

## TABLETOP EXHIBIT AND NETWORKING RECEPTION

On Tuesday, March 30, from 6:00 to 7:30 p.m., there will be a tabletop exhibition and networking reception featuring the following exhibitors:

### **AMETEK, Inc.—Specialty Metal Products Division**

Eighty Four, PA

[www.ametekmetals.com](http://www.ametekmetals.com)

Major producer of stainless steel, high nickel alloy, and titanium powders. Includes 304L, 316L, 410L, 17-4PH, CP Ti, titanium powder and other mixes upon request for MIM and PM.

### **AT&M Powdered Metal Branch Company**

Beijing, China

[www.atmcn.com](http://www.atmcn.com)

Located in the Zhongguancun Science Park in Beijing, Advanced Technology & Materials Company Ltd. (AT&M), Powdered Metal Branch Company, has already established a Metal Injection Molding (MIM) manufacturing facility guided by a group of experts with 10-years of R&D experience to guarantee fast services for our customers. In 2009, the AT&M MIM Plant increased daily production capacity to 400,000 small metal parts with complex shape, high precision and performance requirements, becoming a certified supplier to ten famous global enterprises for a wide array of applications including medical instruments; mobile phone parts; lock parts; and tools. Furthermore, our company has developed both gas atomized and water atomized powder manufacture lines to supply high-quality metal powders such as soft magnetic powders; diamond catalyst powders; tool matrix powders; and MIM powders.

### **atect Corporation**

Osaka, Japan

[www.atect.co.jp](http://www.atect.co.jp)

Established in 1959, atect Corporation has been successful in the semiconductor market utilizing technology for mold tooling and injection molding to meet our customer's various demands. We supply binders for MIM in the global market and are extremely prominent in Asia.

### **Automated Cells & Equipment, Inc.**

Painted Post, NY

[www.autocells.com](http://www.autocells.com)

Automated Cells & Equipment (ACE) is a FANUC Robotics' Certified Servicing Integrator based out of Painted Post, New York. As a leading provider of Factory Automation and Robotics, they are focused on providing well conceived and engineered automation solutions delivered on time and supported with world class service. Their systems currently perform press takeout, furnace load/unload, sizing press load/unload, palletizing and deflashing/deburring operations. They have demonstrated their ability to provide cost-effective, innovative manufacturing solutions at multiple powder metal shops across North America. Hallmarks include: personalized service, dedication to on-going training and technical support available 24 hours, 7 days per week.

## **AVS, Incorporated**

Ayer, MA

[www.avsync.com](http://www.avsync.com)

AVS, Inc. specializes in equipment designed for new materials & processes requiring heat, vacuum, axial, or HIP pressure. AVS offers process development to complete production plants for aerospace; medical; consumer goods; solar; battery; wind energy; electronics; military; and materials development.

## **BASF Corporation**

Evans City, PA

[www.basf.com/catamold](http://www.basf.com/catamold)

BASF Catamold® is a ready-to-mold feedstock for MIM and CIM. Our material portfolio includes various low-alloy steels, stainless steels, tool steel, soft magnetic alloys, super alloys, special alloys (Ti, W, others) and oxide ceramics. New grades will be developed as needed for our customers. Catamold® incorporates catalytic debinding and offers high green strength and dimensional stability. It is well suited for both batch and continuous PIM operations.

## **Carpenter Powder Products, Inc.**

Bridgeville, PA

[www.cartech.com](http://www.cartech.com)

Carpenter Powder Products provides gas atomized tool steel, stainless steel, nickel, and cobalt base powders for Metal Injection Molding (MIM), PTA, Laser, Thermal Spray, Rapid Prototyping, HIP, and Braze applications, as well as mill forms of these alloys. We have manufacturing plants in both North America and Europe.

## **Centorr Vacuum Industries, Inc.**

Merrimack, NH

[www.centorr.com](http://www.centorr.com)

Centorr Vacuum Industries is a manufacturer of high performance vacuum debind and sintering furnaces for the Metal/Ceramic Injection Molding market. Available with either metal or graphite hot zones, these units can process all Fe-Ni, 316-L and 17-4PH feedstocks as well as a variety of other materials including titanium, tungsten carbide and tool steels. MIM-Vac™ furnaces operate at pressures from 1-750 torr in argon, nitrogen, and hydrogen gases for increased flexibility, and include CVI's Sweepgas™ debinding system which is suitable for all commercially available binders and feedstocks. CVI operates a toll-firing Applied Technology Laboratory and has a fully staffed Aftermarket Field Service group.

## **CM Furnaces, Inc.**

Bloomfield, NJ

[www.cmfurnaces.com](http://www.cmfurnaces.com)

CM Furnaces has been involved in Metal and Ceramic Injection Molding for over 20 years. We manufacture both batch and continuous sintering equipment, in a large variety of sizes. We are also involved in thermal debinding, as well as catalytic debinding for the BASF feedstock. Furnaces are available in both standard and custom configurations.

**Dynamic Group**  
Minneapolis, MN

[www.thedynamicgroup.net](http://www.thedynamicgroup.net)

Dynamic Engineering designs and manufactures precision production injection molds for powder and plastic. In business since 1977, we have 30 years of experience in applying leading-edge technology to high-precision molds. Dynamic has been providing innovative solutions for powder injection molding for 20 years. Our PIM expertise encompasses the medical, dental, firearms, and automotive industries as well as other commercial industries. Dynamic has in-house tool sampling capability.

**ELNIK SYSTEMS div of PVA MIMtech, LLC**

Cedar Grove, NJ

[www.elnik.com](http://www.elnik.com)

ELNIK SYSTEMS provides complete debinding & sintering equipment for metal injection molded parts. We feature solvent & catalytic debinding ovens removing the first stage binder. The MIM 3000 furnaces remove the second stage binder and sinter the parts to full density. Both systems have integrated loading trays eliminating the need of re-setting parts which saves time and breakage. DSH Technologies, LLC, our affiliate, can be your partner in developing any or all of the MIM process operations before you invest; use the furnaces in DSH, optimize your process, or let DSH set up your turn-key MIM operations.

**Epson Atmix Corp.—SCM Metal Products Inc.**

Research Triangle Park, NC

[www.atmix.co.jp](http://www.atmix.co.jp)

SCM Metal Products, Inc., is the Exclusive Representative, in North and South America, for MIM powders provided by Epson Atmix Corporation, Japan. Epson Atmix provides a wide variety of high-quality alloys in particle sizes and particle shapes for the MIM industry. Alloy selection includes iron based (stainless and low alloy), nickel based, cobalt based and copper in particle sizes ranging from sub-20 micron to sub-5 micron. Recent advances in Atmix's high-pressure atomization process have made cost-competitive, finer, sub-10 micron powders available for MIM. Improvements in surface quality, dimensional stability and final density have been reported.

**GOCERAM AB**

Molndal, Sweden

[www.goceram.com](http://www.goceram.com)

In business since 1987, GOCERAM AB developed the concept of Medium Pressure Injection Molding (MEDPIMOULD®). Supplier of complete production lines based on medium-pressure injection-molding systems with the flexible principle of CIModule® (Compact Injection Module), including low-cost mixers, injection-molding machines and rate-controlled debinding furnaces as well as supercritical carbon dioxide binder extractors. Complete machinery and product-specific technology packages for oxide and non-oxide ceramics, metals (PM) and cemented carbides. Prototype development. Sales representation for complimentary equipment and technologies. Representatives in the United States, Europe, South East Asia and India.

## **Metal Powder Report/Elsevier**

Oxford, Kidlington, UK

[www.metal-powder.net](http://www.metal-powder.net)

## **Orton Ceramic Foundation**

Westerville, OH

[www.temptab.com](http://www.temptab.com)

The Orton Ceramic Foundation has produced devices that measure thermal energy (temperature and time at temperature) for well over 100 years. Orton has recently introduced a new, easy to use product TempTab, to provide documentation of the sintering process' consistency and reproducibility. The product is currently available for use between 800-1300C and can be used in air, inert or reducing atmospheres and vacuum.

## **PIM International Magazine**

Shrewsbury, UK

[www.pim-international.com/](http://www.pim-international.com/)

We are dedicated to providing the international PIM community with an informative and exciting quarterly publication covering all aspects of PIM component production.

## **PLANSEE USA LLC**

Franklin, MA

[www.plansee-usa.com](http://www.plansee-usa.com)

Schwarzkopf Technologies is now PLANSEE USA and continues to deliver the world's best furnace solutions. Schwarzkopf Technologies is known within the US and Canada as the industry leader in developing, designing, and manufacturing high temperature furnace products to perform better and last longer. As an independent subsidiary we have contributed to the success of the PLANSEE Group going forward we will be operating jointly under one name. Our customers will be able to benefit even more from synergies generated within the Group, demonstrating our uncompromising commitment to delivering the highest-quality products.

## **Polymer-Chemie**

Bad Sobernheim, Germany

[www.polymer-chemie.de](http://www.polymer-chemie.de)

Polmer-Chemie was founded in 1973 and is a leading compounder with a production volume exceeding 150,000 tons of polymer compounds per year. Metal Powder Compounds is a division of Polymer-Chemie GmbH founded in 2005 specialized in the development and marketing of standard and custom-made feedstock for metal injection molding under the product name polyMIM®. All common MIM metal alloys are available as standard feedstock compounds. The portfolio includes low alloy, stainless and super alloy feedstocks.

## **Pressure Technology, Inc.**

Warminster, PA

[www.pressuretechnology.com](http://www.pressuretechnology.com)

Pressure Technology, Inc. (PTI) is a leading provider of high quality hot isostatic pressing services (HIPping) to the MIM industry. We offer a broad range of equipment capabilities utilizing state-of-the-art gas analysis, temperature control, and sophisticated process and data recording. Pressure Technology has eight production units in two locations, Warminster, PA and Concord, OH. Pressure Technology, Inc. stresses superior service and close working relationships with new and long term customers. PTI is ISO 9001:2000 and AS9100 Certified.

## **Proton Energy Systems**

Wallingford, CT

[www.protonenergy.com](http://www.protonenergy.com)

The world leader in on site hydrogen generation solutions. Proton manufactures solid polymer proton exchange membrane systems for hydrogen generation products. Electrolysis occurs across these membranes producing very pure H<sub>2</sub> in a safe, reliable, and cost effective package with many benefits when compared with other alternatives. Systems are available to meet flow rate requirements from 300 cm<sup>3</sup>/min to 1146 SCF/hr (30 Nm<sup>3</sup>/hr) or larger. Originally developed for space shuttle requirements, Proton now supplies the technology to many applications including nuclear submarines, hydrogen car fueling stations, and analytical chemistry uses. The most common commercial applications are for heat treating, power plant generator cooling, and for semiconductor process blanketing and gas deposition requirements.

## **Ryer, Inc.**

Temecula, CA

[www.ryerinc.com](http://www.ryerinc.com)

Ryer, Inc. is a manufacturer, developer and supplier of custom and standard feedstocks for the metal injection molding industry. We offer the largest selection of MIM/PIM feedstocks in the industry. Our vast feedstock selection offers multiple choices of de-binding methods, material types, particle sizes and distributions. As a custom compounder, RYER can match your current material shrink specifications and flow characteristics. Ryer feedstocks are inspected, tested and documented to assure you receive consistent, predictable results with "batch-to-batch" repeatability. Contact Ryer today to learn how Ryer feedstocks can improve your yield, quality and the consistency of your products.

## **Sandvik Osprey LTD**

Neath, United Kingdom

[www.smt.sandvik.com/osprey](http://www.smt.sandvik.com/osprey)

Sandvik Osprey manufacturers gas atomized powder optimized for Metal Injection Molding. Alloys include stainless steel (17-4PH, 316L, 420), Cobalt and Nickel alloys (F75, 718, 625), Copper and Copper alloys, and Master Alloys for stainless and alloy steels. Osprey also manufacturers custom alloys to customer specs. To assist in development work, 50 lbs. lots can be manufactured.

## **SMART Metal Powders**

Toronto, CANADA

SMART Metal Powders was established in late 2009 to provide marketing, sales and product development services to metal powder producers. "SMART" is an authorized representative of Chemical Vapour Metal Refining, "CVMR", based in Toronto, Canada. CVMR has proprietary technology to make carbonyl-based powders, including Ni, Fe, and Co. Current commercial products of interest to the MIM industry include discrete, fine (sub 10 micron) Ni powder grade SNP-800 and a newly developed smooth Ni powder SNP-80S. Also in development are carbonyl alloy powders containing Fe and Ni. "SMART" and CVMR are technology-driven companies and engage in collaborative product development with customers.

## **Sunrock Ceramics Company**

Broadview, IL

[www.sunrockceramics.com](http://www.sunrockceramics.com)

Sunrock Ceramics is a US manufacturer of high-alumina setter tiles, pusher plates, saggars, refractory bricks, hearth plates, and other specialty shapes used for sintering operations in powder metallurgy and advanced ceramics industries, including metal injection molding and ceramic injection molding. Sunrock presses and casts very high-purity alumina ceramics that can withstand the severe thermal cycles and aggressive chemical environments inherent in hydrogen atmosphere sintering operations. Our press production process and large tooling portfolio provides a wide assortment of available shapes, including thin setter plates used in batch hydrogen and vacuum furnaces.

## **Yuelong Superfine Metal Co., Ltd.**

Guangzhou, CHINA

[www.ylqip.com](http://www.ylqip.com)

The private company is committed to manufacturing Carbonyl Iron Powder (CIP), a versatile raw material with a variety of applications in hi-tech industries, among which metal injection molding, diamond synthesis and diamond tools included. Yuelong was founded in 2003 and has been developing at a amazing speed since then. With state-of-the-art technology and strict quality-control systems, Yuelong has a capacity of CIP 3000 MT/annually in the mean time. Late 2009, in order to provide better customer service, Yuelong set up the first overseas branch in Germany. Early 2010, Yuelong launched a new production line for atomized iron powder and stainless steel powder. Any form of cooperating proposals is highly appreciated.

## **ZIRCAR CERAMICS, INC.**

Florida, NY

[www.zircar.com](http://www.zircar.com)

Manufacturer and international marketer of a wide range of products used in the sintering of stronger, denser MIM/PM parts. Products include alumina fiber sintering fixtures and kiln furniture, ceramic fiber papers and blankets, Al<sub>2</sub>O<sub>3</sub> and ZrO<sub>2</sub> coatings and powder papers. A NEW Ceramic Infusion process produces low-mass setters and fixtures with improved wear resistance leading to longer life and lower cost of ownership.

Free prototype fixtures available upon request.

Contact David Hamling/Owner at [dph@zircarceramics.com](mailto:dph@zircarceramics.com)