# williamblythe Chemistry for tomorrow



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# WORLD LEADING INORGANIC CHEMISTRY





A Synthomer Group Company synthomer

# WILLIAM BLYTHE DEVELOPS AND MANUFACTURES INORGANIC SPECIALITY CHEMICALS AND ADVANCED MATERIALS.

William Blythe was founded in 1845 and originally produced chemicals for the local textile industry that was located in the North West of England. Since that time, William Blythe have transformed into a manufacturer of speciality inorganic chemicals. Our vision is to be a leading innovator in the development of advanced, functional, inorganic materials.

We have an established blue chip customer base serving high growth markets such as polymers, catalysts and life sciences. We have a team of highly skilled scientists, technicians and engineers, the majority being based at our facility in Accrington. Our current product range includes derivatives of copper, tin, iodine, zinc, tungsten and magnesium. These functional derivatives are used in a diverse number of applications and our broad product portfolio includes flame retardants, heat stabilisers, catalysts and pigments precursors.

At William Blythe we continue to look to the future, with R&D currently focussed on developing advanced materials. Key areas for our advanced materials research include perovskite materials for solar cells, doped metal oxides with NIR absorption properties and active materials required for energy storage. Graphene oxide is an important new product with a number of exciting applications in water purification, polymer reinforcement and catalysis. William Blythe is a wholly owned subsidiary of Synthomer PLC.

CATALYSTS



**COATINGS** 



**ELECTRONICS** 



FOOD & FEED



LIFE SCIENCES



**PIGMENTS** 



PLATING

USE THIS MENU TO NAVIGATE THROUGH EACH SECTION



**POLYMER ADDITIVES** 



PRINT



PROCESS CHEMICALS



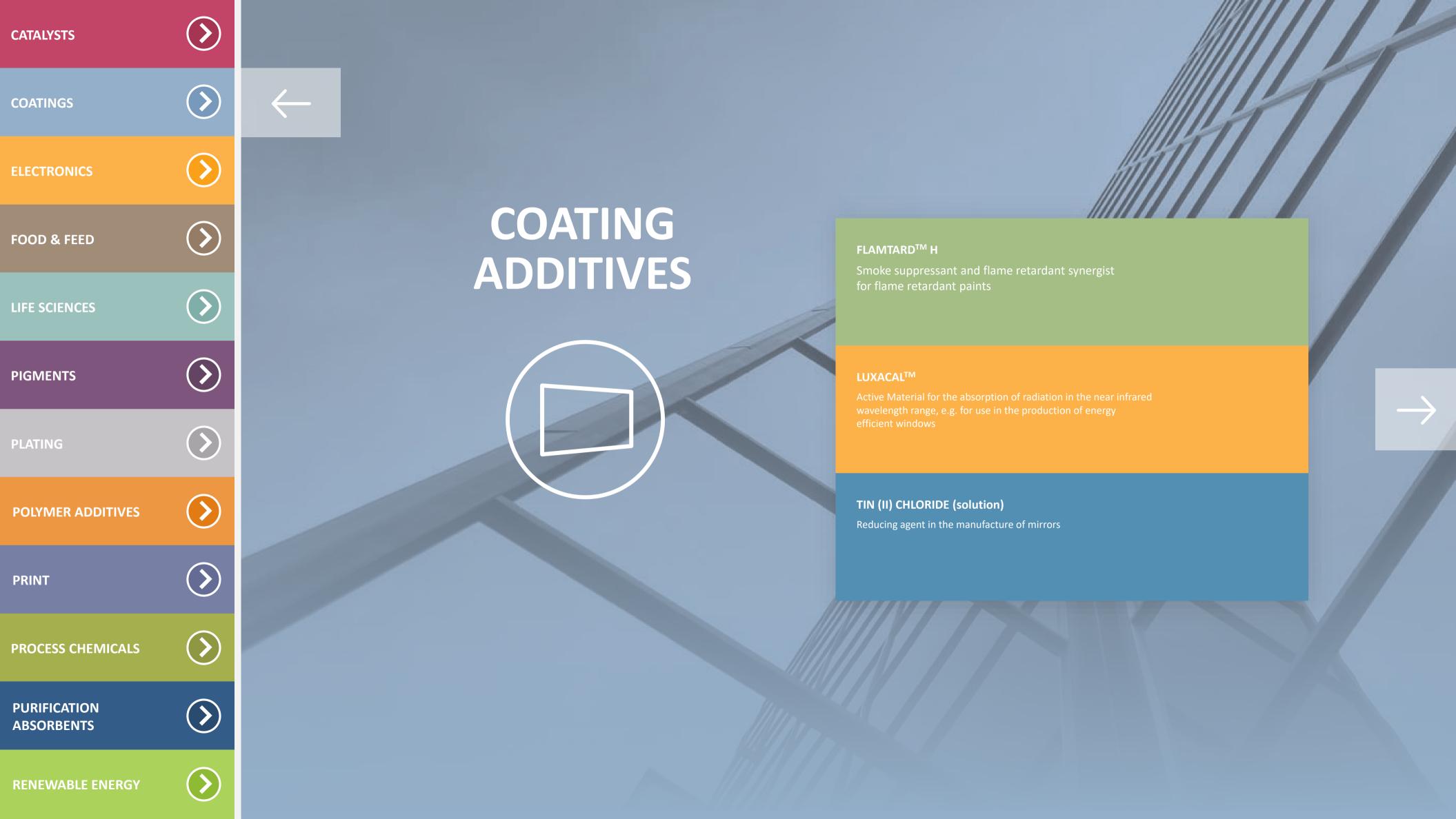
PURIFICATION ABSORBENTS



**RENEWABLE ENERGY** 





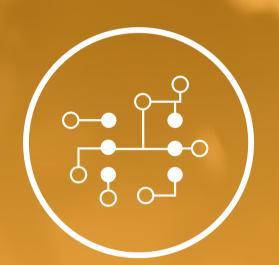


# **CATALYSTS** COATINGS **ELECTRONICS** FOOD & FEED LIFE SCIENCES **PIGMENTS PLATING POLYMER ADDITIVES** PRINT **PROCESS CHEMICALS PURIFICATION ABSORBENTS**

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# **ELECTRONIC CHEMICALS**



# COPPER (I) IODIDE

Cathode material in salt water activated batteries

# **GRAPHENE OXIDE (dispersion)**

Component for creating transparent electrodes in its reduced form (rGO)

# **PERIODIC ACID (solution)**

Selective oxidising agent for the planarization of metal conductive layers in silicon chips

### POTASSIUM IODIDE

Used in light polarisation filters; adsorbed into PVA sheets, the resulting conductivity provides polarisation capability

# TIN (II) CHLORIDE (also available as solution)

Reducing component of sensitising solutions used for electroless plating of non-conductors, e.g. metallisation of plastic, through hole plating in microelectronics

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# FOOD & FEED ADDITIVES



#### **BASIC COPPER CARBONATE**

Copper source used in the manufacture of copper chelates used as feed additives

# COPPER (I) IODIDE

Feed additive to counter iodine deficiency in animals

# **MAGNESIUM NITRATE (solution)**

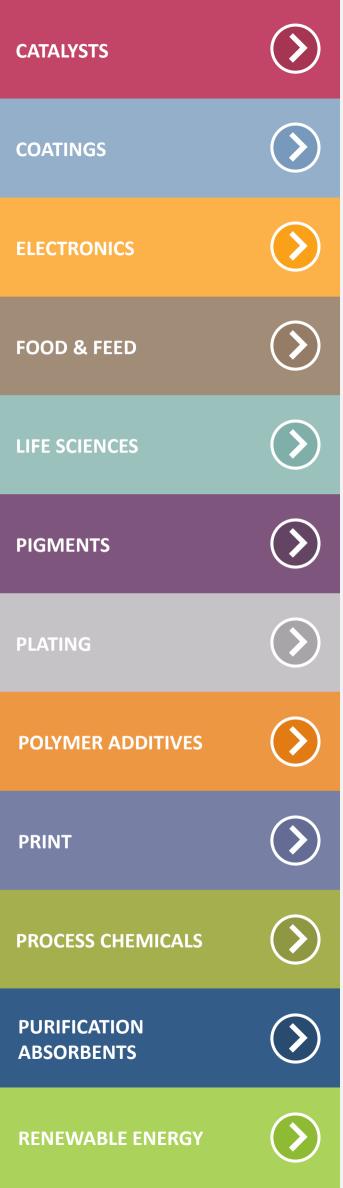
Nutrient in horticulture

### POTASSIUM IODATE

lodine source, with enhanced stability compared to potassium iodide, for addition to food to counter iodine deficiency

#### POTASSIUM IODIDE

lodine source for addition to food to counter iodine deficiency



# LIFE SCIENCE REAGENTS



# COPPER (I) IODIDE

Reagent for the coupling of functional groups to aromatic molecules in fine chemical synthesis

### **GRAPHENE OXIDE (dispersion)**

- 1) Potential antimicrobial agent
- 2) Potential nanocarrier for use in drug delivery systems

# PERIODIC ACID (also available as solution)

Selective oxidising agent for stereospecific cleavage of 1,2 glycols

#### **POTASSIUM IODIDE**

Key component for in situ formation of potassium triiodide complexes in antiseptic creams

#### **SODIUM METAPERIODATE**

- 1) Selective oxidising agent for steroespecific cleavage of 1,2 glycols
- 2) Pro-oxidant with reagents such as potassium permanganate

# TIN (II) CHLORIDE (also available as solution)

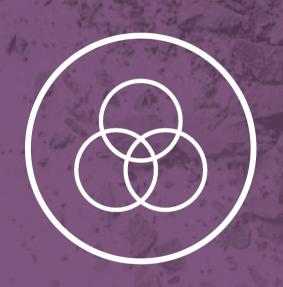
Reducing agent in azo-coupling reactions for the synthesis of heterocyclic compounds, e.g. indole derivatives

### TIN (II) OXIDE

Raw material for the manufacture of anti-caries additives, e.g. toothpaste

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# PIGMENT PRECURSORS



### **COPPER CARBONATE**

Copper source in complex inorganic oxide pigments, e.g. copper chrome

#### POTASSIUM IODIDE

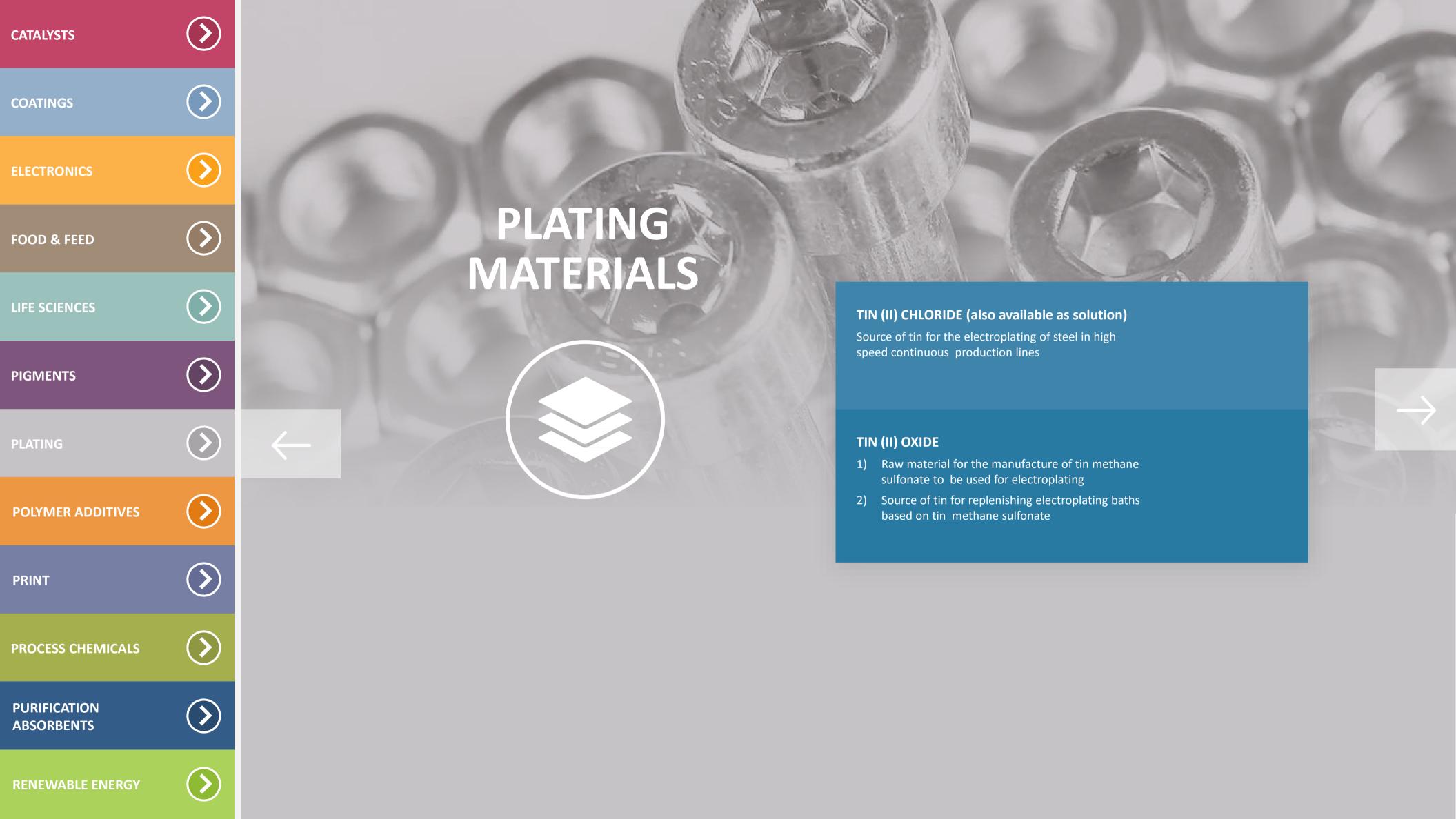
Key component in certain complex inorganic oxide pigments, e.g. bismuth vanadate pigments

# **TIN (II) CHLORIDE (solution)**

A source of tin for the manufacture of tin oxide coated effect pigments

# TIN (II) OXIDE

Key component in complex inorganic oxide pigments, e.g. zinc tin



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### COPPER (I) IODIDE

Heat and light stabiliser in engineering polyamides, in conjunction with potassium iodide

#### FLAMTARD<sup>TM</sup> H

Smoke suppressant and flame retardant synergist with co-flame retardants. For polymer processing at temperatures below 220°C

#### FLAMTARD<sup>TM</sup> HF

Flamtard H with narrower particle size distribution

#### FLAMTARD<sup>TM</sup> S

Smoke suppressant and flame retardant synergist with co-flame retardants. For polymer processing at temperatures above 220°C

#### FLAMTARD<sup>TM</sup> S+

Smoke suppressant and flame retardant synergist with co-flame retardants. For polymer processing at temperatures above 220°C. For use in applications which have zinc-free requirements

#### FLAMTARD<sup>TM</sup> T

Smoke suppressant and flame retardant synergist with co-flame retardants. For polymer processing at temperatures below 220°C. For use in applications requiring improved thermal stability

#### FLAMTARD<sup>TM</sup> V

Range of silica based flame retardant synergists

### **GRAPHENE OXIDE (dispersion)**

Potential additive for enhanced mechanical properties in engineering polymers

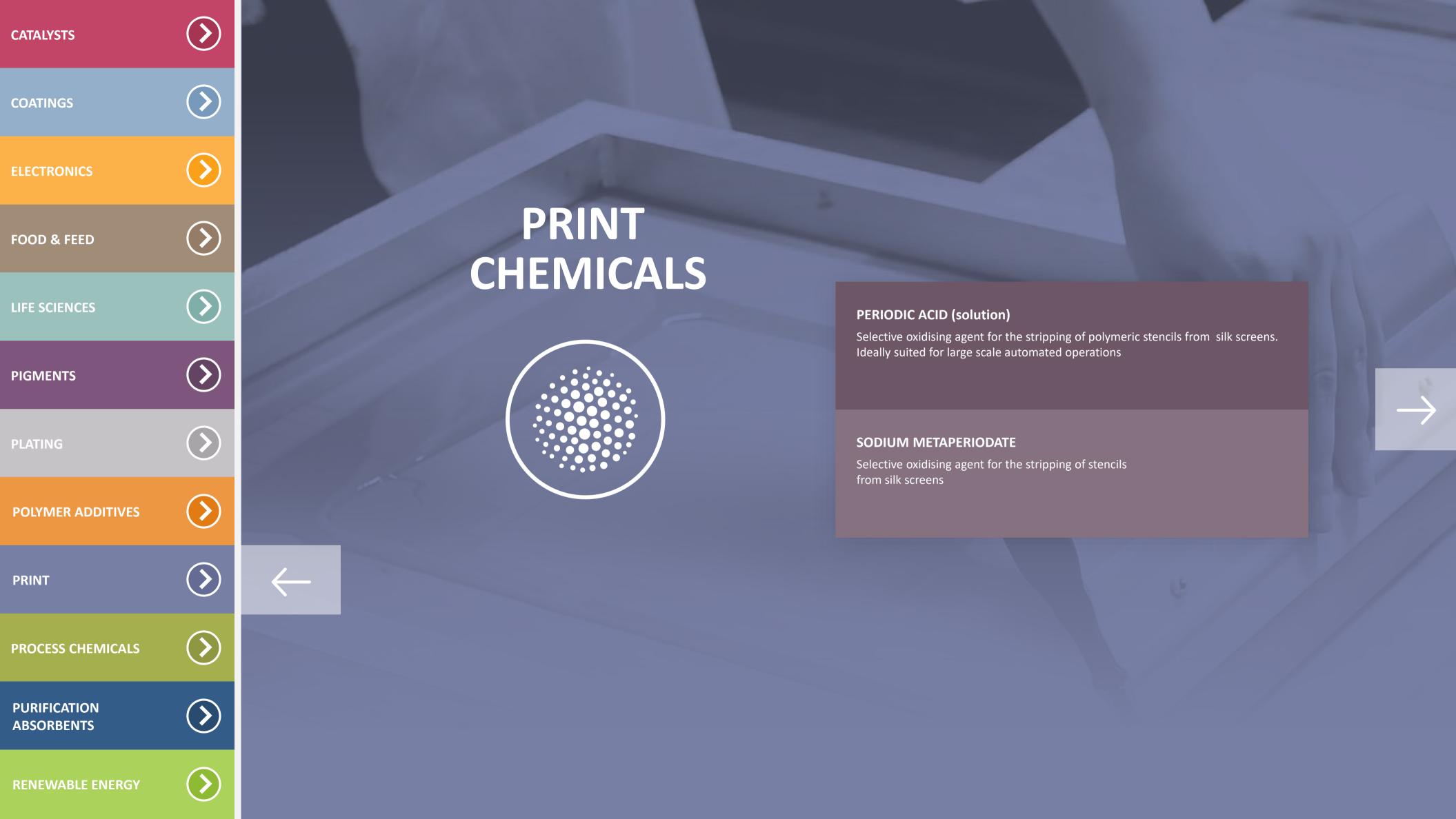
#### POTASSIUM IODIDE

Heat and light stabiliser in engineering polyamides, in conjunction with copper (I) iodide

### TIN (II) CHLORIDE

Cross-linking catalyst for the dynamic vulcanisation of elastomeric compounds containing elastomers, thermoplastics and phenolic resins





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### **BASIC COPPER CARBONATE**

- 1) Copper raw material for the manufacture of biocides for timber treatment and swimming pool treatment
- 2) Source of copper for the impregnation of activated carbon

#### **BASIC COPPER NITRATE**

Activator in propellant compositions in airbags

### **MAGNESIUM NITRATE (solution)**

Stabilisation component in specific biocide formulations

#### **PERIODIC ACID (solution)**

Chelating agent for metal ions for the stabilisation of oxidising surface cleaners, e.g. bleach

ence in chemistry

#### POTASSIUM IODATE

- 1) Used with potassium iodide to generate iodine in situ for the synthesis of iodo-derivatives
- 2) Used for the impregnation of security papers as an anti-forgery treatment

#### POTASSIUM IODIDE

Source of iodine for the synthesis of iodo-derivatives

#### TIN (II) CHLORIDE (also available as solution)

Reducing agent in cement production for converting chromium (VI) to chromium (III)

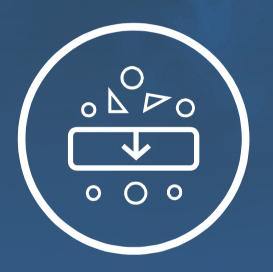
# TIN (II) OXIDE

An acid soluble raw material for the manufacture of tin salts of organic and inorganic acids

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# PURIFICATION ABSORBENTS



# DURAGUARD™ S100

Copper based gas absorbent for the removal of hydrogen sulfide from natural gas

#### DURAGUARD<sup>TM</sup> M100

Copper based gas absorbent for the removal of mercury from natural gas

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#### **ANODE MATERIALS**

Novel anode materials currently under development, please enquire for further details

### **CATHODE MATERIALS**

Novel cathode materials currently under development, please enquire for further details

# **GRAPHENE OXIDE (dispersion)**

- Suitable for use as a conductive additive in electrode mixtures when reduced to rGO
- 2) Suitable for use as a coating on cell components

#### LEAD IODIDE

Precursor material for manufacture of perovskite based solar cells

### LUXACALTM

Active Material for the absorption of radiation in the near infrared wavelength range, e.g. for use in the production of energy efficient windows



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