

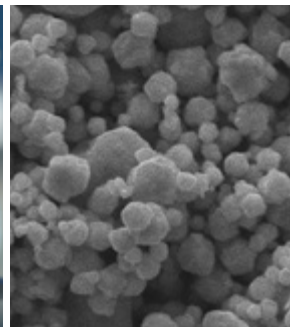


EXCELLENCE IN PRECIOUS METALS



METALOR®

MAKING VALUABLE TECHNOLOGIES BETTER



METALOR TECHNOLOGIES SA

Metalor Technologies SA is an international Swiss-based group and a leading supplier of precious metals and advanced materials. Founded in 1852 as a preliminary rolling mill and producer of semi-finished precious metal products for the watchmaking industry, Metalor began to offer products and services to other industries in 1950.

The knowledge and processes developed at Metalor over the years, the exceptional consistent quality of its products and ability to anticipate market trends and requirements, have earned the company a reputation for excellence all over the world.

Globally 1,600 employees work to further and support the group interests in 17 countries on four continents. Metalor manufacturing facilities are located in Switzerland, France, The United States of America, Mexico, The People's Republic of China, Hong Kong, Taiwan and Japan. Sales offices provide customer support in all major European countries, in the Asia Pacific region, the USA and South America.

Three business units serve the requirements of specific markets.

REFINING

Specializes in the refining and evaluation of precious metals and the manufacture of ingots.

ADVANCED COATINGS

Provides innovative solutions in plating, powders and flakes, chemicals and compounds and plating equipment.

ELECTROTECHNICS

Transforms silver alloys and pseudoalloys into electrical contacts.

ADVANCED COATINGS

The core activities of the business unit focus on the application of metallization technologies. This enables, serves and supports customers operating in markets as diverse as electronic, semiconductor, decorative, photovoltaic, diagnostic, biocide and pigment sectors. Our paramount objective is to find the optimum solution. We are renowned for consistency in product quality and for product reliability.

QUALITY, ENVIRONMENTAL AND HEALTH & SAFETY MANAGEMENT

In addition to the headquarters and manufacturing facility in Switzerland (Marin), there are production sites in the USA (Attleboro, MA; North

Attleboro, MA and Port Huron, MI), France (Oullins), China (Suzhou), Taiwan (Kaohsiung) and Japan (Numazu and Tsukuba). All key facilities are accredited with Quality Management System (ISO 9001), Environmental Management System (ISO 14001) and Occupational Health and Safety Management System (OHSAS 18001) certification. Moreover, the Attleboro site is ISO/TS 16949 certified.

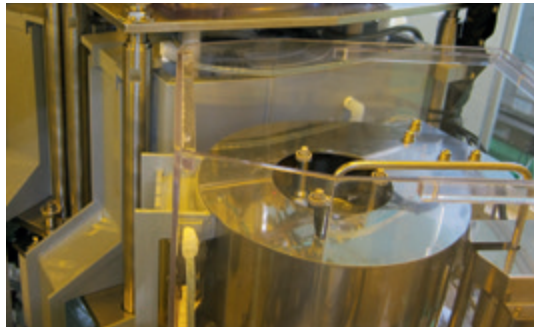
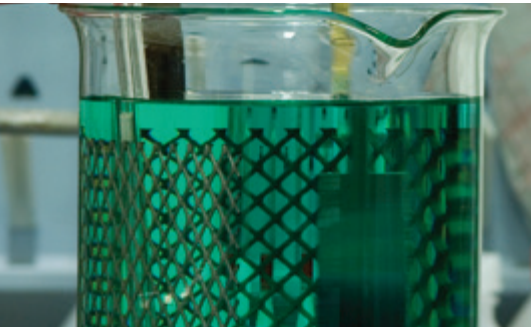
RESEARCH & DEVELOPMENT AND TECHNICAL SUPPORT

By understanding specific customer applications and requirements as fully as possible, our R & D and technical service teams provide enabling technology either by evolutionary development (customization of products), or by using fundamental knowledge to develop new products.

We support our customers by working in collaborative partnerships enabling us to respond effectively to both market and technical developments. R & D operations are located in Europe, the USA and the Asia Pacific region to provide advice and assistance thus enabling strong and lasting relationships with our customers.



INNOVATIVE SOLUTIONS



PLATING

We are a leading supplier of precious metal plating products and processes to the electronic, semiconductor and decorative industries. We concentrate our expertise on a comprehensive plating process range which includes both electrolytic and electroless solutions. Our processes are designed for use with all types of plating/metallization equipment.

Increasingly, our focus is on green technology and on cost reduction for our customers without compromising quality. We are proactive in meeting and exceeding increased legislation that restricts the use of harmful materials.

We offer a complete service from the supply of metal replenishment salts, anodes, process chemistry through plating equipment to the refining of spent solutions and scraps. This provides a “one-stop-shop” enabling customers to reduce complexity and the number of suppliers.

Our technical service team is located across our worldwide facilities. Its specialists are on call and equipped to provide both rapid response to specific queries and on-site installation support. Your local contact will activate global technical resources.

PLATING EQUIPMENT

Our plating processes are developed in strong partnership with our affiliate Mitomo Semicon Engineering Co., plating equipment manufacturer. This enables us to extend our comprehensive service to supplying the most suitable equipment for the final coating process.

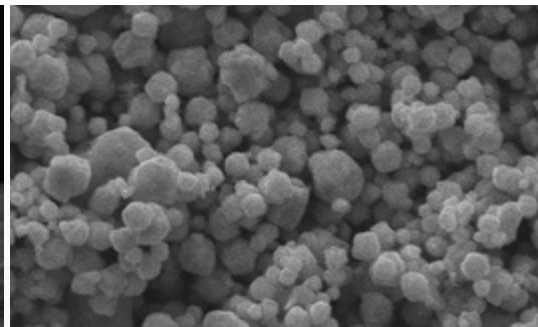
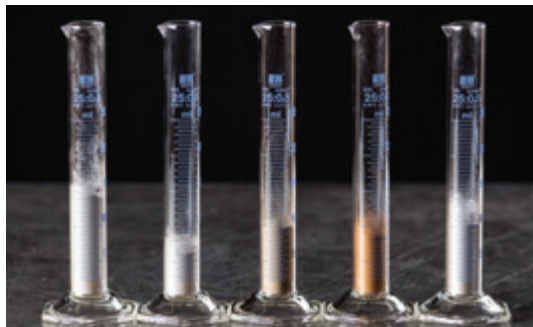
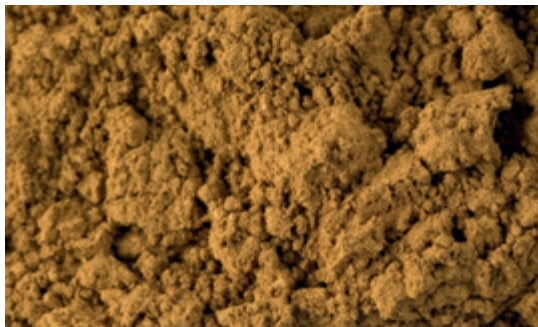
Plating equipment for connectors and lead frames is designed to meet the demands of low volume and high mix productions as well as selective plating. At Mitomo Semicon Engineering Co. our objective is to produce moduled equipment based on the concept: “easy to use”, “easy to change” and “easy to maintain”.

We offer custom-built plating equipment and products to meet our customers’ individual needs. As a leading manufacturer of plating equipment for the electronics industry our machines are in operation worldwide and our production range comprises the following types of machinery:

- reel-to-reel plating equipment
- spot plating equipment
- plating equipment for semi-conductors (wafers)
- jet plating equipment
- selective dip plating equipment
- equipment for chemical treatment of metal surfaces.

CHEMICALS AND COMPOUNDS

We manufacture precious metal salts, solutions and anodes from silver, gold and platinum group metals. These products are used for a variety of purposes in the chemical, petrochemical, automobile, pharmaceutical, biocide, decorative plating and electronic industries.



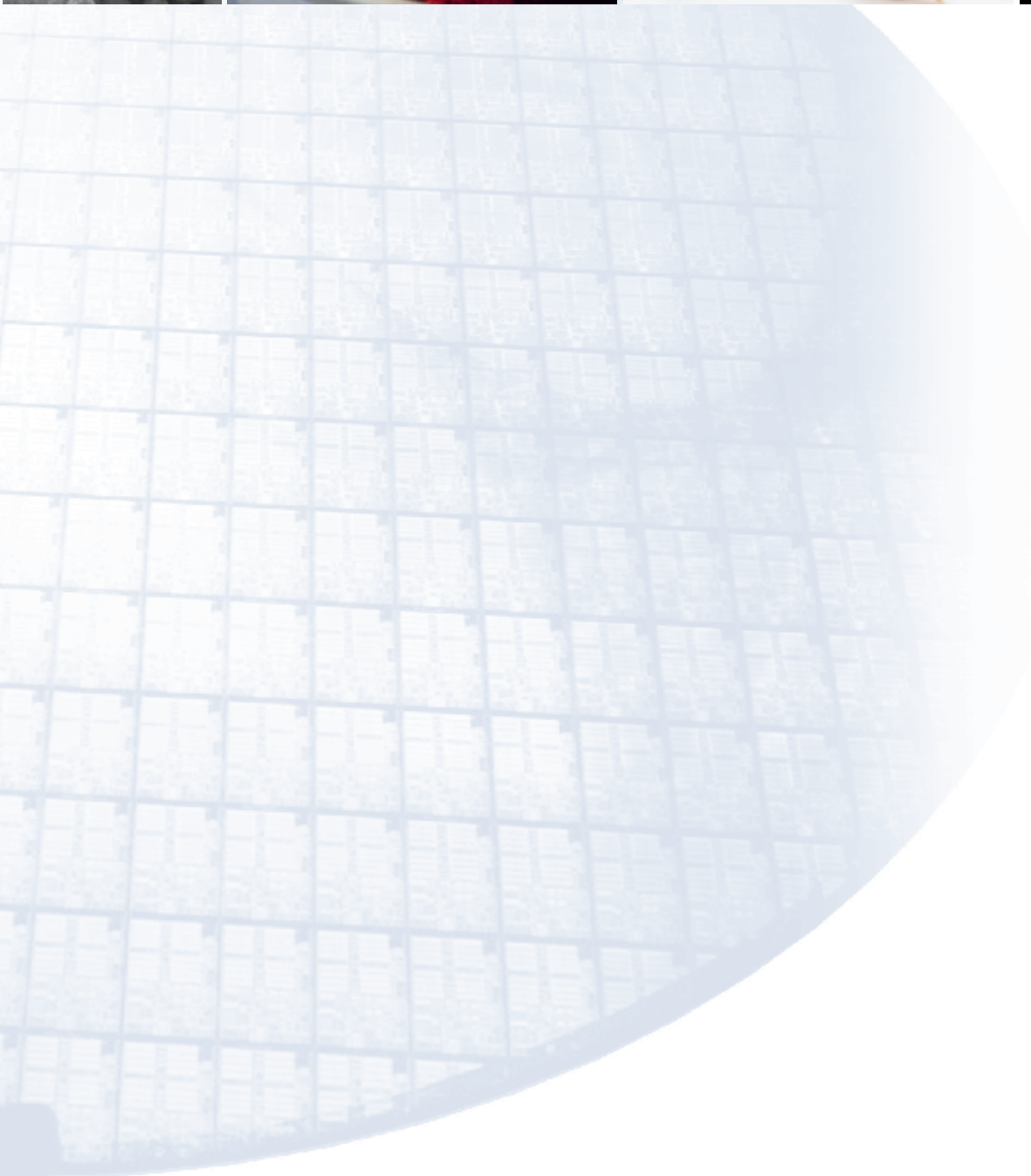
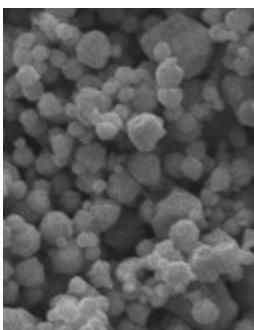
POWDERS AND FLAKES

We supply a comprehensive range of leading-edge materials to meet the demanding requirements of the semiconductor, photovoltaic and electronic industries. Metalor products are acknowledged world-wide by formulators of conductive die attach adhesives, inks and pastes that serve a variety of electronic applications.

Advanced Coatings produces precious metal powders and flakes with various particle sizes, surface areas and morphologies using chemical, electrochemical, or mechanical means. These powders are of high purity, have well-defined particle size distributions, are highly de-agglomerated and they disperse easily. Based on our powder and flake technology we produce:

- customized flakes for electrically and thermally conductive die attach and adhesives for microelectronic applications
- silver powders and flakes for ceramic interconnect, low temperature co-fired ceramic (LTCC) fabrication and passive component termination
- specialty silver powders and flakes for polymer thick film (PTF), membrane touch switches (MTS), RFID antennas and printed electronic (PE) applications
- engineered silver powders and flakes for the rapidly growing photovoltaic market place
- silver powders for sprayable inks, formable gaskets and other shielding materials
- silver chloride powders and flakes for medical applications such as electrocardiography (ECG) sensors
- platinum powders for fuel cells and sensor applications
- gold powders and flakes for high performance thick film inks
- a variety of materials via joint development programmes for custom applications, including, but not limited to, the use of emerging technologies for display requirements.





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