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Advanced Design Consulting USA, Inc.

126 Ridge Road Lansing, NY 14882 USA Tel: 607-533-3531 http://www.adc9001.com ADC, located near Cornell University in Ithaca, New York, is a leading developer and supplier of complex scientific components and instruments for large government laboratories and corporations around the world. Founded as a privately held company in 1995, ADC has grown into one of world's leading technology companies and has enjoyed 22 straight years of business growth and profitability with more than 500 customers located in over 26 countries. ADC's vision is to be a global leader in the development and manufacturing of innovative products for scientific and research markets.

Aerotech, Inc.

101 Zeta Drive Pittsburgh, PA 15238 USA Tel: 412-963-7470 https://www.aerotech.com Since 1970, Aerotech has designed and manufactured the highest performance motion control and positioning systems for our customers in industry, government, science, and research institutions around the world. Aerotech's precision motion control products provide the critical performance for today's demanding applications in markets such as research and development, laser processing and micromachining, aerospace and defense, medical device and life sciences, semiconductor and flat panel, photonics, automotive, data storage, electronic manufacturing and test, assembly, and others requiring high precision, high-throughput motion solutions.

Aerotech manufactures motion control and positioning systems and components including automated direct-drive and piezo nanopositioners; hexapods; planar and rotary air-bearing stages; high-speed gantries; mechanical-bearing linear, rotary, and lift stages; brushless linear and rotary servomotors and drives; stand-alone and software-based motion controllers; goniometers; galvanometers; and gimbals/optical mounts.

Our expertise and ability to provide custom motion components and systems is unmatched. Our custom manufacturing capability is further augmented by our long history of providing vacuum-prepped and cleanroom-ready positioning systems and components.

Aerotech has full sales and service facilities in the U.S., U.K., Germany, Japan, Taiwan, and China, as well as representatives across the globe.

Agilent Technologies

121 Hartwell Avenue Lexington, MA 02421 USA Tel: 781-860-5489 https://www.agilent.com/home Agilent Technologies, Vacuum Products Division (formerly Varian, Inc.) Agilent Technologies is a world leader providing science researchers with total vacuum solutions for over sixty years. And we provide dry vacuum from the ground up, from rough vacuum to UHV, as well as the vacuum measurement instrumentation and leak detection you need to stay up and running.

Alan Burrill Technical Sales

8129 W. Lincoln Avenue West Allis, WI 53219 USA Tel: 414-327-9055 http://www.aburrilltechsales.com Alan Burrill Technical Sales is a manufacturer's representative firm offering cutting edge products for vacuum and thin film technology. Featuring the products of Atlas Technologies, Osaka Vacuum Products, Synergy Systems Corporation, and other quality vendors.

Amplitude Laser Group - Continuum

140 Baytech Drive San Jose, CA 95134 USA Tel: (408) 727-3240 www.amplitude-laser.com Amplitude is a leading manufacturer of ultrafast lasers for scientific, medical, and industrial applications. From ultrafast industrial fiber lasers to Petawatt-class high intensity lasers, Amplitude is focused on helping its customers with advanced solutions. Amplitude offers a unique and distinct product portfolio: diode-pumped ultrafast solid-state lasers, ultra-high energy Ti:Sapphire ultrafast lasers and a full line of high energy solid state laser products. The group consists of three manufacturing locations in Bordeaux and Paris, France, and San Jose, CA U.S.A., and an extensive network of support offices in Europe, Asia and North America.

Anderson Dahlen – Applied Vacuum Division

6850 Sunwood Drive NW Ramsey, MN 55303 USA Tel: 763-852-4700 http://www.andersondahlen.com With 30 years of experience manufacturing custom ultra-high vacuum products, the Anderson Dahlen-Applied Vacuum Division has the tools and technology to provide most requirements. We deliver total vacuum solutions including chambers and assemblies, flanges and components, motion, manipulation and transfer devices, as well as custom integrated equipment.

The Applied Vacuum Division fabricates custom chambers and assemblies from moderate vacuum for industrial processes to extreme-high vacuum (XHV) for critical scientific study. What's more, we manage a range of production volume from custom design-and-build projects for national labs and universities to repeat production for equipment manufacturers. Our current manufacturing envelope ranges from handheld components to 20' in length (14' in diameter) across a multitude of materials including Stainless Steel, Aluminum, Copper, Inconel, Hastelloy, Tungsten, and other exotic materials.

Andor Technology

300 Baker Avenue Suite 150 Concord, MA 01742 USA Tel: 860-290-9211 http://www.andor.com Andor Technology, a world renowned innovator in the design and manufacture of scientific research equipment, will be exhibiting at this year's APS Users meeting. We will be showcasing our latest developments in our vast physical science imaging portfolio.

Anton Paar

10215 Timber Ridge Drive Ashland, VA 2300 USA Tel: 804-550-1051 https://www.anton-paar.com/us-en/ Anton Paar produces high-quality measuring and analysis instruments for laboratory, research and industrial applications. In the fields of density and concentration measurement we are the established world leader. Our product portfolio also includes viscometers, rheometers, polarimeters, refractometers, microwave synthesis, microwave decomposition, and instruments for X-ray structure analysis.

Applied Diamond, Inc.

3825 Lancaster Pike Wilmington, DE 19805 USA Tel: 302-999-1132 http://www.ddk.com Applied Diamond supplies products made from single crystal and polycrystalline diamond customized to the specific use of synchrotron facilities. Our products include highly transparent windows, filters, beam positioning detectors, ultra high thermal conductivity high spreaders and thin membranes for x-ray beamlines. We have expertise in diamond polishing for smooth surfaces, metallization for bonding and mounting of windows to flanges.

The transmission and thermal conductivity of diamond has grown to be particularly useful for high power beamlines where the performance of standard materials is not as effective.

attocube systems Inc.

2020 Stuart Street Berkeley, CA 94703 USA Tel: 510-649-9245 http://www.attocube.com attocube offers piezo positioning stages as well as complete piezo motion solutions with highest precision and extremely rugged yet cost efficient design. The IDS3010 is the latest addition to attocube's patented fiber-based interferometer technology which enables displacement and vibrometry measurements in various applications and in extreme environmental conditions.

Axilon AG

Emil-Hoffmann Straße 55-59 50996 Köln Germany Tel: +49 (221) 165324 00 Fax: +49 (221) 165324 99 http://www.axilon.de/website/ AXILON is a strong new corporation serving the international synchrotron, accelerator & photon community. Based on the extensive and long-term experience of our dedicated experts, we serve our customers with excellent and efficient solutions for complete beamlines, beamline components, monochromators, mirror systems, experimental stations, X-ray microscopes, insertion devices and other special engineering and manufacturing solutions.

Carl Zeiss SMT GmbH

Rudolf-Eber-Str. 2 Oberkochen 73447 DE Germany Tel: +497364205971 https://www.zeiss.com/corporate/ int/home.html Carl Zeiss SMT is a reliable partner for the manufacturing of synchrotron mirrors. We implement powerful metrology and manufacturing techniques for the upcoming generation of highest-quality optical components for synchrotron radiation and other x-ray applications.

Cosmotec, Inc.

229 Polaris Ave. Suite 3 Mountain View, CA 94022 USA Tel: 408-428-9741 Fax: 408-428-9742 http://www.cosmotec.us/index.php THE HIGHEST QUALITY CERAMIC-TO-METAL Over 25 years of excellence. Now in Silicon Valley. Because cutting corners isn't an option. We, at COSMOTEC, design the highest quality feedthroughs available on the market today. Perfection you can count on our CUSTOM PRODUCTS. Large inventory in Silicon Valley, US and Japan make SAME DAY SHIPPING. We work very closely with our clients, scientists, corporations, researchers, government labs, universities and individuals. Cosmotec respects the accomplishments or achievements with the people involved. We will amaze you with our custom manufacturing capabilities. Whether it is "one quantity" order, Cosmotec will work at its best to not let our clients down. We will "WORK TOGETHER" with our clients and find the best solution. Whether they are isolators, ceramic feedthroughs, coaxial and multi-pin connectors, coaxial connectors, multi-pin connectors, double-ended connectors, floating coaxial connectors, multi-pin connectors, ceramic chambers, beam positioning monitors(BPM), isolator flanges, ceramic isolator flanges, sapphire windows, single-crystal sapphire material, ceramic-to-metal bonding technology, we will provide solutions.

DECTRIS USA Inc.

325 Chestnut Street Suite 800 Philadelphia, PA 19106 USA Tel: 215-384-3479 https://www.dectris.com

DECTRIS is one of the technology leaders in X-Ray detection. The DECTRIS photon counting detectors have transformed basic research at synchrotron light sources, as well as in the laboratory and with industrial X-Ray applications. DECTRIS aims to continuously improve the measurement quality, thereby enabling new scientific findings. This pioneering technology is the basis of a broad range of products, all scaled to meet the needs of various applications. DECTRIS also provides solutions for customer developments in scientific and industrial X-Ray detection.

Ebara Technologies

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EBARA is a global innovator/local provider of vacuum pumps and advanced exhaust management solutions for semiconductor, photovoltaic, thin films and R&D: Dry Vacuum Pumps, Turbomolecular Pumps, Point-of-Use Abatement, Field Services, Parts Cleaning Services.

FMB Oxford Ltd.

Units 1-4 Ferry Mills Ferry Mills Osney Mead, Oxford OX2 0ES United Kingdom Tel: +44 1865 320300 http://www.fmb-oxford.com

With nearly two decades of experience working with X-rays, we have an extensive portfolio consisting of detectors, diagnostics, monochromators, mirrors and many other field proven components.

greateyes GmbH

Justus-von-Liebig-Straße 2 12489 Berlin Tel: +49 (0)30 912075 250

https://www.greateyes.de/en/home.html

greateyes GmbH is an aspiring German-based manufacturer of scientific high-performance cameras for imaging and spectroscopic applications. The company is passionate about innovative, cutting-edge technology and strives for continuous product improvement. Based on their unique platform concept, customers can choose from a large portfolio of cameras (more than 50) including various pixel formats with sensor sizes up to 16.8 megapixel. The compact detector design allows flexible integration into existing setups either as stand-alone detector or attached to a vacuum chamber. Full flexibility is particularly offered by the in-vacuum camera series designed and optimised to be operated under UHV conditions. Low-noise electronics combined with deep sensor cooling enables high dynamic range measurements for most-demanding applications, with excellent sensitivities ranging from the X-ray through EUV to the VIS and NIR spectral region.

HIWIN Corporation

12455 Jim Dhamer Drive Huntley, IL 60142 USA Tel: 224-268-5996 https://www.hiwin.com/index.html Hiwin Corp. manufactures an extensive line of both linear motion components and complete solutions. With a goal of supplying superior quality at the most competitive prices, the company offers a variety of precision ground and rolled ballscrews, linear guideways, electric actuators, ballscrew-driven stages, and linear motors, with many fully integrated value-added features.

Huber Diffraction USA

8344 West Avenue C4 Lancaster, CA 93536 USA Tel: 949-391-7755 http://www.xhuber.de/en/contact/ HUBER Diffraktionstechnik GmbH designs and manufactures high-precision positioning systems primarily used for X-ray diffraction in laboratories and at synchrotron beam sources. Other application fields are diffraction experiments with neutrons, laser technology, astronomy and precise measurement technology. Your Decision for Precision.

Instrument Design Technology Ltd.

Unit 2 Turnstone Business Park Mulberry Avenue Widnes CHS Cheshire WA8 GE United Kingdom Tel: +44 (0)8455088438 http://idtnet.co.uk/contact.html

Instrument Design Technology (IDT) provides the world's synchrotron community with a design and-build resource in state-of-the-art mechanical high-precision instrumentation. IDT is fully compliant with the latest quality management system, ISO-9001. IDT has core competencies in design and build of complex, state-of-the-art, instruments with motion in multiple degrees of freedom, often working in an ultra-high-vacuum (UHV) environment. Complex optical engineering of x-ray and other beamlines is provided, very often with novel concepts being incorporated. We have a growing reputation for novel monochromators with exceptional proven performance in the field.

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2511C Broadbent Parkway Albuquerque, NM 87107 Tel: 505-345-2660 http://insyncoptics.com InSync, Inc. is a custom, high-tech, optical manufacturing company. Specialty is the unusual, "state of the art" polished optic up to 1500mm in size. Capabilities; Computer Design, Finite Element Analysis, Slicing, Grinding, Feature Machining, Etching, Bonding, Lapping, Polishing, Coating, Metrology. Polished Shapes; Cylindrical, Spherical, Flat. Substrate Designs; Internally Cooled, Externally Cooled, Uncooled, Rectangular, Round, Bendable for other polished shapes. Substrate Materials; Silicon, Glass, Metals.

JTEC Corporation

2-4-35 Saito-Yamabuki Ibaraki, JP-27 Osaka 567-0086 JP Japan Tel: +81-72-643-2292 We, JTEC Corporation, design and fabricate Ultra Precision X-ray mirrors using EEM, nano fabricating technology, and MSI/RADSI, nanometrological technology, of Osaka University. These technologies enabled us to fabricate Perfect Surface at <2nmPV on 1- meter size Free Form and we have delivered our mirrors to synchrotron facilities worldwide. EEM can be applied to Silicon, Silica (Quartz Glass), ULE®, ZERODUR®, and CLEARCERAM® to achieve Perfect Surface.

KOHZU Precision Co., Ltd. c/o Daniel F Crews, LLC

P.O. Box 2804 Evergreen, CO 80437 USA Tel: 303-944-1082 https://dfcrews.com/kohzu/ KOHZU Precision manufactures reliable, high-end production quality, cost effective, linear stages (X), rotary axes (R), vertical lift stages (zed axis, Z), stacked XY, swivel or goniometer stages (tip/tilt) for atmospheric or vacuum environments. Stages are available with manual micrometers or stepper motors (motorized). KOHZU also manufactures 6-axis alignment stations, metrology & synchrotron equipment.

Kugler of America, LTD

74 Palomba Drive Unit D Enfield, CT 06082 USA Tel: 860-749-6400 Fax: 860-749-6600 http://www.kuglerofamerica.com We are the leading manufacturer of ultra-precision Machining Systems for Accelerator/Undulator Magnetic Measurment Benches up to 9 meters long, with highest precision linear drive up to 9 meters, and up to 9 motorized goniometer axes, with advanced ultrafast control, and elaborate shielding and ultra low permeability. We are also a large Job Shop- Manufacturer of high end Metal Mirrors for X-ray/IR/Far IR/Terahertz mirrors.

Kurt J. Lesker Company

1925 Route 51 Jefferson Hill, PA 15025 USA Tel: 412-387-9200 Fax: 412-384-2745 https://www.lesker.com Manufacturer/distributor of: standard and custom high vacuum and UHV chambers and subassemblies; standard and custom vacuum hardware; feedthroughs; valves, vacuum pumps of all types. Manufacturer of thin film deposition systems for sputtering, electron beam, thermal evaporation, and Atomic Layer Deposition. Exclusive North American representative for UHV Design Ltd. motion, heating and manipulation devices.

Materion Corporation

44036 S. Grimmer Boulevard Fremont, CA 94538-6346 USA Tel: 510-623-1500 https://materion.com Materion has more than 50 years of experience fabricating a variety of ultra-high vacuum (UHV) components incorporating beryllium windows, including custom UHV research chambers, beryllium beam pipes (up to 7 meters long), actively cooled window assemblies, and CF (ConFlat) window assemblies.

McCrone Group

850 Pasquinelli Drive Westmont, IL 60559 USA Tel: 630-887-7100 www.mccrone.come The McCrone Group is internationally recognized as a world leader in microscopy and microanalysis and includes McCrone Associates, McCrone Microscopes & Accessories and Hooke College of Applied Sciences. McCrone Associates, Inc. is focused on solving the most difficult materials and particle identification problems along with the day-to-day analysis needs of clinical laboratories, scientific researchers, business organizations, and government agencies worldwide. McCrone Associates' scientists consult directly with clients, and use the most advanced microscopy techniques and instrumentation to solve their problems. McCrone Microscopes & Accessories, LLC is the authorized dealer for Nikon microscopes and measuring equipment, Linkam high temperature and X-ray stages, the JEOL NeoScope benchtop SEM with EDS, HiROX Digital Microscope Systems, digital imaging systems, and a variety of laboratory supplies. The technical sales representatives at McCrone Microscopes are trusted advisors to scientists worldwide. Hooke College of Applied Sciences provides education and training to scientists worldwide, specializing in SEM instruction. Topics covered include light and electron microscopy, spectroscopy, sample preparation, chemistry and laboratory safety, and image analysis.

Midwest Vacuum Inc.

15 Spinning Wheel Road Suite 120 Hinsdale, IL 60521 USA Tel: 630-323-5399 http://www.midwestvacuum.com/ Home.9.0.html Midwest Vacuum, Inc. was founded in 1983 as a Vacuum one stop Manufacturer Representative Agency/Distributor for Vacuum to Ultra High Vacuum Valves, Pumps, Chambers and or Process Equipment. Midwest Vacuum Inc. also offers some unique all metal sealing components for applications ranging from UHV to food processing. Please give us a call if you are in need for vacuum to UHV related components and equipment.

Mirion Technologies

800 Research Parkway Meriden, CT 06450 USA Tel: 203-238-2351 https://www.mirion.com Canberra, now part of Mirion Technologies, is a leading supplier of innovative and cost-effective nuclear measurement solutions and services used to protect people, property, and environment from the harmful effects of ionizing radiation. Canberra solutions are used in radiochemistry laboratories, health physics applications, nuclear power operations, nuclear safeguards, nuclear waste management, environmental radiochemistry and other applications.

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MODION® Vacuum

115 Railroad Street Irwin, PA 15642 USA Tel: 724-523-9610 http://www.modionvacuum.com MODION® Ion Pumps and accessories, manufactured by J.B. Anderson & Son, Inc are small, modular ion pumps. MODION® systems are suitable for High and Ultra High Vacuum (UHV) systems where space savings are beneficial, portability is needed, and where mass is an issue. In addition to a diverse use acrossed the globe, MODION® Ion Pumps and accessories have a rich space flight heritage. Our systems can be customized to customer spec, and we now offer a battery backup/Uninterupted power suppy for our small modular systems for complete portability. Call us at 724.523.9610. Web: www.modionvacuum.com.

MPF Products Inc.

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neaspec GmbH

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Newport Corporation

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OMS Motion, Inc.

15201 NW Greenbrier Parkway Ste. B1 Beaverton, OR 97006 USA Tel: 503-629-8081 http://www.omsinmotion.com For more than 35 years OMS Motion, aka Oregon Micro Systems has been successfully producing motion control products and services. Single axis integrated controls with drives as well as multi-axis controllers that can control up to 10-axes on a single controller.

Founded in the early 80's OMS developed patented technology that provided an advantage in the motion control industry. In the mid 90's OMS was acquired by Pro-Dex Inc, a publicly traded company, and continued business as a subsidiary and later a division of Pro-Dex. There were many changes within the Pro-Dex organization though OMS remained constant, expanding their role beyond Motion Control to the support of the Medical Devices of other Pro-Dex companies. In January 2017 OMS separated from Pro-Dex as a private company and has regained its focus on motion control with its original leadership of the last 30 years.

OMS Motion produces superior motion control products that include multi-axis controllers for up to 10-axes as well as single axis integrated drives with controls. The controls accept simple ASCII character commands for simple and intuitive programming. Controllers support Ethernet, RS232, RS485, ModBus, VME and PCI bus communications. Soon to be included are support for EtherCAT, PCIe and other communication protocols.

OMS has earned a strong reputation for reliable and quality motion control products that is trusted throughout many industries, including; semiconductor equipment, laboratory automation, factory automation and large-scale research. OMS Motion is a trusted name worldwide for quality motion control.

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Quantum Detectors Ltd.

Rutherford Appleton Lab Harwell, OX11 0QX United Kingdom Tel: +441235 445 795 http://quantumdetectors.com Quantum Detectors has provided novel technology to the APS to increase detection throughput for 10 years, with the first installation here in 2008. This has continued in the last year with five more systems being installed around the ring. If you'd like to hear how we could provide better usability, enable faster throughput and in some cases offer a completely new mechanism for detection at your beamline, drop by our booth to learn more.

Raith Nanofabrication

1377 Long Island Motor Parkway Suite 101 Islandia, NY 11749 Tel: 631-738-9500 Fax: 631-738-2055 https://www.raith.com Raith is a leading precision instrument manufacturer for electron beam lithography, FIB-SEM for nanofabrication and nanoengineering, and automated large area SEM. Life science applications and reverse engineering of semiconductor devices strongly benefits from the large area SEM imaging enabled by the automation and stability of a professional lithography system architecture, ultra-precise image calibrations, and the nanoscale accuracy of the laser interferometer stage. With over 35 years of experience and an international service and support structure, Raith helps customers in achieving great results in their field of work. Be at the top of the game in your area of expertise, with the best Raith solution for your application.

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RaySpec

Sirius House, Watery Lane Wooburn Green, High Wycombe Buckinghamshire, HP10 0AP, United Kingdom Tel: +44 (0) 1628 533060

Fax: +44 (0) 1628 533034 https://www.rayspec.co.uk RaySpec Ltd (hereafter referred to as RaySpec) is a specialist x-ray detector manufacturer with a long history of excellence in custom designs for synchrotron applications. RaySpec has successfully designed and manufactured many different configurations of single and multi-element SDD detectors which have achieved high performance specifications.

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RSA, Inc.

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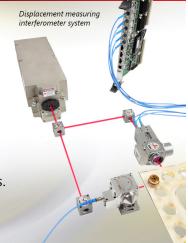
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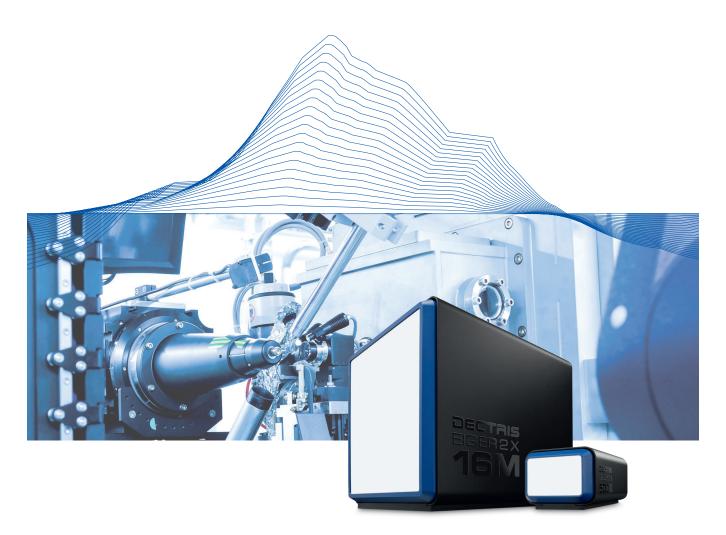


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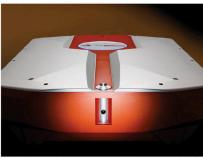
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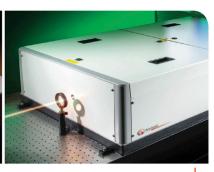




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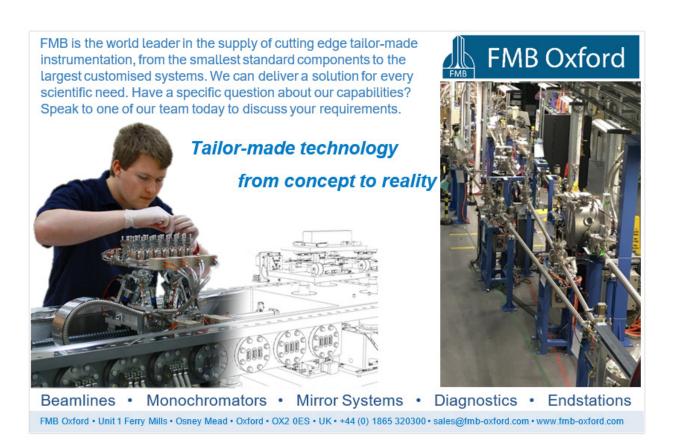




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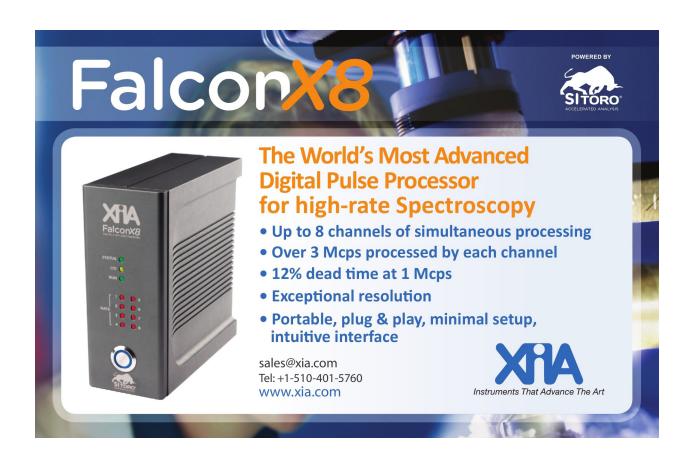
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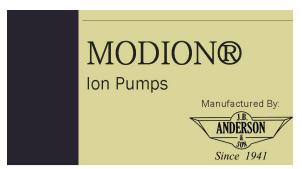
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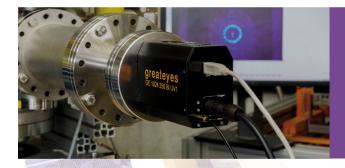


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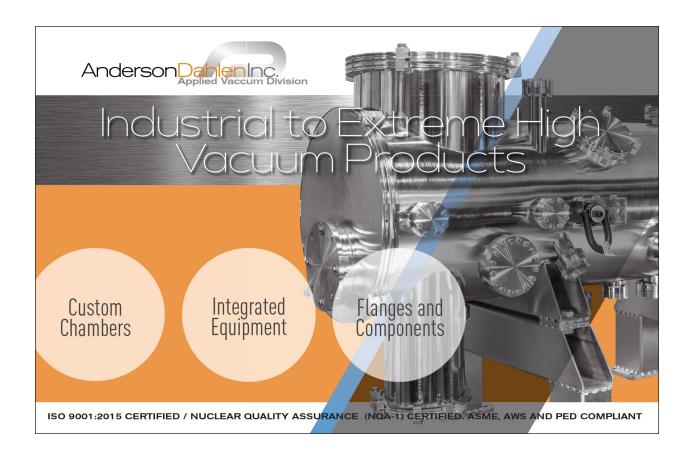
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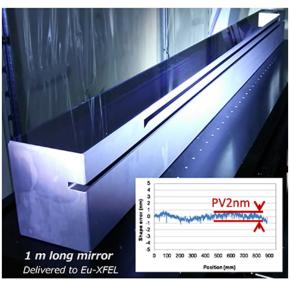








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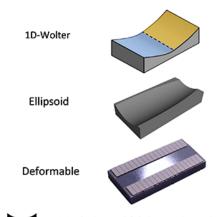


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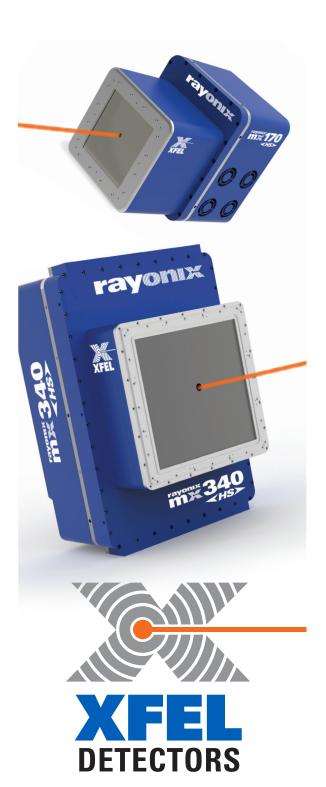
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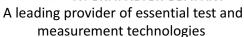
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