

# Particle Works

## Automated Library Synthesis System



## Speed up your discoveries with Automated Library Synthesis (ALiS) System

The Automated Library Synthesis (ALiS) System – to be launched in 2022 – enables high throughput screening of nanoparticle formulations and mRNA candidates in early-stage development. This platform significantly accelerates discovery projects by performing numerous reactions – as much as 96 experiments in a day – collecting as little as 250  $\mu$ l per sample and using automated washing cycles to avoid cross-contamination.

### Key features:

- Fluid Handler
- Fluid Store (unpressurized)
- Chip Holder
- Quad Pump



#### Monodispersity

Excellent PDI and encapsulation efficiency



#### Precision

Accurate control, robust & reliable results



#### Automation

Walk away during experiments increasing lab efficiency



#### Scalability

From 200  $\mu$ l to continuous production



#### Flexibility

Easy to set up and modify parameters



#### Speed

Rapid optimization timeframes



#### Cost saving

Reduced reagent use and reusable chips



#### High throughput

Aspirate from and dispense into 96 well plates

We've seen what's possible when brilliant minds come together to focus and find the answers. You continue to inspire us with the incredible work you're doing and we champion your commitment to push the boundaries of science.

We care deeply about the revolutionary change our technology can bring and the powerful impact it will have. Let's shape the big picture together, one particle at a time.

## Keep rooted in microfluidics

Under Dolomite Microfluidics (part of Blacktrace Holdings Ltd), we've been at the forefront of microfluidics and working with particles for nearly two decades. We've listened to our customers and launched a dedicated particles brand, designing and building game-changing particle engineering platforms which will allow you to produce nanoparticles with unrivalled precision, consistency, & control, whilst reducing your development time and cost.

## Advantages of microfluidics

Continuous flow process provides a small and consistent reaction window as fluids converge precisely providing:

- Unparalleled consistency of particle size and monodispersity
- Higher encapsulation efficiency with controlled payload release
- Higher reproducibility and linearly scalable processes
- Lower sample volumes and reduced waste
- Negates particle damage caused by mechanical mixing
- Faster, easier to optimize protocols
- Scalability – produce  $\mu\text{l}$  to liters with the same chip

What makes us unique is our combined capabilities: a strong history of particle engineering, scientific knowledge, microfluidic expertise, and in-house chip fabrication. We also offer a proof of principle service, offering you the opportunity to test your protocol and API's prior to purchase.

We pave the way for particle perfection – delivering unrivalled accuracy, quality, consistency, and efficiency: from our technology and custom studies to our customer support.

## Engineering a future worth experimenting for together

As we look to the future, we have more exciting platforms in our product pipeline that will take you all the way from formulation screening, and protocol development to GMP scale-up and large-scale production.

Let's zoom in to make big change, one particle at a time.



## Your pathway to particle perfection



Screening



Protocol development



Initial scale-up



Production

## Contact us

[info@particle-works.com](mailto:info@particle-works.com)  
[particle-works.com](http://particle-works.com)

So, if you are interested in what we do, please do come and talk to one of the experts in our team. We'd love to tell you more about our technology, and demonstrate how you can revolutionize your workflow.