

Supplementary Information

Table S1: Details of the experiments done in the microreactor

Total Residence Time	Total Flow rate (mL/min)	Aqueous Phase to Organic Phase flow rate ratio (V/V)	Total Aqueous Phase flow rate (mL/min)	Each Aqueous Phase flow rate (mL/min)	Organic Phase flow rate (mL/min)
10 Min	0.1	90:10	0.09	0.045	0.01
		80:20	0.08	0.04	0.02
		70:30	0.07	0.035	0.03
		60:40	0.06	0.03	0.04
		50:50	0.05	0.025	0.05
8 Min	0.125	90:10	0.1125	0.05625	0.0125
		80:20	0.1	0.05	0.025
		70:30	0.0875	0.04375	0.0375
		60:40	0.075	0.0375	0.02
		50:50	0.0635	0.03125	0.0625
6 Min	0.1667	90:10	0.15003	0.075015	0.01667
		80:20	0.13336	0.06668	0.03334
		70:30	0.11669	0.058345	0.05001
		60:40	0.10002	0.05001	0.06668
		50:50	0.08335	0.041675	0.08335
4 Min	0.25	90:10	0.225	0.1125	0.025
		80:20	0.2	0.1	0.05
		70:30	0.175	0.0875	0.075
		60:40	0.15	0.075	0.1
		50:50	0.125	0.0625	0.125
2 Min	0.5	90:10	0.45	0.225	0.05
		80:20	0.04	0.02	0.1
		70:30	0.175	0.0875	0.075
		60:40	0.15	0.075	0.1
		50:50	0.125	0.0625	0.125
1 Min	1	90:10	0.9	0.45	0.1
		80:20	0.8	0.4	0.2
		70:30	0.7	0.35	0.3
		60:40	0.6	0.3	0.4
		50:50	0.5	0.25	0.5
40 Sec	1.5	90:10	1.35	0.675	0.15
		80:20	1.2	0.6	0.3
		70:30	1.05	0.525	0.45
		60:40	0.9	0.45	0.6

		50:50	0.75	0.375	0.75
20 Sec	3	90:10	2.7	1.35	0.3
		80:20	2.4	1.2	0.6
		70:30	2.1	1.05	0.9
		60:40	1.8	0.9	1.2
		50:50	1.5	0.75	1.5
10 Sec	6	90:10	5.4	2.7	0.6
		80:20	4.8	2.4	1.2
		70:30	4.2	2.1	1.8
		60:40	3.6	1.8	2.4
		50:50	3	1.5	3

- The flow rates were calculated by fixing a particular residence time, as indicated in Equation 1.

$$TotalFlowrate = \frac{TotalVolume (1 mL)}{TotalResidenceTime} \dots\dots\dots Eq.1$$

**Table S2: Yield of nanoparticles obtained at different residence times.**

Residence Time (Minutes)	Conversion (mg)	Yield (%)
<b>10</b>	18.57 ± 0.85	87.06 ± 4.01
<b>8</b>	18.30 ± 0.71	85.8 ± 3.36
<b>6</b>	18.91 ± 0.32	88.67 ± 1.52
<b>4</b>	19.05 ± 0.44	89.34 ± 2.081
<b>2</b>	18.48 ± 0.44	86.67 ± 2.08
<b>1</b>	18.77± 0.73	88 ± 3.46
<b>0.667</b>	18.05 ±0.32	84.66 ± 1.52
<b>0.334</b>	17.98 ± 0.53	84.33 ± 2.51
<b>0.1668</b>	18.41± 0.74	86.33 ± 3.51

- Total initial mass in each sample is 21.33 mg ( mass of total polymer(11.25mg) + mass of surfactant (10.08mg)
- Values are average of three readings ± standard deviation (n = 3)
- Aqueous to organic phase flow rate ratio (V/V) is 90:10 in all the experiments