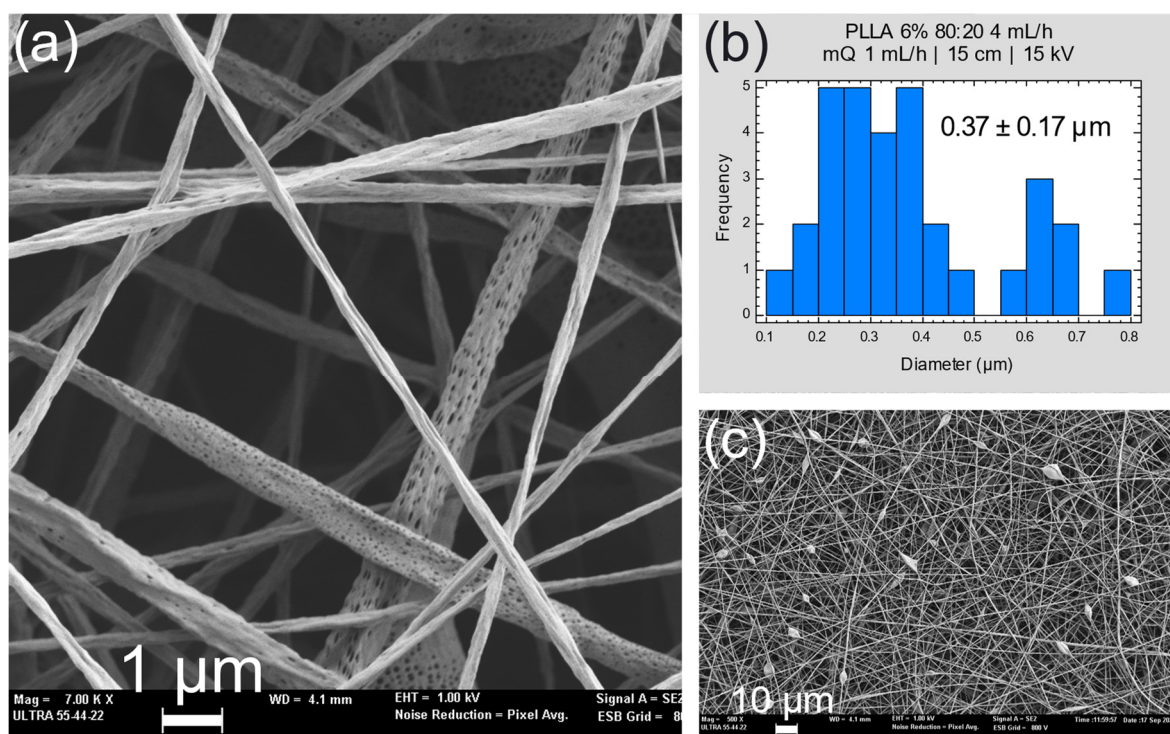


Figure S9. Coaxial microfibers of PLLA 6% chloroform:DMF 80:20 shell and mQ water core manufactured with shell – core flow 4 – 1 mL/h at 15 cm and 15 kV by FESEM (a, c) and histogram diameter results (mean \pm SD = $0.37 \pm 0.17 \mu\text{m}$; range from 0.137 to 0.758) (b).

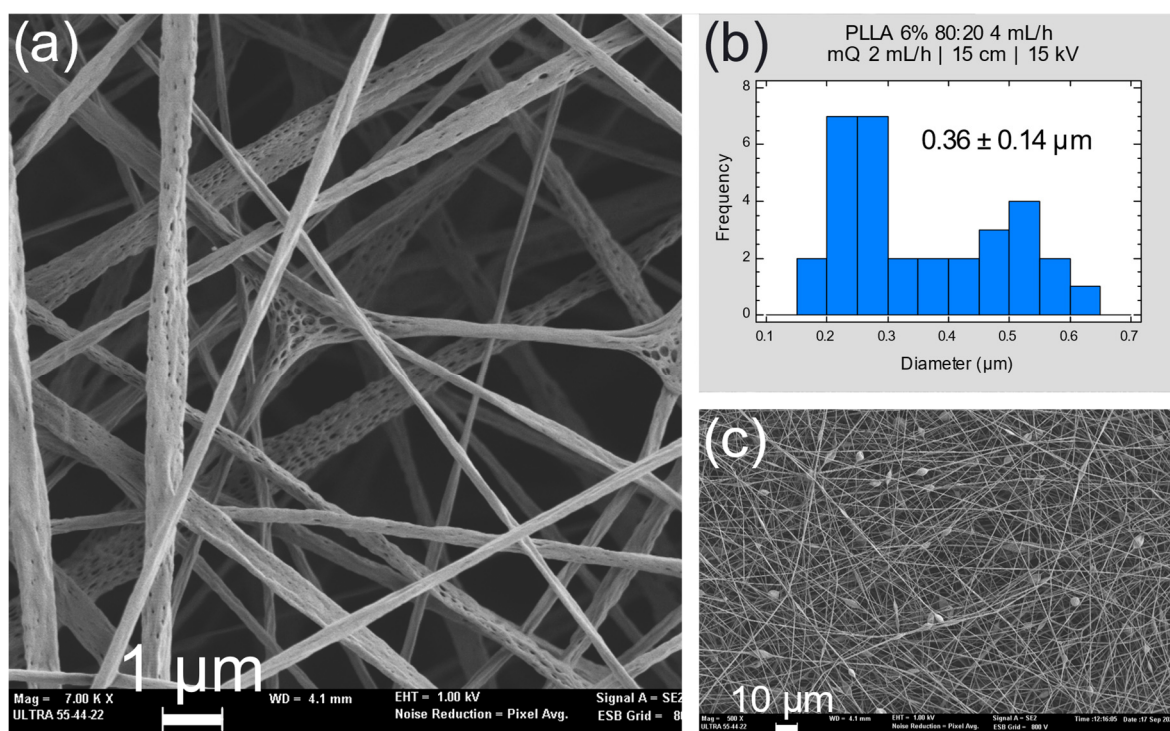


Figure S10. Coaxial microfibers of PLLA 6% chloroform:DMF 80:20 shell and mQ water core manufactured with shell - core flow 4 - 2 mL/h at 15 cm and 15 kV by FESEM (a, c) and histogram diameter results (mean \pm SD = $0.36 \pm 0.14 \mu\text{m}$; range from 0.171 to 0.63) (b).

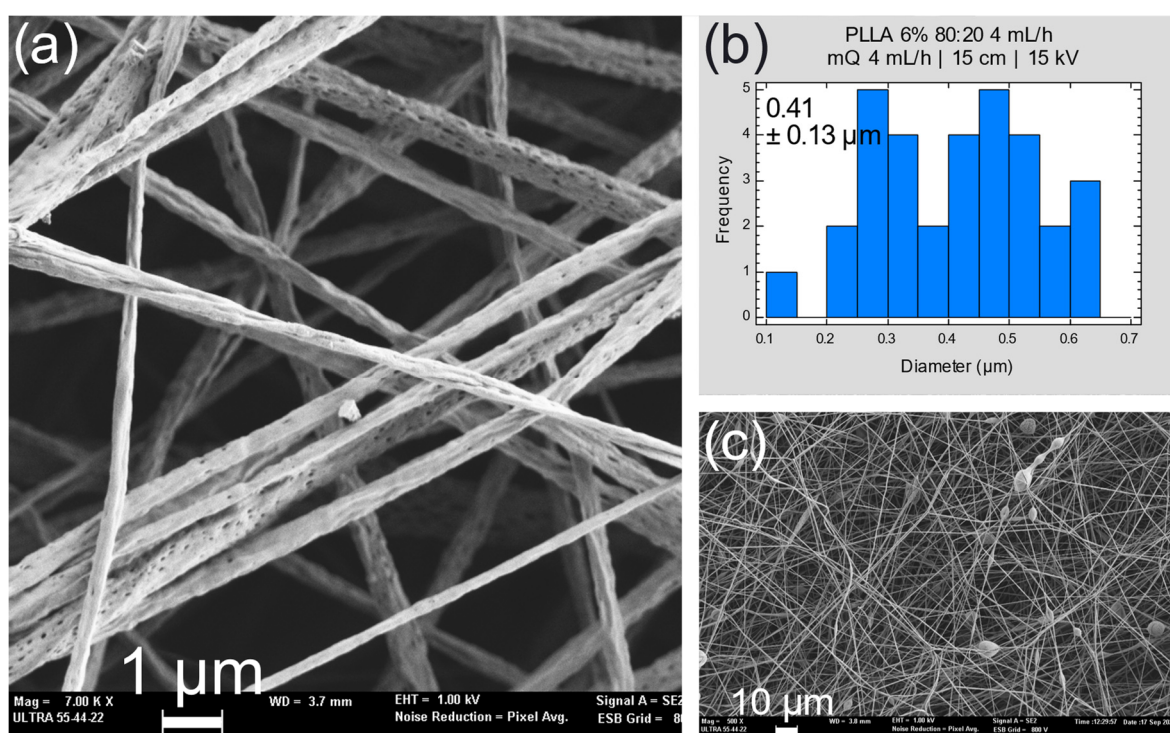


Figure S11. Coaxial microfibers of PLLA 6% chloroform:DMF 80:20 shell and mQ water core manufactured with shell – core same flow 4 - 4 mL/h at 15 cm and 15 kV by FESEM (a, c) and histogram diameter results (mean \pm SD = $0.41 \pm 0.13 \mu\text{m}$; range from 0.149 to 0.647) (b).

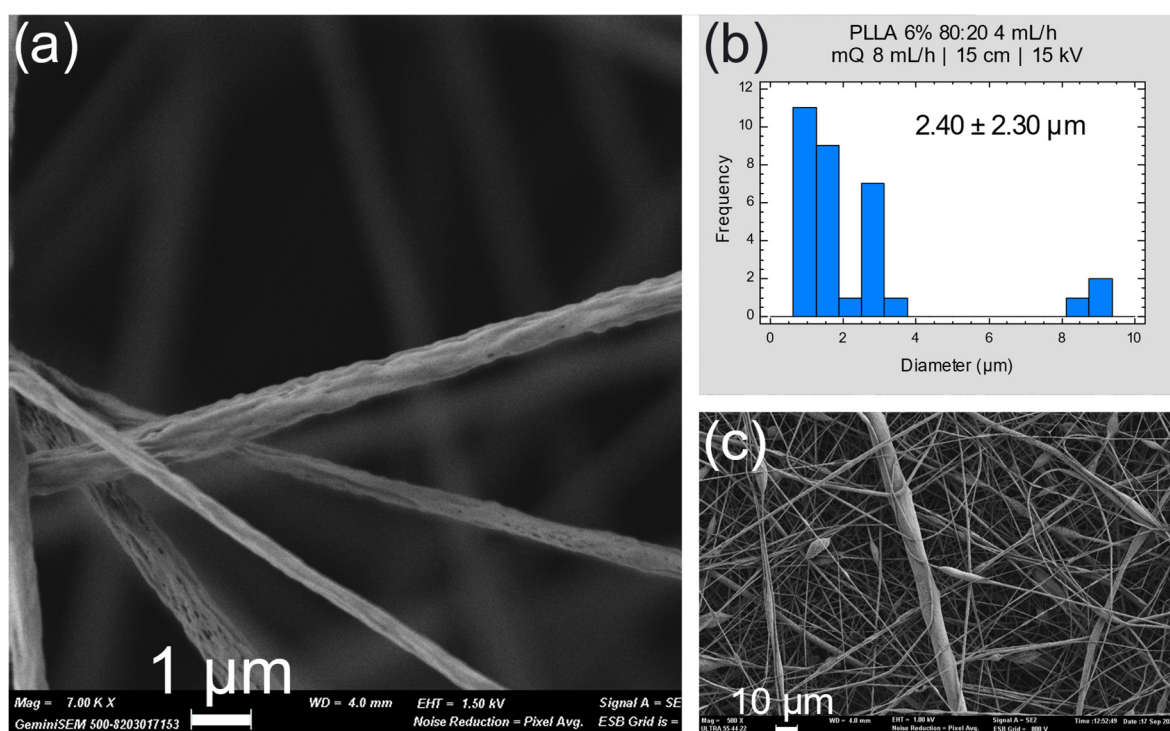


Figure S12. Coaxial microfibers of PLLA 6% chloroform:DMF 80:20 shell and mQ water core manufactured with shell – core flow 4 - 8 mL/h at 15 cm and 15 kV by FESEM (a, c) and histogram diameter results (mean \pm SD = $2.4 \pm 2.3 \mu\text{m}$; range from 0.684 to 9.213) (b).

C-ES microfibers of PLLA 6% 80:20 | PVA 8% as a function of inner flow rate and voltage

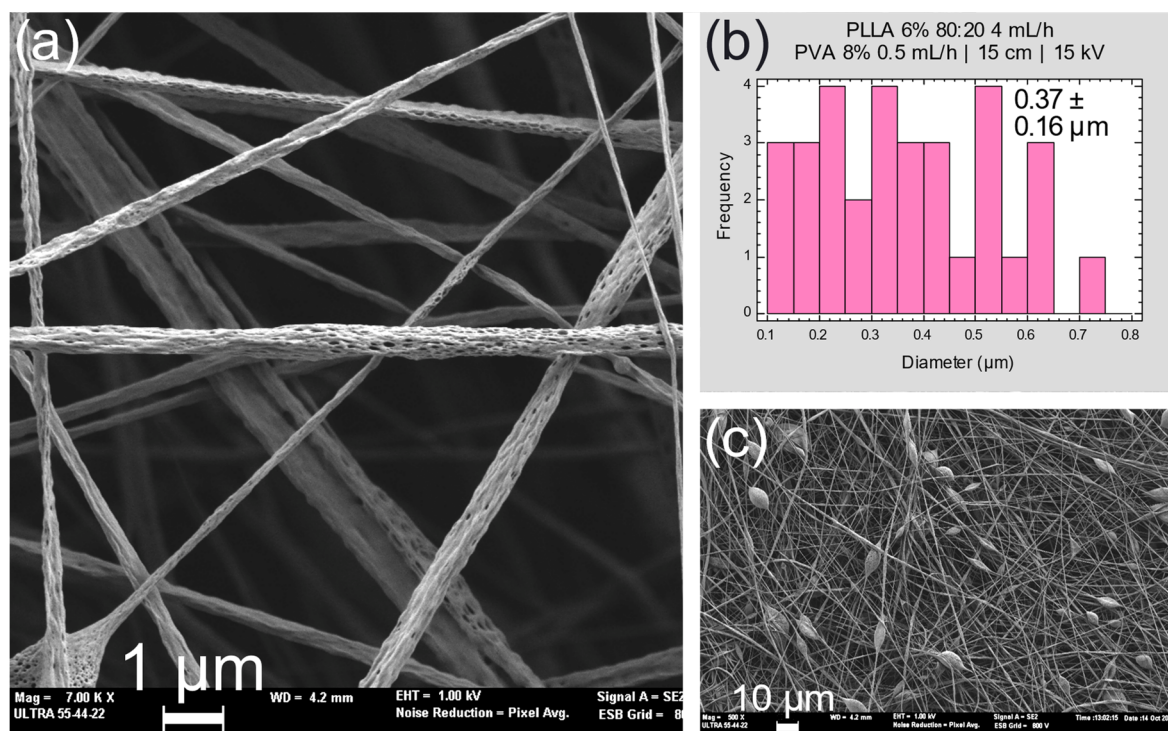


Figure S13. Coaxial microfibers of PLLA 6% chloroform:DMF 80:20 shell and PVA 8% core manufactured with shell – core flow 4 – 0.5 mL/h at 15 cm and 15 kV by FESEM (a, c) and histogram diameter results (mean \pm SD = $0.37 \pm 0.16 \mu\text{m}$; range from 0.128 to 0.732) (b).

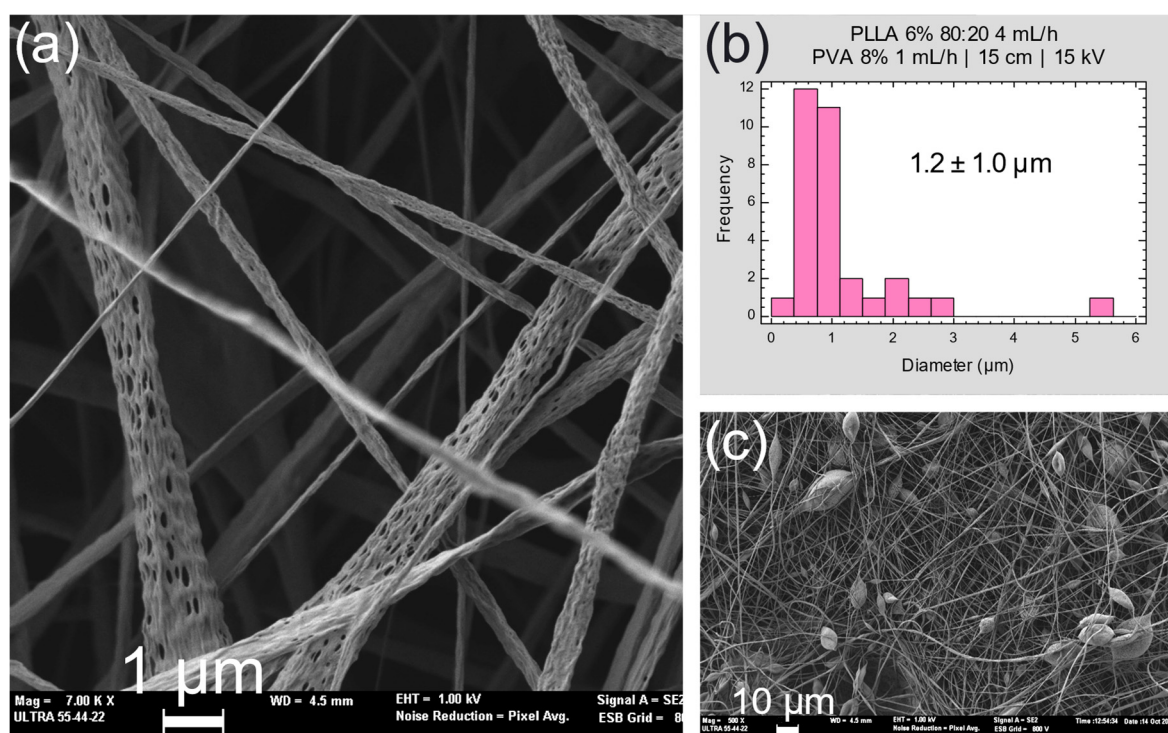


Figure S14. Coaxial microfibers of PLLA 6% chloroform:DMF 80:20 shell and PVA 8% core manufactured with shell – core flow 4 – 1 mL/h at 15 cm and 15 kV by FESEM (a, c) and histogram diameter results (mean \pm SD = $1.2 \pm 1.0 \mu\text{m}$; range from 0.356 to 5.517) (b).

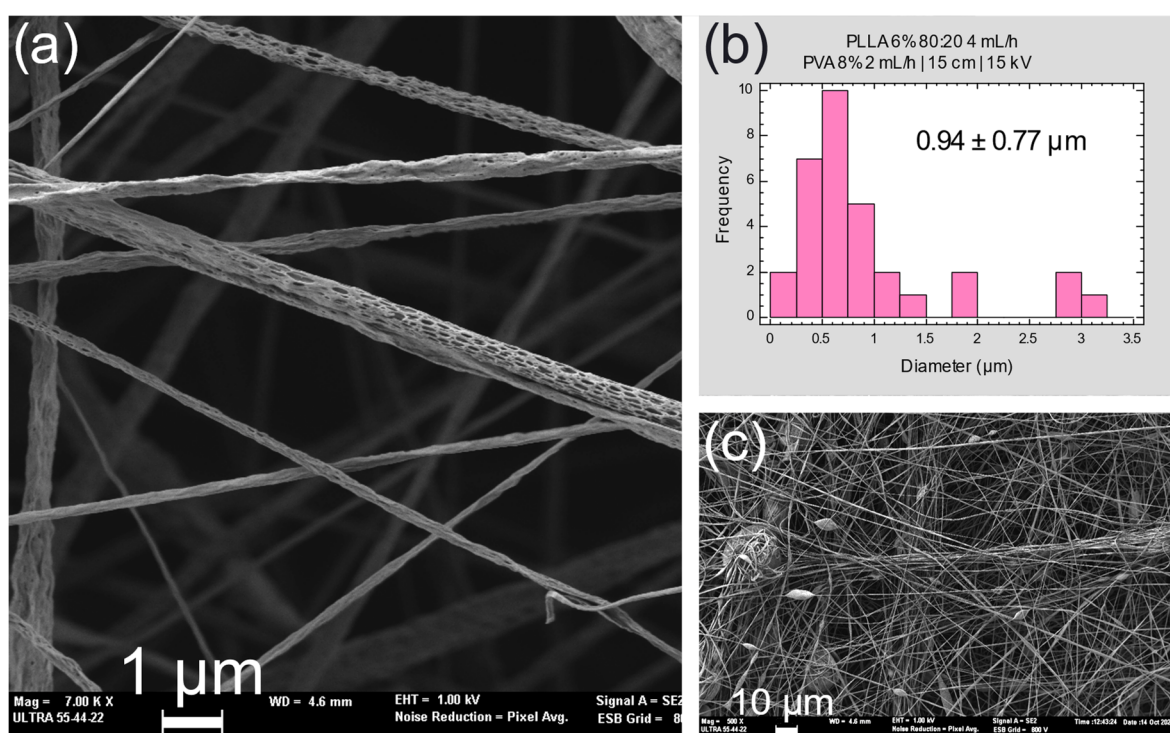


Figure S15. Coaxial microfibers of PLLA 6% chloroform:DMF 80:20 shell and PVA 8% core manufactured with shell – core flow 4 – 2 mL/h at 15 cm and 15 kV by FESEM (a, c) and histogram diameter results (mean \pm SD = $0.94 \pm 0.77 \mu\text{m}$; range from 0.229 to 3.174) (b).

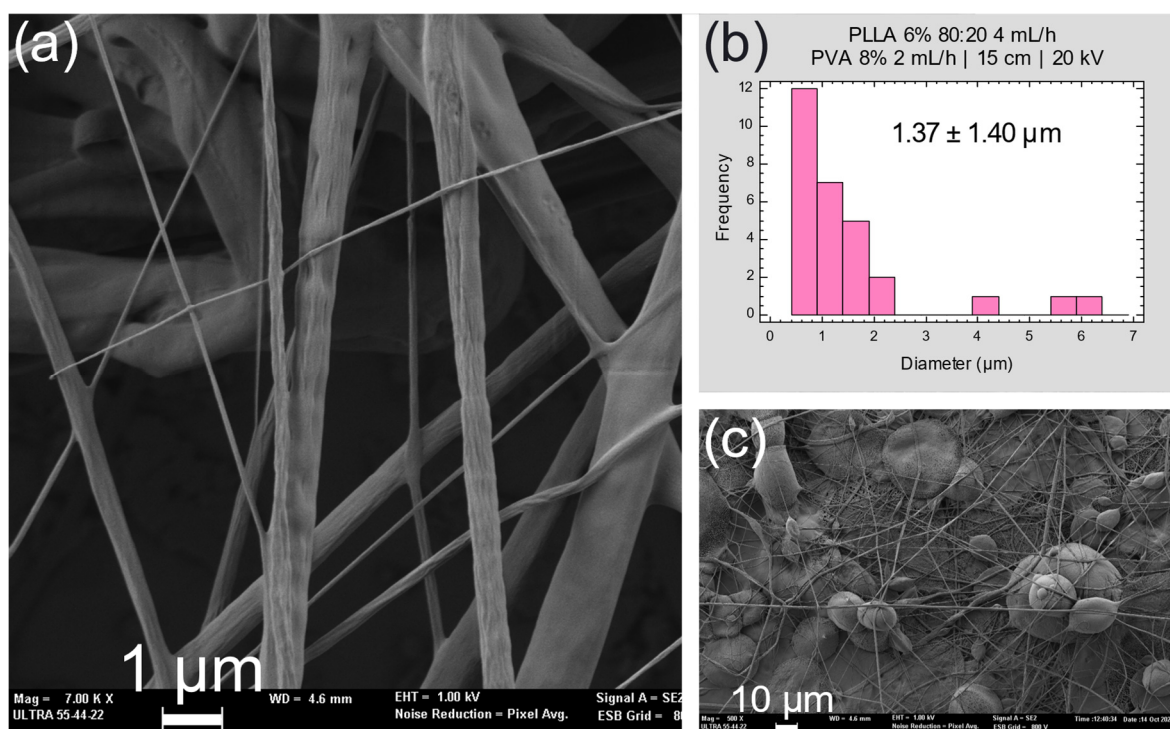


Figure S16. Coaxial microfibers of PLLA 6% chloroform:DMF 80:20 shell and PVA 8% core manufactured with shell – core flow 4 – 2 mL/h at 15 cm and 20 kV by FESEM (a, c) and histogram diameter results (mean \pm SD = $1.37 \pm 1.4 \mu\text{m}$; range from 0.243 to 6.108) (b).

C-ES microfibers of PLLA 9% 80:20 | PVA 8% as a function of flow rate and voltage

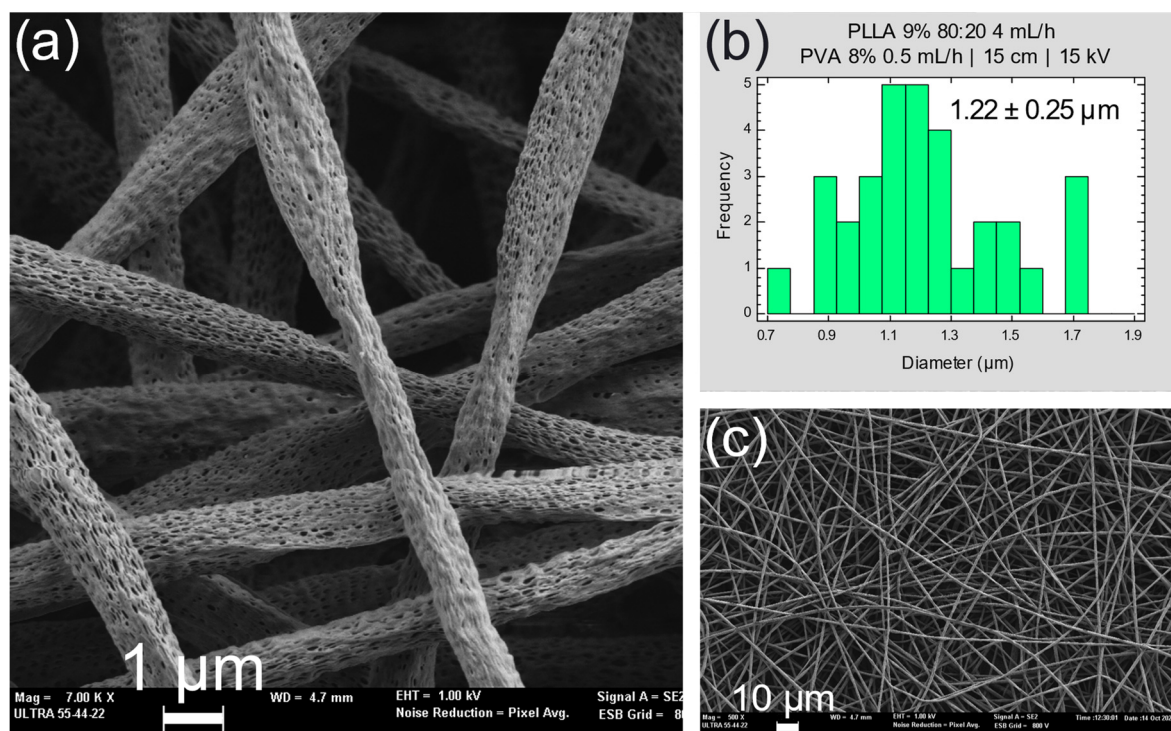


Figure S17. Coaxial microfibers of PLLA 9% chloroform:DMF 80:20 shell and PVA 8% core manufactured with shell – core flow 4 – 0.5 mL/h at 15 cm and 15 kV by FESEM (a, c) and histogram diameter results (mean \pm SD = $1.22 \pm 0.25 \mu\text{m}$; range from 0.75 to 1.736) (b).

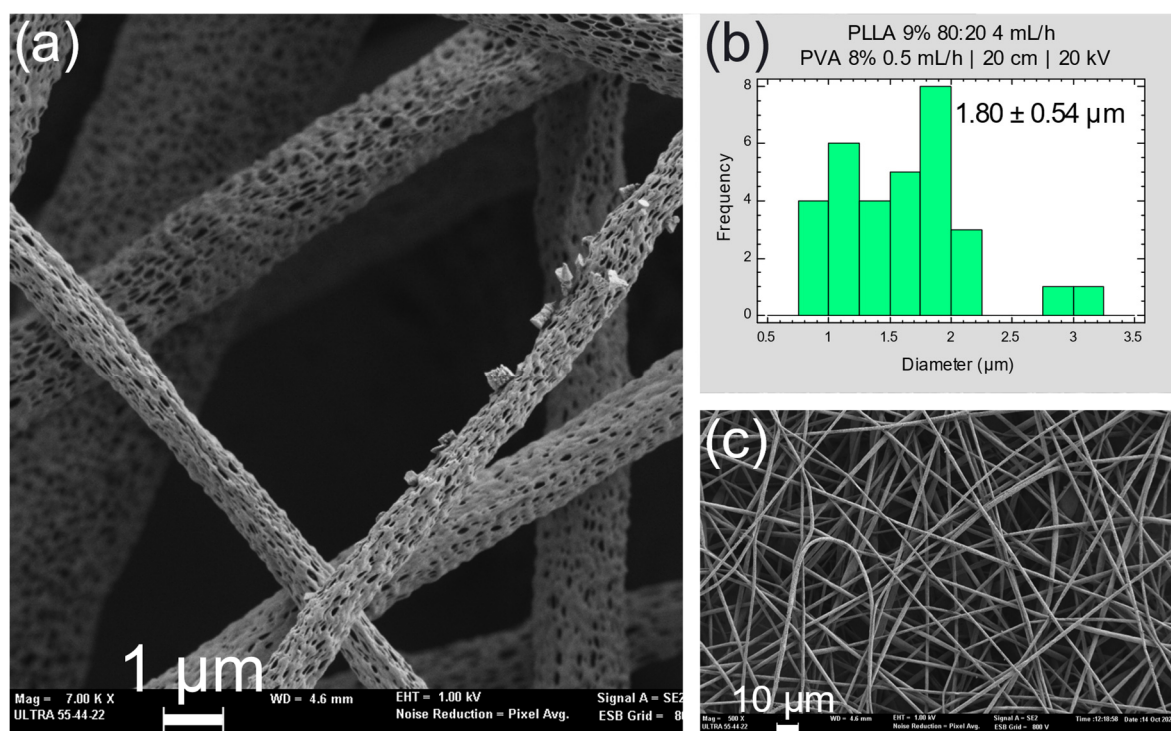


Figure S18. Coaxial microfibers of PLLA 9% chloroform:DMF 80:20 shell and PVA 8% core manufactured with shell – core flow 4 – 0.5 mL/h at 20 cm and 20 kV by FESEM (a, c) and histogram diameter results (mean \pm SD = $1.80 \pm 0.54 \mu\text{m}$; range from 0.79 to 3.233) (b).

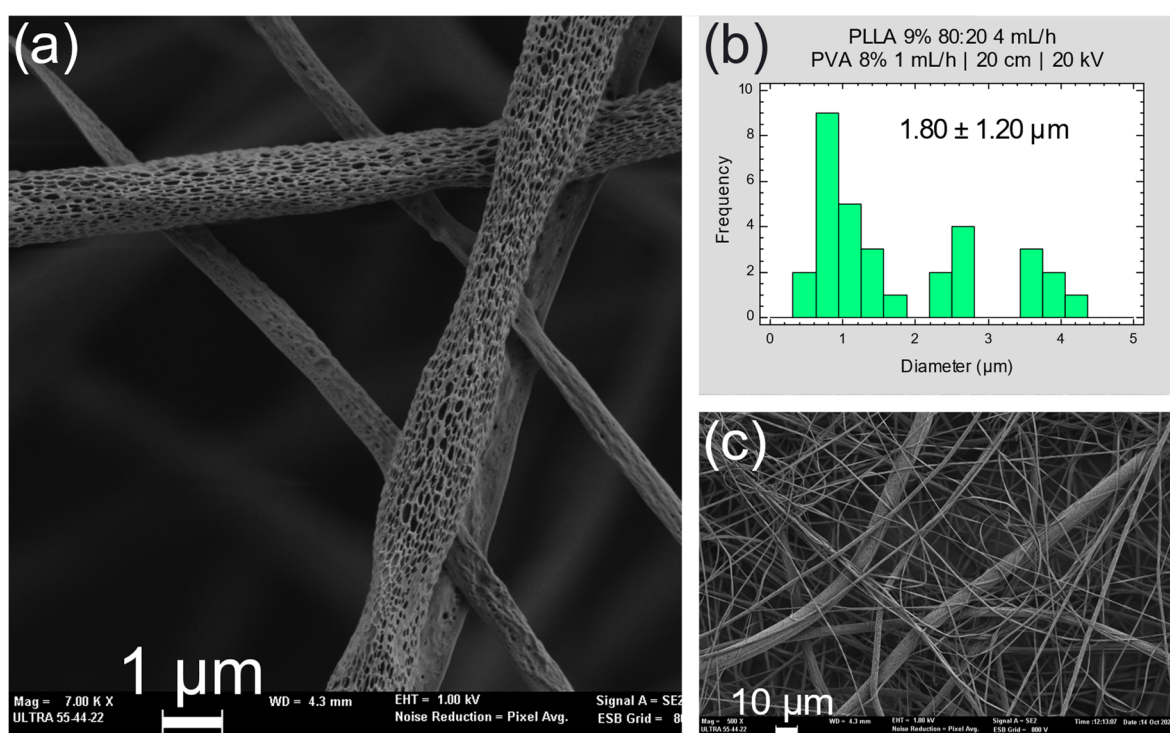


Figure S19. Coaxial microfibers of PLLA 9% chloroform:DMF 80:20 shell and PVA 8% core manufactured with shell – core flow 4 – 1 mL/h at 20 cm and 20 kV by FESEM (a, c) and histogram diameter results (mean \pm SD = $1.80 \pm 1.20 \mu\text{m}$; range from 0.555 to 4.312) (b).

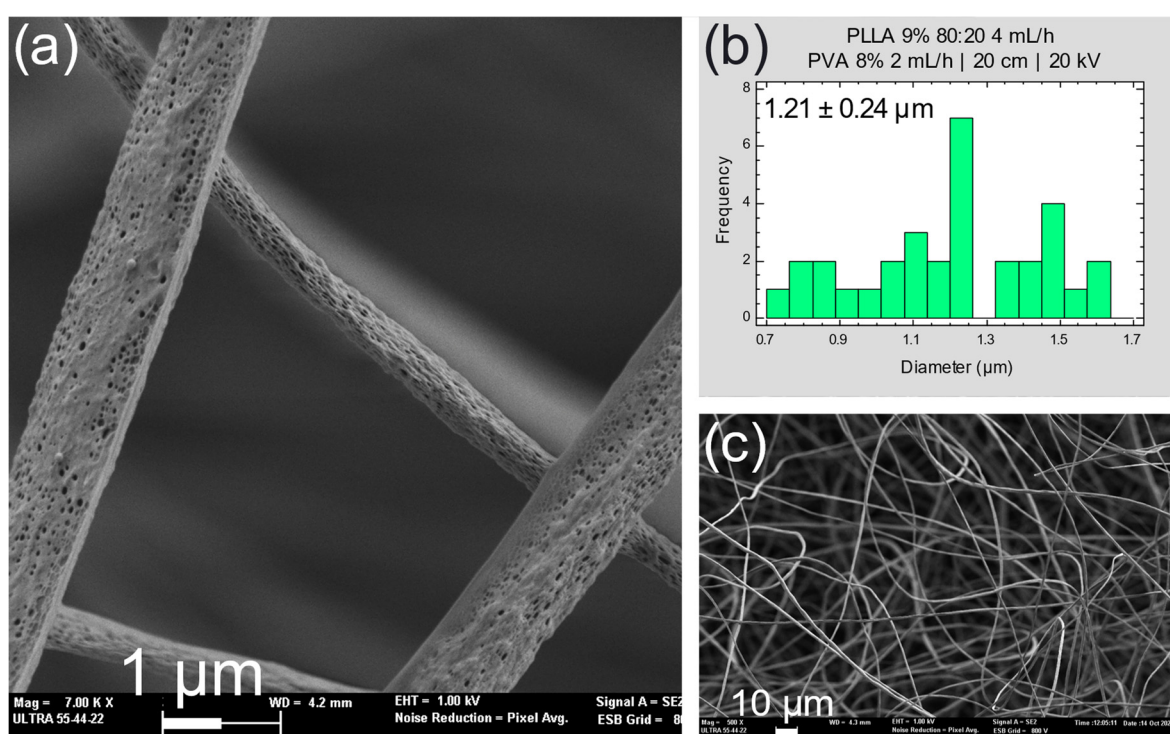


Figure S20. Coaxial microfibers of PLLA 9% chloroform:DMF 80:20 shell and PVA 8% core manufactured with shell – core flow 4 – 2 mL/h at 20 cm and 20 kV by FESEM (a, c) and histogram diameter results (mean \pm SD = $1.21 \pm 0.24 \mu\text{m}$; range from 0.75 to 1.579) (b).

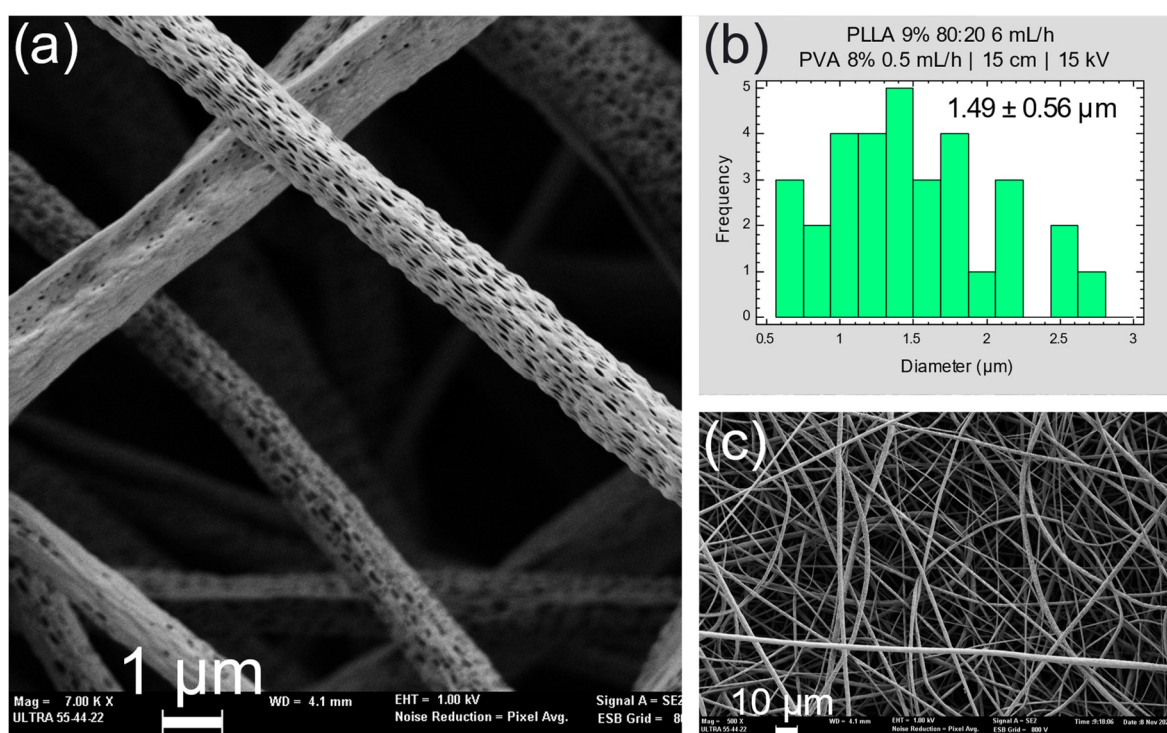


Figure S21. Coaxial microfibers of PLLA 9% chloroform:DMF 80:20 shell and PVA 8% core manufactured with shell – core flow 6 – 0.5 mL/h at 15 cm and 15 kV by FESEM (a,c) and histogram diameter results (mean \pm SD = $1.49 \pm 0.56 \mu\text{m}$; range from 0.566 to 2.657) (b).

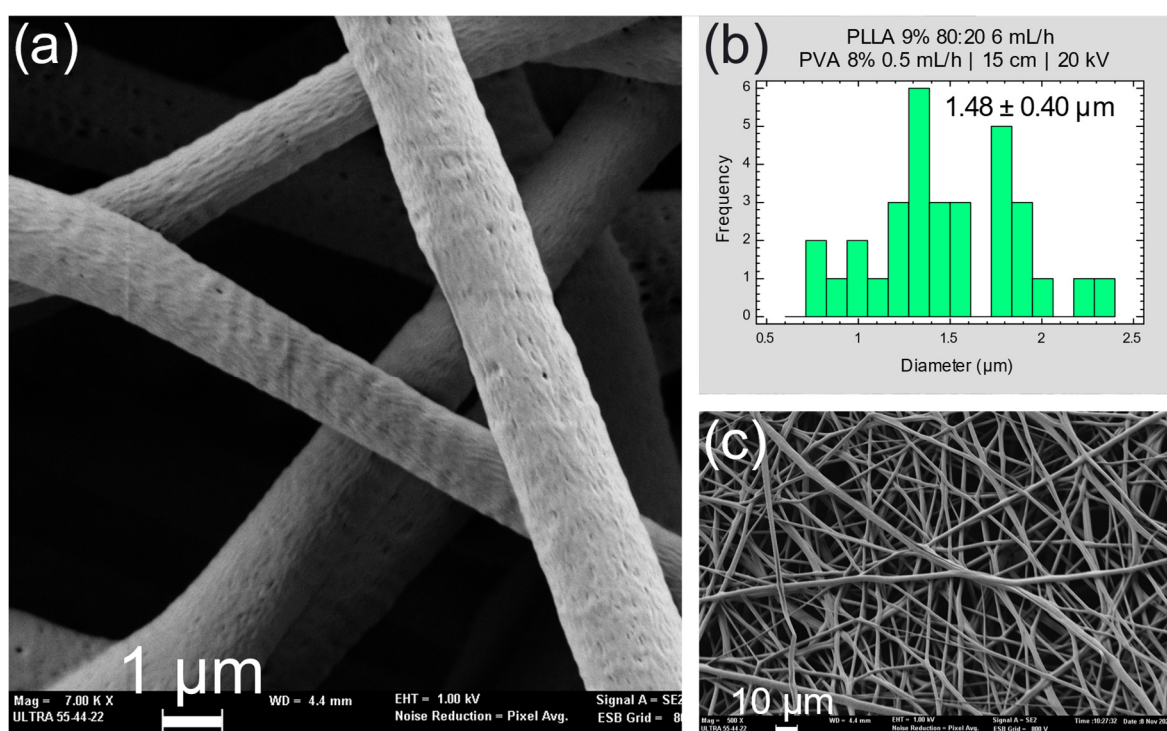


Figure S22. Coaxial microfibers of PLLA 9% chloroform:DMF 80:20 shell and PVA 8% core manufactured with shell – core flow 6 – 0.5 mL/h at 15 cm and 20 kV by FESEM (a,b) and histogram diameter results (mean \pm SD = $1.48 \pm 0.40 \mu\text{m}$; range from 0.774 to 2.3 for) (b).

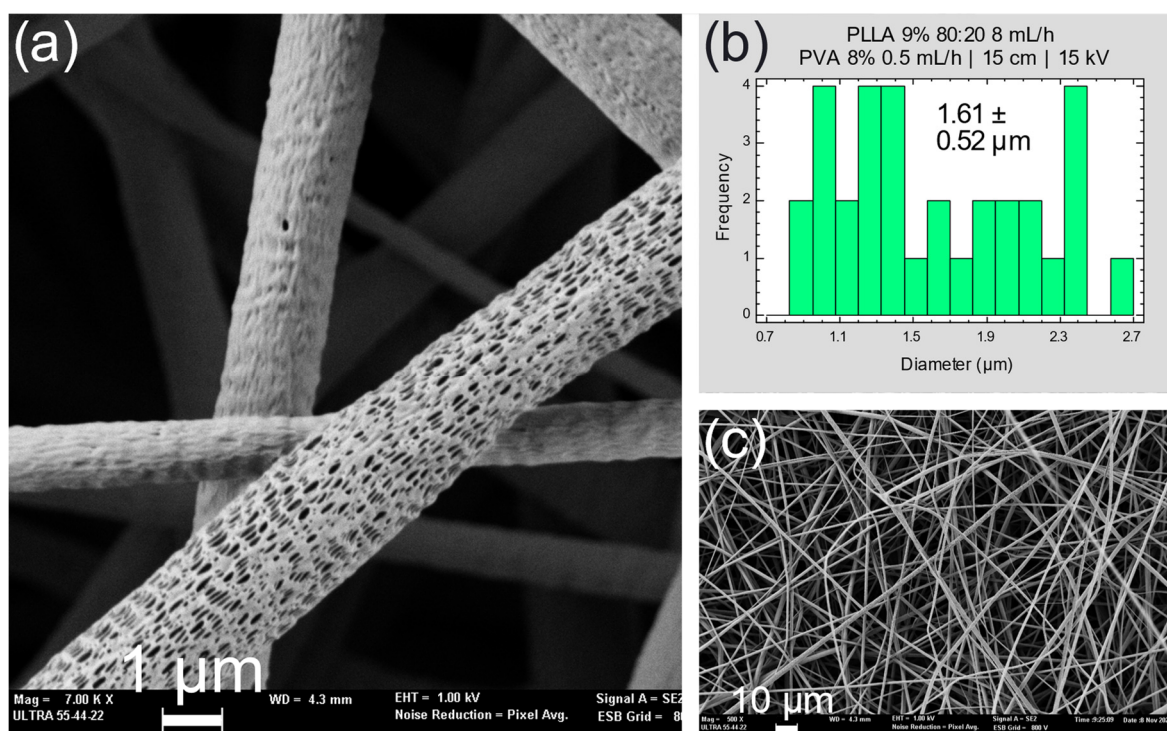


Figure S23. Coaxial microfibers of PLLA 9% chloroform:DMF 80:20 shell and PVA 8% core manufactured with shell – core flow 8 – 0.5 mL/h at 15 cm and 15 kV by FESEM (a, c) and histogram diameter results (mean \pm SD = $1.61 \pm 0.52 \mu\text{m}$; range from 0.83 to 2.585) (b).

C-ES microfibers of PLLA 9% 100:0 | PVA 8% as a function of flow rate and voltage

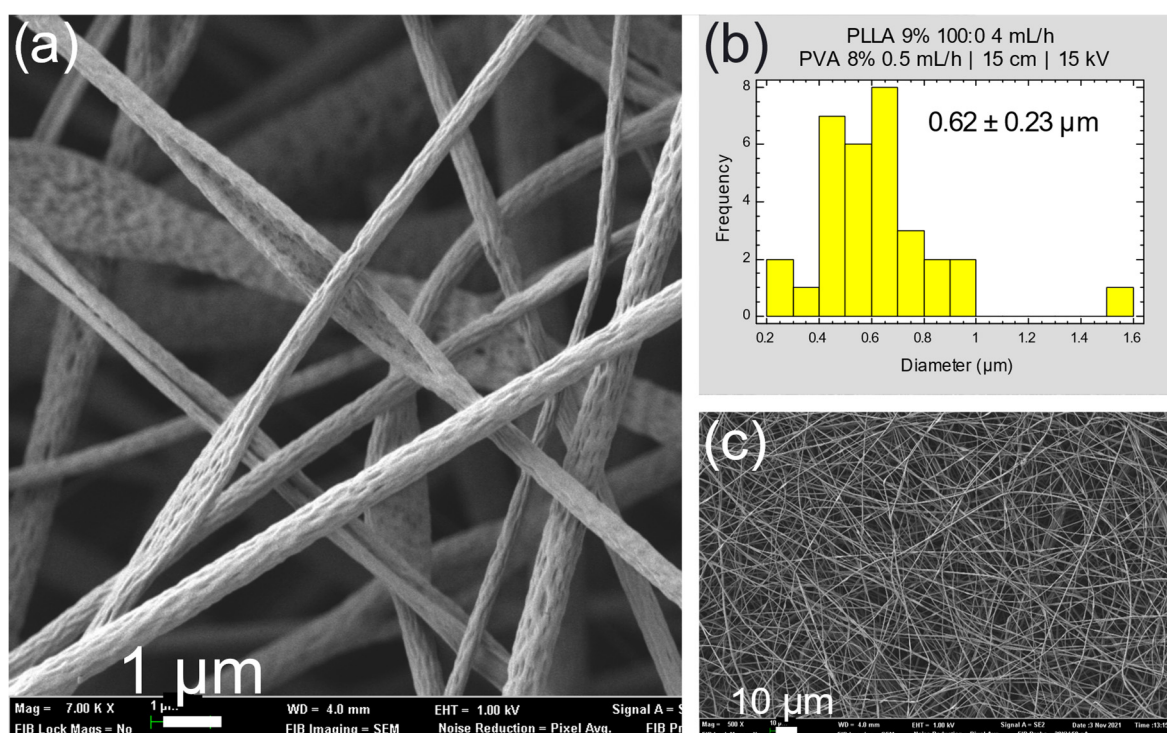


Figure S24. Coaxial microfibers of PLLA 9% chloroform:DMF 100:0 shell and PVA 8% core manufactured with shell – core flow 4 – 0.5 mL/h at 15 cm and 15 kV by FESEM (a, c) and histogram diameter results (mean \pm SD = $0.62 \pm 0.23 \mu\text{m}$; range from 0.238 to 1.501) (b).

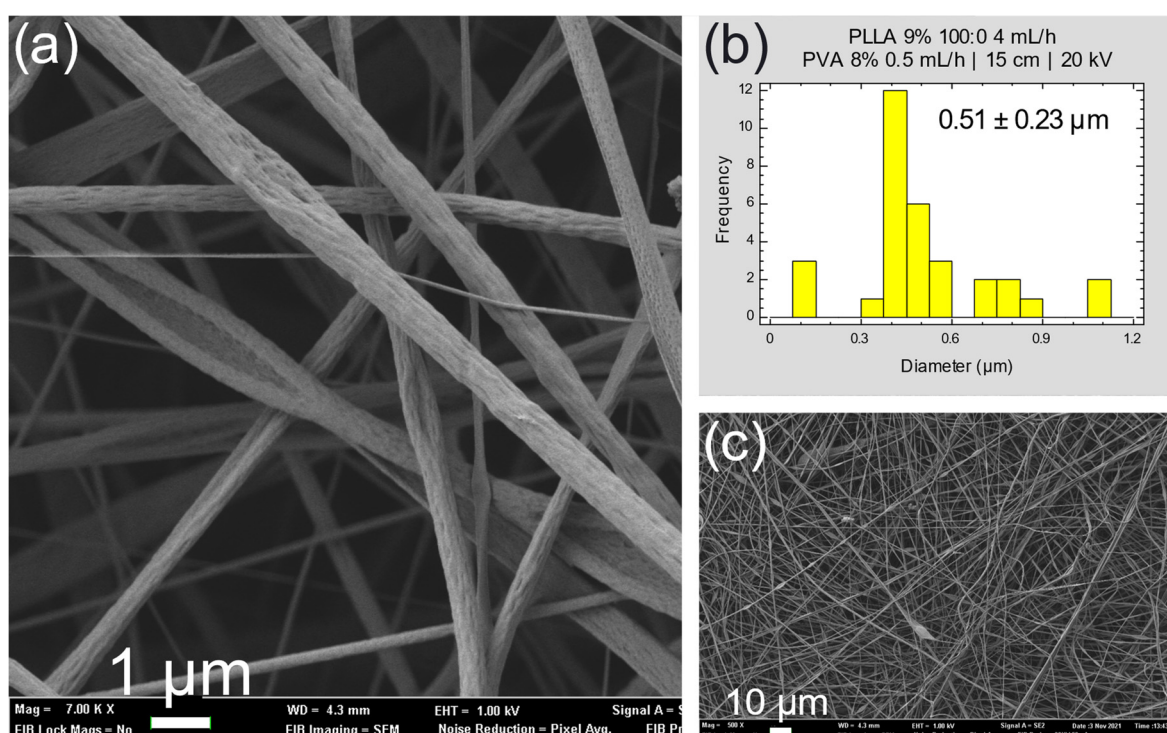


Figure S25. Coaxial microfibers of PLLA 9% chloroform:DMF 100:0 shell and PVA 8% core manufactured with shell – core flow 4 – 0.5 mL/h at 15 cm and 20 kV by FESEM (a, c) and histogram diameter results (mean \pm SD = $0.51 \pm 0.23 \mu\text{m}$; range from 0.092 to 1.088) (b).

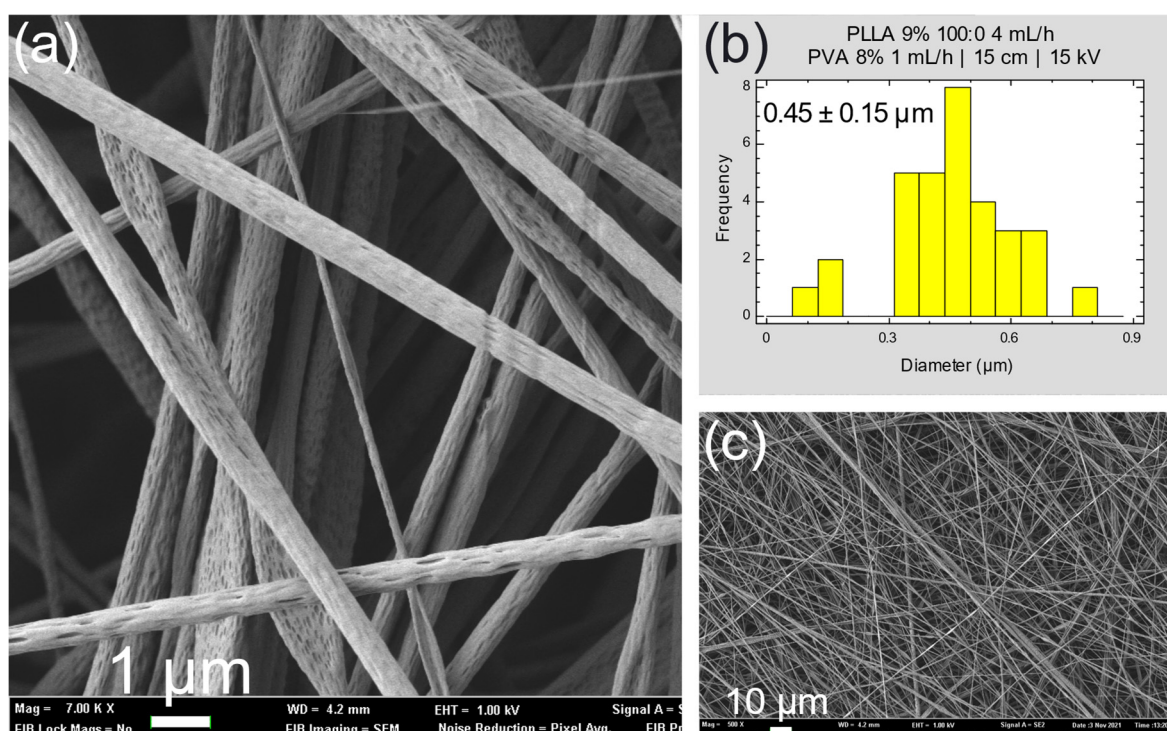


Figure S26. Coaxial microfibers of PLLA 9% chloroform:DMF 100:0 shell and PVA 8% core manufactured with shell – core flow 4 – 1 mL/h at 15 cm and 15 kV by FESEM (a, c) and histogram diameter results (mean \pm SD = $0.45 \pm 0.15 \mu\text{m}$; range from 0.121 to 0.774) (b).

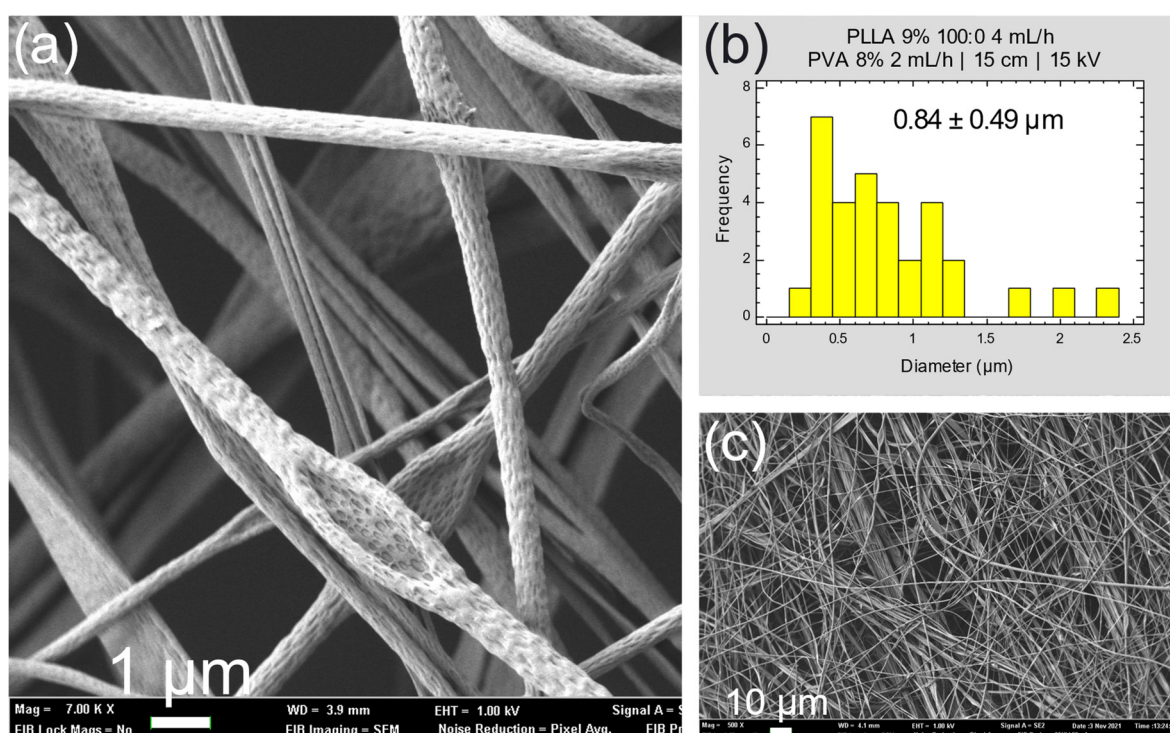


Figure S27. Coaxial microfibers of PLLA 9% chloroform:DMF 100:0 shell and PVA 8% core manufactured with shell – core flow 4 – 2 mL/h at 15 cm and 15 kV by FESEM (a, c) and histogram diameter results (mean \pm SD = $0.84 \pm 0.49 \mu\text{m}$; range from 0.299 to 2.278) (b).

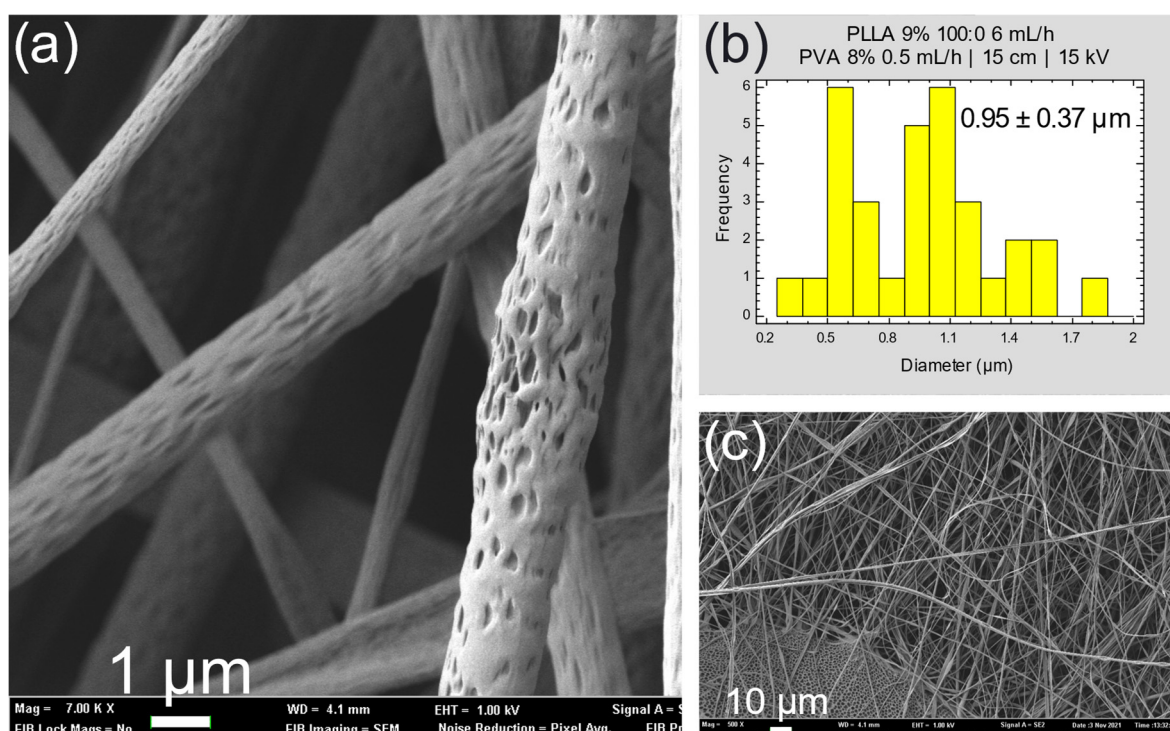


Figure S28. Coaxial microfibers of PLLA 9% chloroform:DMF 100:0 shell and PVA 8% core manufactured with shell – core flow 6 – 0.5 mL/h at 15 cm and 15 kV by FESEM (a, c) and histogram diameter results (mean \pm SD = $0.95 \pm 0.37 \mu\text{m}$; range from 0.256 to 1.781) (b).

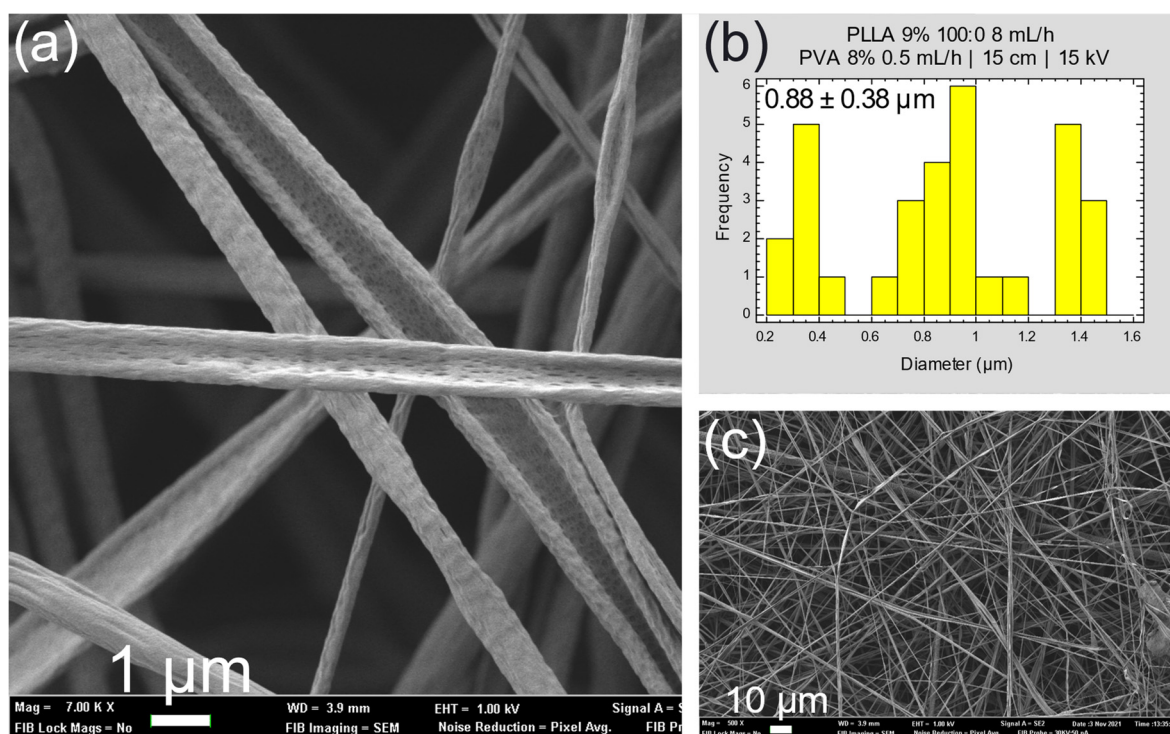


Figure S29. Coaxial microfibers of PLLA 9% chloroform:DMF 100:0 shell and PVA 8% core manufactured with shell – core flow 8 – 0.5 mL/h at 15 cm and 15 kV by FESEM (a, c) and histogram diameter results (mean \pm SD = $0.88 \pm 0.38 \mu\text{m}$; range from 0.275 to 1.474) (b).