Electronic Supplementary Material (ESI) for RSC Advances.
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Supplementary Information

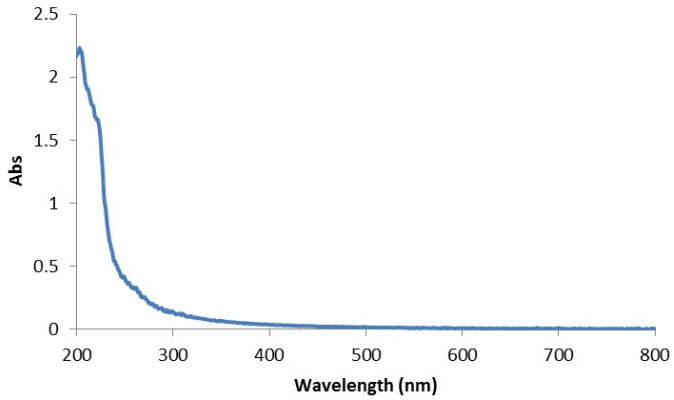


Figure 1S: UV-Vis spectrum of 1000 times diluted PA02N particles.

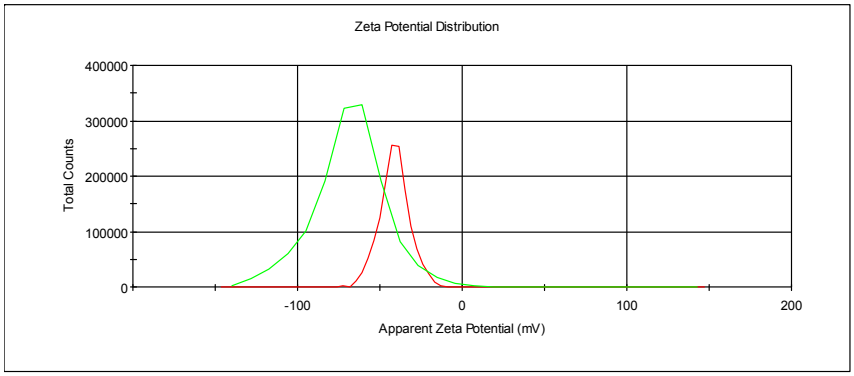


Figure 2S: Zeta potential of the PA02N particles in 10 mM PB (red) and 0.08% NaOH + 0.02% SDS (green).

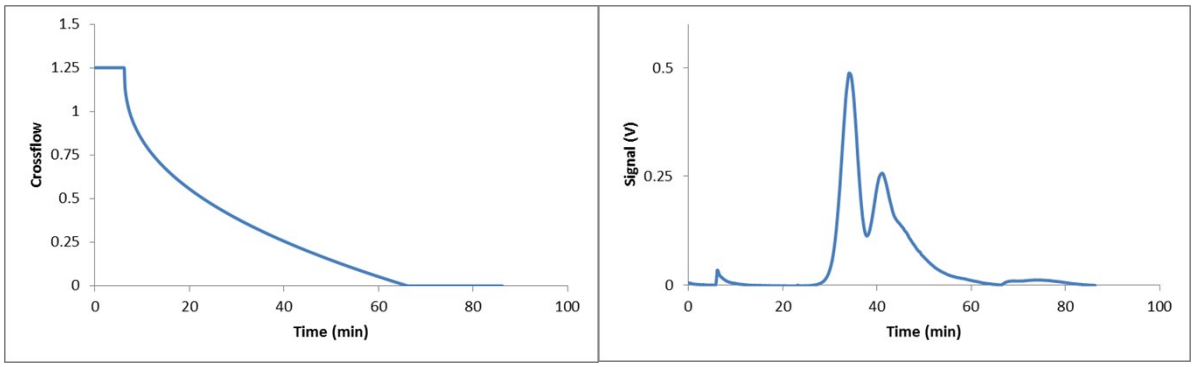


Figure 3S: FFF separation method used in the separation(left). Elugram corresponding to the profile on the left (right).

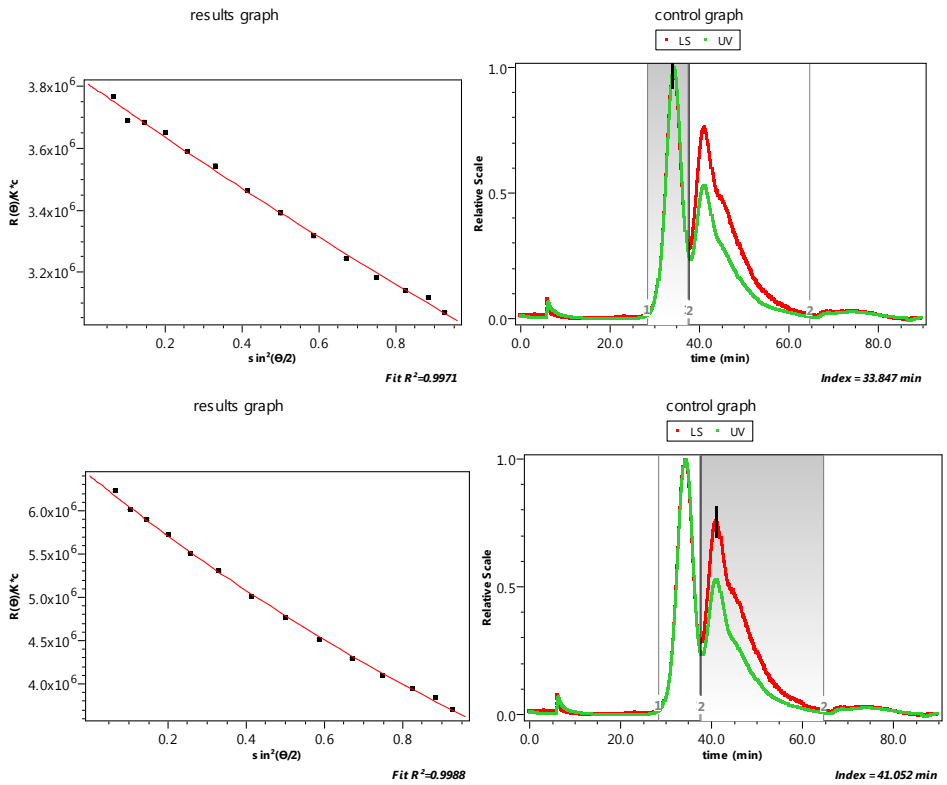


Figure 4S: MALS analysis after FFF separation. Fitting with Sphere model.

TEM analysis

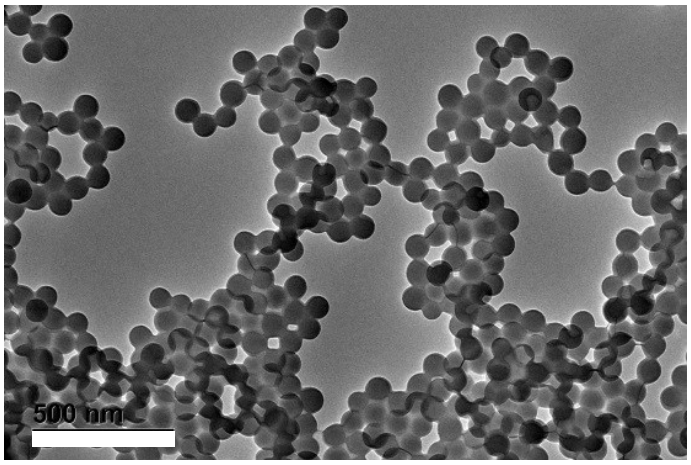


Figure 5S: TEM image (dried drop on grid) of the particle suspension.

CPS analysis

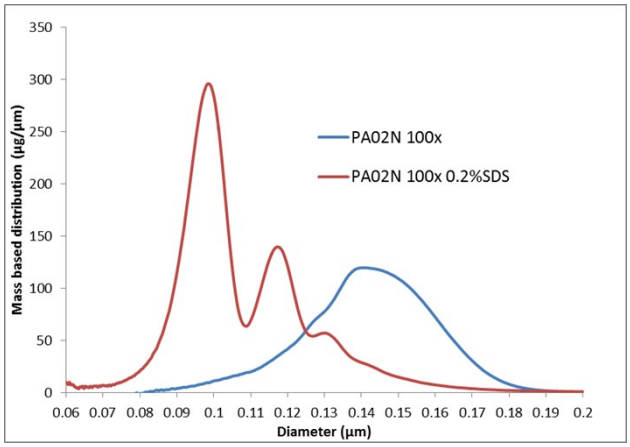
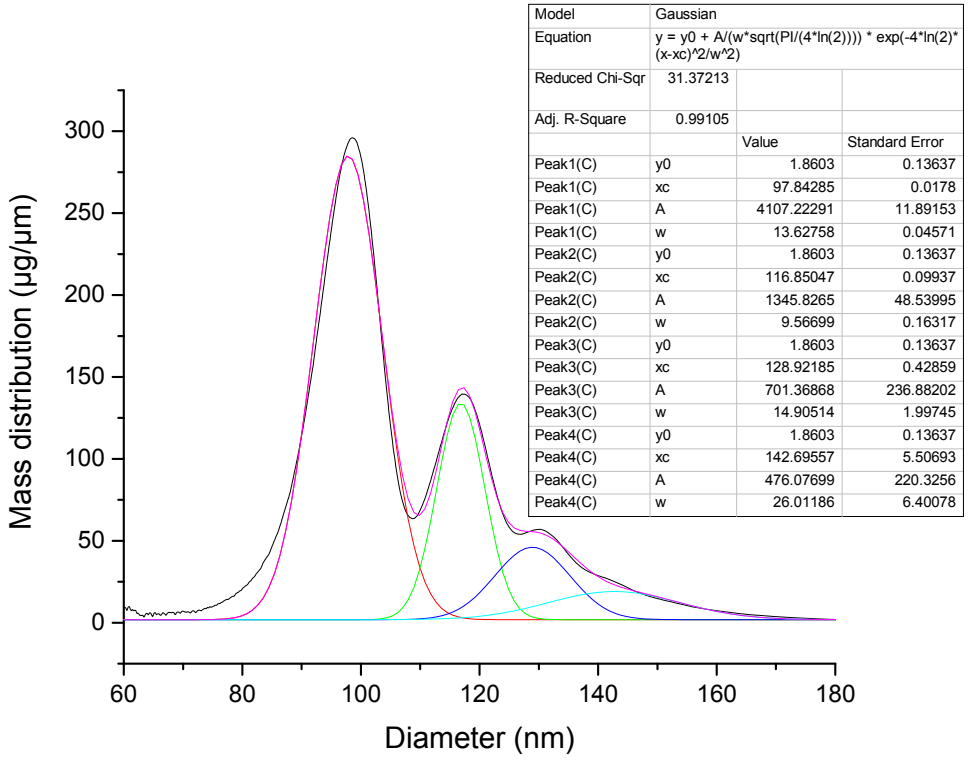


Figure 6S: Mass based particle size distribution measured by CPS with and without 0.2% SDS in the gradient. Without SDS (blue curve) the particles seem to form aggregates in the sucrose solution and the particle size distribution maximum is shifted to about 150 nm.



Model	Gaussian		
Equation	y = y0 + A/(w*sqrt(PI/(4*ln(2)))) * exp(-4*ln(2)*(x-xc)^2/w^2)		
Reduced Chi-Sqr	31.37213		
Adj. R-Square	0.99105		
		Value	Standard Error
Peak1(C)	y0	1.8603	0.13637
Peak1(C)	xc	97.84285	0.0178
Peak1(C)	A	4107.22291	11.89153
Peak1(C)	w	13.62758	0.04571
Peak2(C)	y0	1.8603	0.13637
Peak2(C)	xc	116.85047	0.09937
Peak2(C)	A	1345.8265	48.53995
Peak2(C)	w	9.56699	0.16317
Peak3(C)	y0	1.8603	0.13637
Peak3(C)	xc	128.92185	0.42859
Peak3(C)	A	701.36868	236.88202
Peak3(C)	w	14.90514	1.99745
Peak4(C)	y0	1.8603	0.13637
Peak4(C)	xc	142.69557	5.50693
Peak4(C)	A	476.07699	220.3256
Peak4(C)	w	26.01186	6.40078

Figure 7S: Gaussian fit (using Origin) of the CPS differential mass distribution results. Peak positions fit well theoretical values.

TRPS analysis

The applied equation for each population was

y = y0 + A/(w*sqrt(PI/(4*ln(2)))) * exp(-4*ln(2)*(x-xc)^2/w^2

Values used for the fitting:

Fit	*Peak 1 (y1)*	*Peak 2 (y2)*	*Peak 3 (y3)*
Y_0	0	0	0
X_c	87	106	115
w	15	5	10
A	160	14.5	15

Fit of the whole particle size distribution was performed using the following equation:

$y = y_1+y_2+y_3$

y_x= y0 + A/(w*sqrt(PI/(4*ln(2)))) * exp(-4*ln(2)*(x-xc)^2/w^2

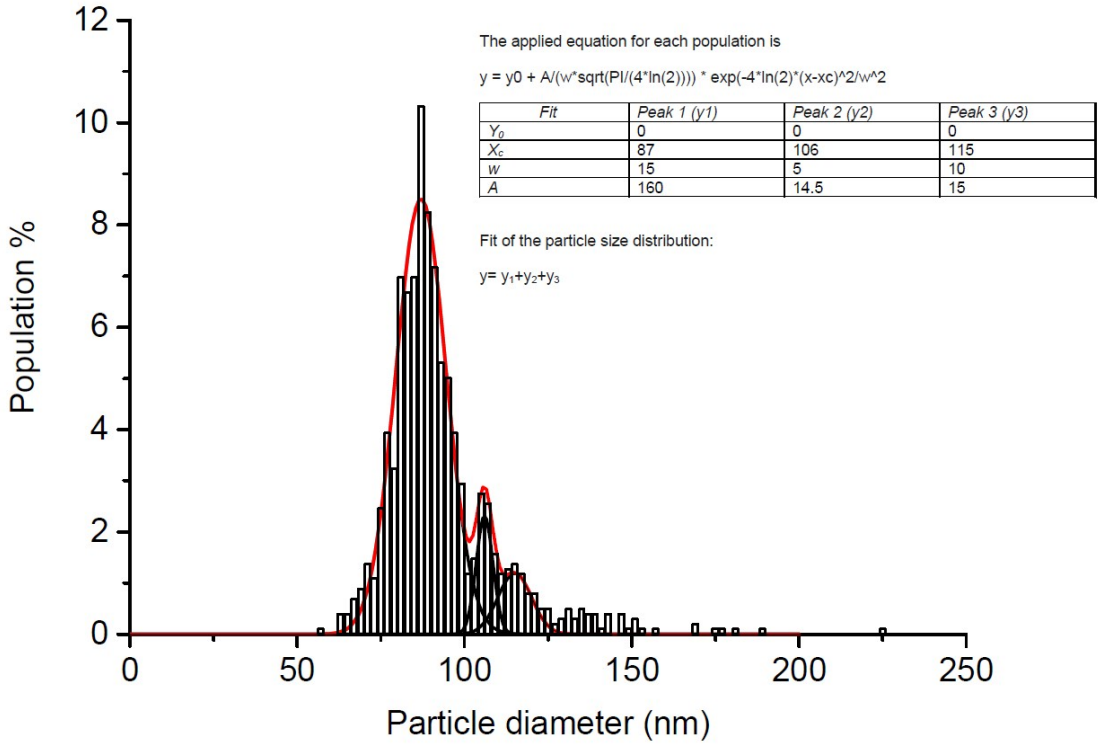


Figure 8S: Gaussian fit of the three main particle populations detected in TRPS