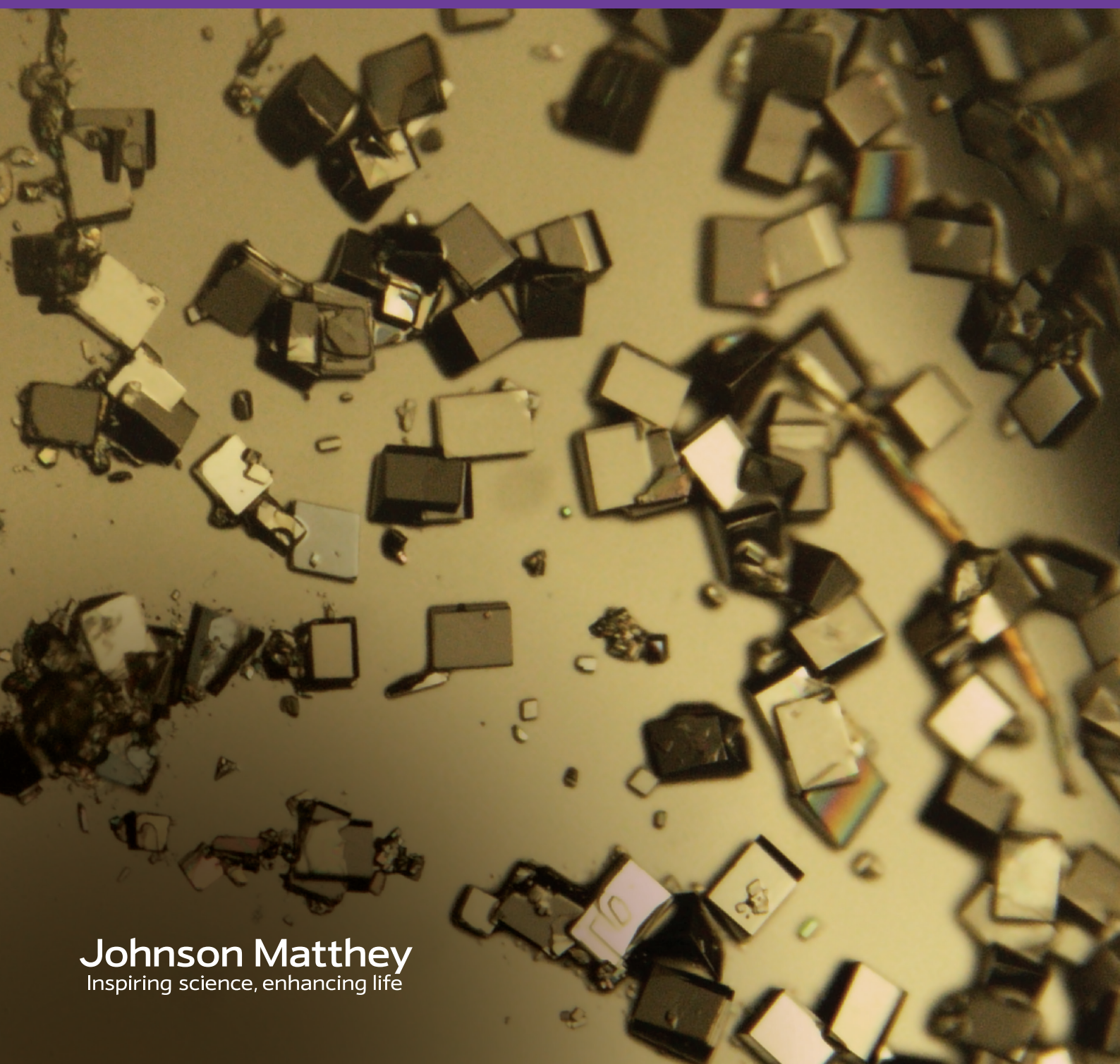


# JM

## PHARMORPHIX<sup>®</sup>

Solid State Services



**Johnson Matthey**  
Inspiring science, enhancing life



Our expertise in solid state pharmaceutical studies helps to enhance your drug discovery and development by enabling better products and a faster route to market.

Based in Cambridge UK, our state-of-the-art facility offers a full range of solid state research capabilities.

## PHARMORPHIX® solid form benefits

### CANDIDATE SELECTION

Identifying the optimal API form at the right stage to improve long term stability and enhancing drug delivery

### BIOAVAILABILITY AND PHARMACOKINETICS ENHANCEMENT

Addressing physical property challenges through salt, polymorph and co-crystal screening

### INTELLECTUAL PROPERTY

Building valuable additional protection around core product patents

### REGULATORY SUPPORT

Delivery of critical inputs for key regulatory requirements for drug discovery, development and launch

### ROBUST SCALABLE PROCESSES

Crystallisation process development, scale up and in-process testing to ensure reliability and compliance

## PHARMORPHIX® solid form services

### POLYMORPHISM SCREENING

- Reduced risk of failure during development
- Meeting regulatory requirements
- Strengthened intellectual property

### SALT SELECTION

- Effective development of drug candidates
- Improved bioavailability
- Enhanced physicochemical properties

### CO-CRYSTALLISATION

- Unique API intellectual property protection
- Increased formulation stability
- Enhanced physicochemical properties

### AMORPHOUS DISPERSIONS

- Increased solubility and bioavailability
- Stabilised amorphous forms
- Controlled particle size distribution

### CRYSTALLOGRAPHY

- Dual source X-ray
- Assignment of absolute stereochemistry
- Structure determination from the smallest of crystals

### PHYSICAL AND CHEMICAL ANALYSIS

- Assess the performance of novel crystalline forms
- Design-appropriate salt and co-crystal screens
- Investigation of alternative drug delivery routes

### CHIRAL RESOLUTION

- Optimised enantiomeric excess of chiral products
- Rapid access to single enantiomers
- Enrichment of low ee materials

### CRYSTALLISATION DEVELOPMENT

- Maximised processes yields
- Reliable crystalline form and morphology
- Controlled particle size distribution