

# Alchemite™

Advanced machine learning software from Intellegens

Accelerate innovation for materials, chemicals, manufacturing, and beyond

intellegens

Applied machine learning

## Why Alchemite™?

Win with optimised formulations, products, and processes

Save time and cost with up to 90% fewer experiments

Extract more value from real-world, sparse, noisy data

Deploy advanced machine learning for maximum impact

## Customers say:

***“Alchemite™ was able to converge on a solution with far fewer experiments”***

AMRC

***“It really expands the bandwidth of our data scientists”***

NASA

***“Alchemite™ identified novel formulations quickly and accurately”***

Domino Printing Sciences

***“We can make better decisions about which experiments we perform”***

Lucideon

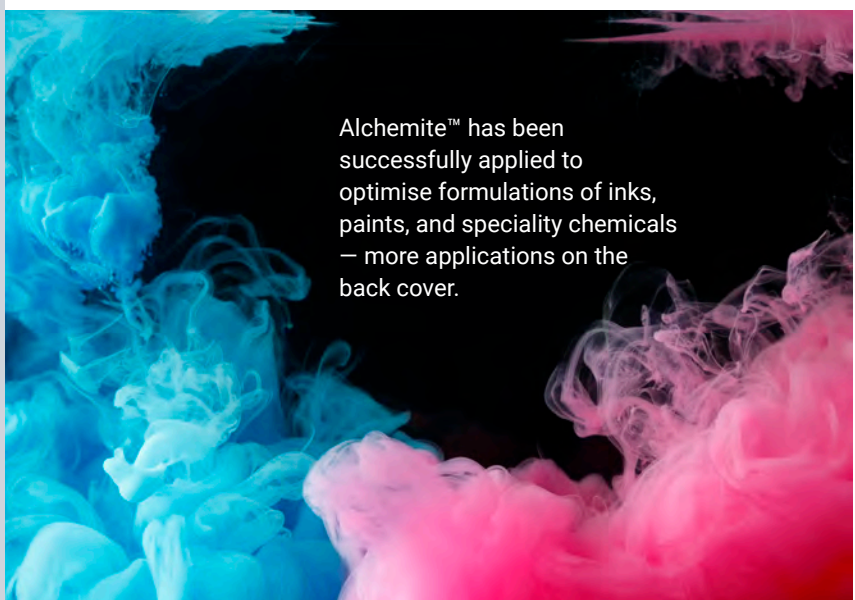
## What is Alchemite™?

Based on algorithms originating at the University of Cambridge, Alchemite™ is advanced machine learning software developed by Intellegens. It has unique capabilities to extract value from real-world, sparse, noisy data, where most machine learning methods fail.

Successful application areas include materials, chemicals, formulations, life sciences and industrial processes.

Whatever the system being studied, Alchemite™ fills in gaps in the data and generates a machine learning model that you can then apply to predict outputs or optimise inputs. It can also identify important relationships in the data and provide guidance on which set of experiments would most efficiently enable you to achieve your targets.

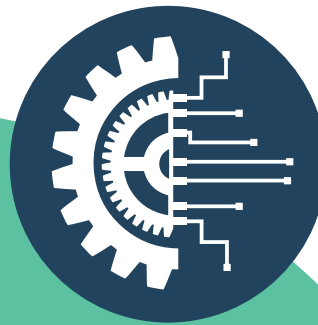
**The result?** You can apply advanced machine learning to accelerate innovation.



Alchemite™ has been successfully applied to optimise formulations of inks, paints, and speciality chemicals – more applications on the back cover.

See all case studies at  
[Intellegens.com/casestudies](https://www.intellegens.com/casestudies)

# Making machine learning easy to deploy



## Alchemite™ Analytics

Deep data insights on  
your desktop

For scientists and engineers

Guide experiments

Predict, design, optimise

## Alchemite™ Engine

Power and flexibility  
for data scientists

Integrate Alchemite™  
into your workflows

Advanced configuration  
and deployment

## Alchemite™ Success

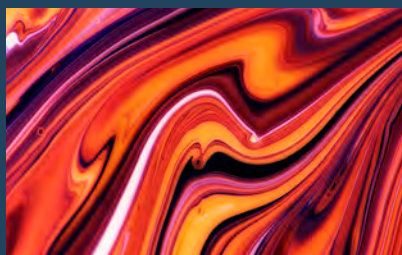
Apply our machine learning expertise

From 'getting started' support to full project  
management

## Key features

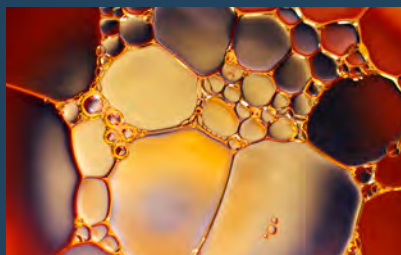
- Handle sparse, noisy real-world data
- Optimise against multiple targets
- Provide confidence with accurate uncertainty quantification
- Make a fast start – Alchemite™ requires minimal assumptions
- Apply a lightning-fast, scalable method
- Learn from all available data in a single study

# Example applications



## Formulated products

Make better use of experimental resources and get to market faster.



## Chemicals and processes

Cut out trial-and-error and speed up discovery and development.



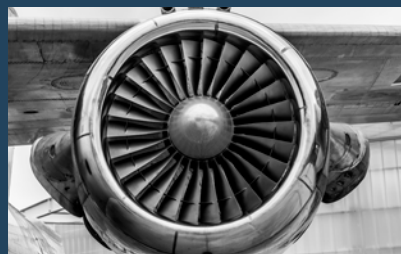
## Plastics

Improve the design, blending, and processing of polymeric materials.



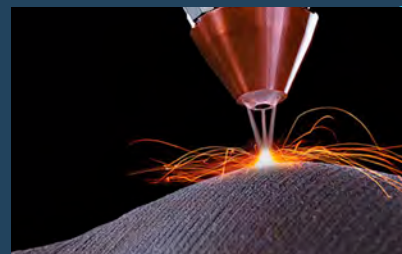
## Life sciences

Find new candidates, support virtual screening, and focus experiment and clinical studies.



## Alloys

Accelerate innovation and optimise processing for steels and other advanced alloys.



## Additive manufacturing

A data-driven approach to reliable, repeatable AM processes.



## Batteries

Optimise battery formulations and pack design, enable battery management.



## Manufacturing processes

Optimise processing parameters for improved quality and efficiency.



## Adaptive experimental design

Better results from fewer experiments.

**More at: [Intellegens.com](https://www.intellegens.com)**

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