



## Supporting Information

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### Needleless Electrohydrodynamic Cojetting of Bicompartmental Particles and Fibers from an Extended Fluid Interface

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((Supporting Information should be included here for submission only; for publication, please provide Supporting Information as a separate PDF file.))

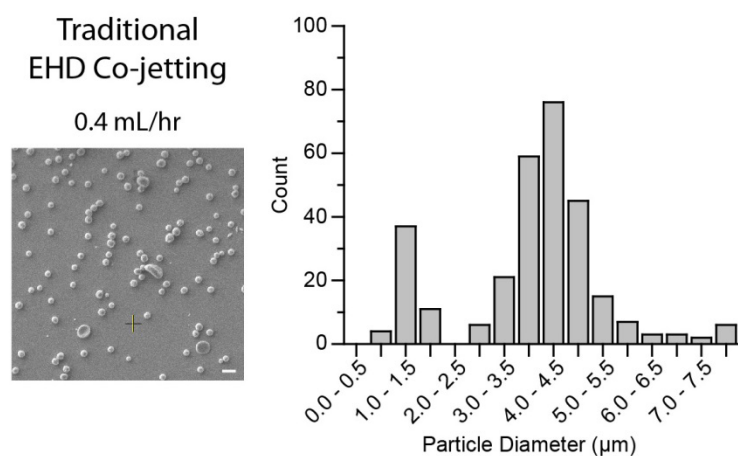
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## Supporting Information

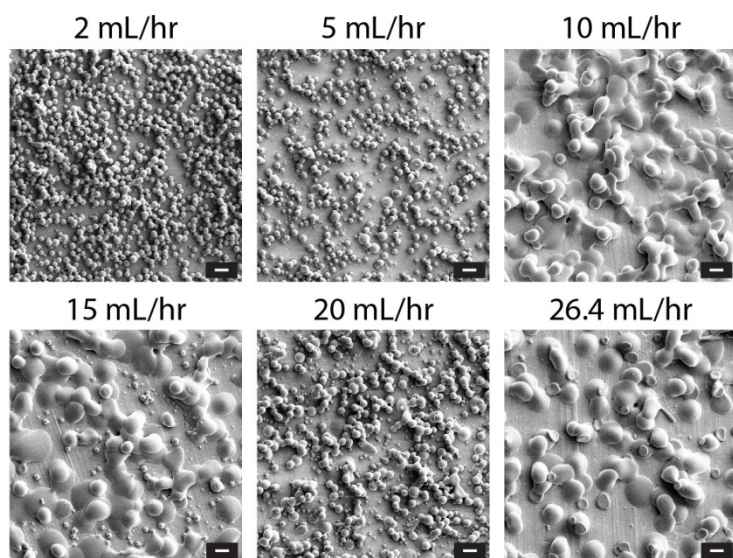
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### Needle-less electrohydrodynamic co-jetting of bicompartamental particles and fibers

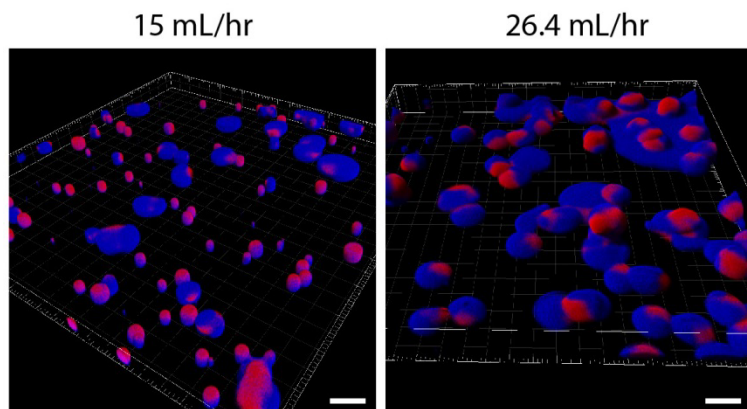
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*Figure S1.* Microparticles fabricated using traditional EHD co-jetting technique. Parallel capillaries were utilized to obtain bicompartamental particles. A stable cone-jet is obtained at  $0.4 \text{ ml hr}^{-1}$ , and produces particles of a similar morphology and particle size distribution as particles fabricated using the needle-less high-throughput co-jetting device (Figure 3).



*Figure S2.* The effect of flow rate on resultant particle morphology. At flow rates of 2.0 to 5 ml hr<sup>-1</sup>, particles with a spherical morphology were produced. At flow rates between 10 and 20 ml hr<sup>-1</sup> a mixture of spherical particles and flattened disc morphologies were observed. The 26.4 ml hr<sup>-1</sup> flow rate contained both discs and red blood cell shaped particles. Scale bars indicate 10 μm.



*Figure S3.* Bicompartmental particle architecture is maintained at higher flow rates despite different particle morphologies. At  $15 \text{ ml hr}^{-1}$  a combination of bicompartmental particles and discs were fabricated. Similarly, bicompartmental discs were observed at  $26.4 \text{ ml hr}^{-1}$  flow rates. Scale bars indicate  $20 \mu\text{m}$ .

*Movie S1.* Demonstration of the device operation during fabrication of bicomponent PLGA/PVAc fibers at a flow rate of  $26.4 \text{ ml hr}^{-1}$ , collector distance of 40 cm, and applied voltage of 75 kV.

*Movie S2.* Deposition of the resultant bicomponent PLGA/PVAc fibers on the collection electrode at a flow rate of  $26.4 \text{ ml hr}^{-1}$ , collector distance of 40 cm, and applied voltage of 75 kV.