

2007 March Meeting

MARCH 5 – 9 • DENVER

www.aps.org/meetings/march**A&N Corporation #602**

A&N Corporation, manufacturer of high vacuum components since 1965, offers researchers and laboratories an extensive line of standard high and ultra high vacuum components, as well as custom valves and process chambers. A&N products are designed to meet or exceed the standards required by industrial and academic users.

Advanced Research Systems #707,705

Designs and manufactures the Pneumatic drive 4K DISPLEX closed cycle and the ultra low vibration HELITRAN open cycle families of cryogenic coolers that operate in the 1.7 to 900K temperature range. ARS integrates the cryostats providing custom interfaces, instrumentation, vacuum shrouds, radiation shields, sample holders, temperature controllers and vacuum systems for each cryocooler.

Advanced Test Equipment Rentals #1103

Advanced Test Equipment Rentals offers effective solutions on rentals, leases, and sales of leading-edge test, measurement, environmental, and inspection equipment. Our wide selection includes a large inventory of test equipment manufactured by Agilent, Narda, Rodhe & Schwarz, Tektronix, Fluke, Schaffner and more. Visit us at www.ate-corp.com or call 800-404-2832.

Agilent Technologies #601, 603

Agilent, the world's premier measurement company has acquired Molecular Imaging, the premier manufacturer of Atomic Force Microscope (AFM) and Scanning Probe Microscope (SPM) systems. This portfolio of high-resolution AFM instruments is ideal for nanometer scale measurement while imag-

ing in fluids, air or gases and under controlled temperature and environmental conditions.

AJA International #801

Products: Sputtering and E-beam Systems for R&D and Pilot Production; Static and Rotating Magnetron Sputter Sources for HV and UHV; Substrate Holders with Rotation, RF Biasing, Heating and Cooling; Sputter Targets / Deposition Materials; Microwave, RF and DC Power Supplies; Microwave Components and Plasma Sources; Other Ion/Plasma Sources.

American Institute of Physics #700,702

AIP offers Author Select — an open-access publishing option — to contributors to any AIP journal. AIP also introduces a new journal — Biomicrofluidics, and two new free-standing subscription options to JCP Biochemical Physics and Applied Physics Reviews — content also included in The Journal of Chemical Physics and Journal of Applied Physics respectively.

American Magnetics #806

Offers superconducting magnet systems to meet any custom requirement and are available in helium cooled or cryogen free versions. Our multi-axis MAXES systems are also available in an optical cryostat and our systems are configured for use with 3rd party He3 inserts or dilution fridges. AMI also manufactures cryofree magnet systems for X-ray diffraction application for use at synchrotron facilities and are designed to fit in compact goniometers. AMI routinely manufactures customized magnet systems for beam lines applications, resonance spectroscopy & STM applications. Other product offerings include power supplies for superconducting

magnets, vapor cooled current leads, liquid helium level instrumentation and cryogenic autofill systems.

American Physical Society #1001,1003

The American Physical Society is the publisher of the world's most prestigious and widely-read physics research journals: Physical Review A, B, C, D, E, Physical Review Letters, Reviews of Modern Physics, PRLA(Physical Review Online Archive), PR-Special Topics-Accelerators and Beams, PR-Special Topics-Physics Education Research and PR Focus.

Amuneal Manufacturing Corporation #1011

Amuneal Manufacturing Corporation designs and fabricates custom magnetic shield components and assemblies for both room temperature and cryogenic applications, and is a world leader in providing cost-effective shielding solutions to the applied physics community. From shield design and attenuation calculations to 3D modeling, we work with you to provide the design for your specific application. All Amuneal fabricated magnetic shields are hydrogen annealed in our in-house heat treat center for maximum shielding properties.

Andeen-Hagerling #1019

Andeen-Hagerling (AH) manufactures the world's most precise capacitance/loss bridges and capacitance standards. AH bridges are fully automatic and resolve sub-attofarad measurements. Loss (dissipation factor) is measured down to $1.5 \times 10^{-8} \tan \delta$. Capacitance standards are available from 0.1pF to 100+pF. Standards have a temperature coefficient of .01ppm/C, stability of

0.3ppm/year, and are NIST traceable to 2ppm accuracy.

AR Worldwide #1115
AR Worldwide RF/Microwave Instrumentation will be exhibiting its new broadband amplifiers, model 800A3 (800 watts, 10kHz 3MHz), for applications that require high voltage and high impedance. The 800A3 drives loads without mismatch by a switchable impedance matching output transformer that can be set to 12.5, 25, 50, 100, 150, 200 and 400 ohms. If higher impedance is required, an external matching transformer is available. For higher power requirements, model 1500A3 provides 1500 watts and the model 5000A3 provides 5000 watts of power over the same frequency range.

Asylum Research #522
Featured is the MFP-3D™ AFM with unprecedented precision, accuracy and image clarity with sensed closed loop operation in all three axes. The system features built in nanolithography and manipulation, advanced 3D rendering, and open software. Our new exclusive Dual AC imaging mode goes beyond phase imaging to measure chemical and mechanical properties.

Attocube Systems AG #517,519
attocube systems AG offers a wide range of high-precision nanopositioning systems, easy-to-use scanning probe microscopes and probe stations. Temperatures down to 10 mK, high magnetic fields up to 28 T, and ultra-high vacuum conditions. The nanopositioners solve experimental tasks at the cutting edge.

Blake Industries #1017
Will be exhibiting the Blake-Huber line of x-ray and synchrotron instruments and accessories, including rotary tables, goniometers, translation stages and Eulerian Cradles.

BOC Edwards #605

Bruker BioSpin Corporation, EPR Division #706
Bruker BioSpin Corporation highlights the ELEXSYS line of FT-EPR spectrometers featuring Linux workstations. Complementing the EMX Series, the ELEXSYS spectrometers provide the ultimate in CW, Pulse-FT-EPR, CW, High Frequency and Pulse ENDOR/Triple instrumentation. The EMX series offers simplicity and reliability for traditional continuous wave EPR.

Cambridge Magnetic Refrigeration #805
CMR will be displaying its mFridge range of general purpose demagnetization refrigerators for hassle free cooling to as low as 30mK. You will be able to talk to our scientists about how ADR technology can benefit your work and discover the full temperature range and convenience of the modular and reliable mFridge family. CMR - Setting new standards in cooling technology.

Cambridge University Press #925, 927
Stop by the Cambridge University Press booth to receive a 20% discount on the latest in Physics, including Electronic Structure by Richard Martin, Composite Fermions by Jainendra Jain and Condensed Matter Field Theory by Alexander Altland and Ben Simons.

Computing in Science & Engineering (CiSE) #418
CiSE is a bimonthly magazine that enables scientists and engineers to apply high-end software to their research. The magazine bridges the communications gap between researchers and IT professionals. The magazine is peer-reviewed. Subscriptions are \$45/year. Stop by for free back issues, archival CDs, and free pens!

Cryo Industries of America #1009
NEW! The XE102 flow cryostat with breakthrough low LHe consumption, AC Susceptibility with externally electronically balancing coils, CRYO Auto Control 2 software to automate your cryostat, VSM sensitivity levels challenging squids, generator to make your own LN₂, CRYOCOOL G2 x-ray diffraction(crystallography) systems and Atomic Force (magnetic cantilever) Microscopes(AFM).

Cryoconcept #1109
Cryoconcept has built up expertise in low temperature physics and dilution refrigerators to the benefit of the end user of reliable technologies in experimental wiring. In partnership with the low temperature laboratory of the CEA (Saclay), we improved the designs of 10mK fridges with the requirements of physicists in mind.

Cryogenic Control Systems #803
Cryogenic Control Systems (Cryo-con) is a manufacturer of precision electronic instrumentation for both laboratory and industrial process control applications. Cryo-con offers a full line of cryogenic temperature controllers, monitors, scanners, cryogenic accessories and temperature sensors. We will be introducing several new additions to our thermometry line. Stop by booth # 803 to view our new products.

Cryogenic Ltd. #830
Designs and manufactures high field measurement systems to +18 Tesla for the study of electrical, magnetic or thermal properties of material. This includes magnetic moment, specific heat, Hall effect, Seebeck effect and Resistivity. Also, high field superconducting magnets to +20 Tesla, Cryogen Free magnets to +16 Tesla, split pair/optical magnets to +12 Tesla, ESR/EPR magnet to 16 Tesla, He-3 and Low temperature inserts.

Cryomagnetics #606
Offers a complete superconducting magnet system, related electronic instrumentation, and cryogenic accessory line. New products include our Model 4G Superconducting Magnet Power Supply. Our C-Mag line of cryogen-free superconducting magnet systems includes options for variable temperature and optical access in a compact package. Cryomagnetics is committed to staying at the forefront of superconducting magnet technology and welcomes the opportunity to discuss your requirements.

Cryomech #506
Cryomech manufactures Gifford McMahon and Pulse tube style cryorefrigerators that are capable of temperatures from 2.8K to 100K in various capacities. We are introducing the Cryomech Liquid Helium Plant which can produce more than 12 liters of liquid helium a day. Our portable Liquid Nitrogen Plants are capable of producing liquid nitro-

gen directly from the air in most locations around the world

DongWoo Optron Col, Ltd. #526
Featuring: MonoRa imaging monochromator/spectrographs, focal length 150mm to 750mm; Ramboss Confocal Micro Raman Measurement system; Maple Micro/Macro Photoluminescence Mapping system; Com-Ram-320i Dispersive NIR Raman measurement system; DongWoo is Drawing Wavelength. We are focused on spectroscopy and offering solutions for optical spectroscopy applications.

Dryogenic #807
The Dryogenic Cryogen-Free Measurement System: State of the art integrated performance, with fast turnaround automated measurement options. Combines ultra-low-vibration pulse-tube cooling with optional and affordable millikelvin ADR technology. The next generation system for sample characterization and device measurement.

Duniway Stockroom Corporation #510
Vacuum Equipment and Supplies, including: Hardware and Supplies: flanges, gaskets, bolts/nuts, valves, leak detectors, supplies (oils, greases, hoses, bell jars); Vacuum Pumps: ion pumps/controls, mechanical pumps/rebuild kits, diffusion pumps; turbo pumps; Vacuum Gauges: controls, sensors, cables. Equipment rebuilding services and re-conditioned equipment. Free 2007 Catalog.

Dynaflow, Inc. #1024
Presenting the ABS Acoustic Bubble Spectrometer® and software products. The ABS is an acoustics based instrument that measures bubble size distributions and void fractions in liquids. 3DYNAFS® allows simulation of nonlinear free surface problems such as bubble dynamics, underwater explosion, ship wave hydrodynamics, and fluid structure interactions.

Easylab Technologies LTD #630
Provides high-pressure cells, such as: High & Low Temperature Diacell Diamond Anvil Cells for Optical and X-Ray Applications; Conventional Piston-Cylinder High Pressure Cells for Magnetic and Electrical Applications; High-Pressure Cells for Biological Applications; spares and accessories for Diacell DACs (including anvils) and Piston-Cylinder Cells.

Elsevier #924,926

GMW Associates #1015
Laboratory Electromagnet Systems with power supply, field measurement and control, computer interface options. Applications to sensor calibration, device development, biological studies, EPR, FMR and NMR Spectroscopy, magnetic processing and magnetic separation. Field measurement Instrumentation: 1- and 3-component Fluxgates for low fields, 1- and 3-component Hall Analog Transducers and Digital Teslameter for control and mapping, NMR Teslameters for very high resolution and accuracy.

Hamamatsu Corporation #504
A leading manufacturer of devices for generation and measurement of visible, ultraviolet, and infrared light. Hamamatsu's unique corporate philosophy stresses the advancement of photonics through extensive research, and yields products regarded as state of the art

Hinds Instruments #604

With over 35 years of polarization modulation experience, Hinds Instrument's Photoelastic Modulators (PEMs) are proven tools for laboratory and research applications. PEMs operate on principles of resonance (20-84 kHz), require low power, and have no moving parts. The Hinds family of products includes modulators, optical choppers, Stokes polarimeters, and birefringence measurement systems.

ICEoxford #502

Offers standard and tailor-made superconducting and cryogenic solutions. We design and manufacture cryogenic systems from liquid nitrogen temperatures down to <7 mK in liquid Helium cooled and cryogen free configurations. We will be exhibiting our standard dilution unit system and various ³He system inserts through our collaboration with Scientific Magnetics. Whether you require a simple bath cryostat or a system with new or unusual features, you should be talking to us.

Instec Inc. #410

Instec designs and manufactures microscope thermal stages, thermal chucks and thermal plates with programmable precision temperature controllers. With the introduction of our new products: ALCT-Automatic Liquid Crystal Testing Equipment, Thermal Stage for 10 OLED sample testing, and LC Cells, Instec is the ultimate source for your LC research and testing equipment needs.

Insulator Seal #1107

A leader in ceramic-to-metal joining. Standard product lines include multi-pin, coaxial, thermocouple and power feedthroughs. Additional products include, breaks, viewports, fiber optic feedthroughs, EUV-grade viewports, high-current powerboot-fitted feedthroughs, 50 pin D type subminiature connectors and the new 40kv HVL feedthroughs. From minor design modifications to custom engineered solutions, ISI covers the ceramic-to metal seal applications spectrum.

IOP Publishing #928, 930

IOP Publishing is not-for-profit, learned society publisher. We are a world leader in scientific publishing and the electronic dissemination of peer-reviewed research. Stop by our booth for a personal demonstration of our award-winning electronic journals service, new open-access community websites, and a chance to win a monthly gourmet gift!

J.A. Woollam Co., Inc #508

The J.A. Woollam Company was founded in 1987 by Dr. John Woollam and since has risen to be a world leader in spectroscopic ellipsometry. We currently offer a wide range of spectroscopic ellipsometers for all types of applications: research and development, process qualification, in-line monitoring, and more.

Janis Research Company, Inc. #906

Recipient of NASA achievement awards (1996 & 2000), R&D-100 award (1998), offers a complete line of standard and customized cryogenic systems. These include dilution refrigerators (10mK), ADRs (50mK), He-3 & He-4 superconducting magnet systems (0.3K & 6-17T), cryocoolers (3K-800K), VT cryostats (2K-800K), noble gas cold traps, micromanipulated probe stations, and more.

Johnsen Ultravac #520

Manufactures a complete line of ultra high vacuum products for material, nano and low temperature research including 6-axis manipulators with 10K cooling and 1,300K heating, linear translators with 72inch Z-motion, -11 Torr vacuum chambers; 80K Blackbodies; Beam line components, Monochromators; Plasma Spray and other deposition systems for Semiconductor, Nano and Photonics industry.

Keithley Instruments #1006

Keithley Instruments continues its tradition of providing the best in measurement tools from DC to pulse to RF for a variety of research applications in disciplines that include physics, nanoscience, superconductivity, and semiconductors. Recent product introductions, including pulse/pattern generators, PXI data acquisition products for use in hybrid systems, and RF vector Signal generators and signal analyzers, illustrate Keithley's leadership in measurement innovation.

Kimball Physics, Inc. #800

Electron Guns and Ion Guns: Energies 1eV to 100keV. Applications: Surface, Vacuum, Space, and Plasma Physics, Neutralization, Cathodoluminescence, Semiconductor processing, FEL, RHEED, ESD, Custom. Features: Modular optics, Compact fiber-optic control, LabView, RS-232, RS-422, Energy sweeping, Rastering, Pulsing, Feedback stabilization. Components: Multi CF Fittings, Compact Vacuum Chambers, eV Parts®, Cathodes, Faraday cups.

KLA-Tencor Corporation #1110

At KLA-Tencor's Surface Metrology product group, our market segments span from semiconductor and data storage manufacturing, to MEMS, optoelectronics, material science and general scientific research a range of industries that measure surface topography to either control their process or research new material characteristics. Typical parameters measured include flatness, roughness, curvature, peak-to-valley, asperity, waviness, texture, volume, sphericity, slope, density, stress, bearing ratio, and distance mainly in the micron to nanometer range. Our products range from benchtop stylus and optical profilers used in research environments to automated high resolution profilers for advanced IC and data storage production facilities.

Kurt J. Lesker Co. #1101

Offering systems and components for all vacuum applications, including: sputtering, e-beam evaporation, organics, and atomic layer deposition (ALD). KJLC manufacturers and distributes: vacuum chambers; sub-assemblies; standard and custom vacuum hardware; feedthroughs, and all levels of vacuum pumping. We can also fill all your deposition materials needs including our exclusive NanoBond® for backing plate bonding to ceramics, oxides, or metals.

Lake Shore Cryotronics, Inc. #901, 903

Stop by to see our Model TTP4 micro-manipulated probe station and to learn more about our full line of cryogenic, magnet-based, load-lock, and high vacuum probe stations. Also on display will be our new Model 325 2-channel temperature controller and our Model 475 gaussmeter, the only gaussmeter with a built-in field control algorithm. Our knowledgeable staff will be on hand to discuss your research requirements.

Lambda Americas #501

Genesys programmable AC/DC power. 750W to 3.3kW, Outputs 7.5 to 600VDC, current to 400A. Worldwide Inputs, Active PFC assures operation in difficult AC environments. RS-232/485 Standard. Advanced Parallel Operation - four like units in parallel for 13.2kW. Common family controls. Flexible, reliable power for critical test systems in research and development laboratories.

MacKichan Software #900

Scientific WorkPlace 5.5 simplifies writing, sharing, and doing mathematics. A click of a button allows you to typeset in LaTeX. The integrated computer algebra system lets you solve and plot equations; animate 2D and 3D plots; rotate, move, and fly through 3D plots; create 3D implicit plots; and more.

Mad City Labs, Inc. #600

One of the largest American manufacturers of precision nanopositioning systems. The proprietary PicoQ sensing technology incorporated into all nanopositioner designs provides usable resolution down into the picometer range. Applications for nanopositioners include AFM, NSOM, Scanning Probe Microscopy, fiber positioning, interferometry, single molecule spectroscopy and nanolithography.

Minus K Technology #1116

Manufactures low-cost vibration isolation products ideal for SPMs, Micro-hardness testers, laser and optical systems. They are easy to use, require no air, can be vacuum compatible and non-magnetic.

NanoAndMore USA #518

NanoAndMore USA is the North American distributor of NANOSENSORS, NanoWorld and BudgetSensors AFM probes. NAM is also the exclusive distributor for Lyncee tec's Digital Holographic Microscope (real time nanoscopic 3-D imaging) and NanoSight's Nanoparticle Size Analyzer (all particles sizes are tracked which creates a complete distribution graph).

Nanomagnetics Instruments #607

Provides a wide range of scanning probe microscope products for research, industry and education. The easy-to-use Nanosurf Mobile S AFM will be featured in our booth. Stop by to see the latest in ease-of-use, attractive design, and SPM capabilities. Our wide range of AFM products include the nanoAnalytics Q-control, Budgetsensors & Nanosensors AFM probes, Carbon Nanotube AFM tips, SPM post-processing software, and a variety of accessories for your AFM and STM.

Nanonics Imaging Ltd #1111

Ultimate resolution AFM/NSOM/SPM systems including the first multiple probe SPM system. Hallmarked by free optical and electron/ion beam axis integration with confocal, microRaman, SEM's, TEM's, FIB's, 10°K operation. Exposed AFM probes/tips surpassing nanotube profiling with deep trench capabilities, nanowire glass insulated electrical probes, NanoheaterTM thermal conductivity, electrochemical, gas & liquid nanochemical deposition.

Nanotec Electronica S.L. #430

Nanotec Electronica develops Scanning Probe Microscopes (SPM) with the best quality and the latest technology in the field, providing both scientific and industrial com-

munities easy access to the nanometer scale. Nanotec Electrónica also designs and manufactures control systems for Scanning Probe Microscopes and WSxM Software.

NanoWorld #518

The NanoWorld Holding AG is a purely financial holding company and does not conduct operational business. The present key activities of the associated companies are concentrated on the development, production and commercialization of consumables for Atomic Force Microscopes (AFM) namely AFM probes or tips for Scanning Probe Microscopes (SPM). In 2005 NanoAndMore USA Corp. (NAM) was founded by NanoWorld Holding AG

National Research Council of the National Academies #627

The National Research Council of the National Academies offers awards for independent postdoctoral and senior scientific research in physics to be conducted at participating U.S. government laboratories. Awards include generous stipend, relocation, professional travel and health insurance. Deadline dates and application instructions are at www.national-academies.org/rap. Applications must be submitted online.

Nature Publishing Group #929,931

Nature Publishing Group offers a range of journals in the physical sciences - from the broad scope of Nature to specific titles in physics, materials, nanotechnology and photonics. Each journal carries a mix of research papers, review titles, news and views, and commentaries that will keep you abreast with the latest research.

New Orleans Metropolitan Convention & Visitors Bureau #300

Today the cultural riches, sensual indulgences and unparalleled service that define the New Orleans experience continue to flourish, as they have for centuries. The most celebrated and historic core of the city including the French Quarter, Central Business District, Warehouse and Arts District, Magazine Street and Garden District- not only remains intact, both physically and spiritually, but is thriving. The New Orleans CVB is proudly welcoming visitors and business travelers every day.

Nor-Cal Products #1004

Manufacturer of high vacuum components since 1962. Standard components: flanges, fittings, viewports, feedthroughs and flex-hose; isolation and pressure control valves; thermal products; molecular sieve, particulate and cold traps; thin film components; pressure gauges and manipulators. Custom components: chambers, traps, manifolds, collars and baseplates from customer specifications. 3D Model Library available on-line. ISO 9000-2001 registered.

NRC Research Press #626

Stop by for submission and subscription information on the Canadian Journal of Physics - one of 16 international journals we publish online and in print. Features include rapid online publication, web-based manuscript submission, and no page charges. Take advantage of our special conference discount on our monographs.

Ocean Optics #802

Ocean Optics, the leading supplier of optical sensing tools, has expanded the frontiers of optical sensing, making it a foundation on which innovative, life-changing ideas are built. Our extensive line of complementary technologies includes scientific grade spectrometers, sensors, light sources, and optical sensing accessories.

Omicron Nanotechnology USA #1007

OMICRON NanoTechnology is the premier supplier of UHV systems and instrumentation for research at the nanoscale. We invite you to visit our display to view the latest AFM data obtained from our new Low Temperature (<4 K) Atomic Force Microscope. We will also be presenting results from the NanoESCA (<650 nm) and NanoSAM (<5 nm).

OriginLab Corporation #514

Origin is a software application that combines point-and-click interfaces for scientific graphing and analysis with a powerful programming environment. Over 60 built-in plot types allow you to quickly create 2D, 3D, contour, and image graphs. Advanced data analysis tools include statistics, signal processing, curve fitting and peak analysis.

Oxford Instruments America #614-622

Oxford Instruments designs, supplies and supports high-technology tools, processes and solutions with a focus on nanotechnology, physical and bioscience sectors. We will be presenting the latest developments driving innovation in applied superconductivity and ultra-low temperature cryogenic environments as well as versatile process tools that enable precision engineering of micro/nano-structures.

Oxford University Press #724, 726

Oxford University Press is a world leader in scientific book and journals publishing. Visits us in Booth #s 724 & 726 to see our list of books and journals including the recently published Quantum Liquids, Exploring the Quantum, Statistical Mechanics: Algorithms, and Computations and Experimental Techniques for Low-Temperature Measurements.

PEGASUS Shanghai Optical Systems Co. Ltd. #828

Manufacturer of solid state green lasers, red diode laser modules, optical components of lenses, prisms and waveplates for R&D at colleges or universities.

Photonics Spectra #516

Photonics Spectra is the leading photonics magazine serving industries that use photonic technology: lasers, imaging, fiber optics, optics, electro-optics, and photonic component manufacturing. It presents the latest news articles and in-depth reports on photonics technology. It is distributed free to those who use or apply photonics.

Physics Education Technology Project #628

Fun, interactive simulations of physical phenomena from the Physics Education Technology project at the University of Colorado.

Physics Today Exhibitor Lounge

Physics Today magazine reaches 120,000 scientists and engineers working in the \$481 billion physics market. Published by AIP for 10 physics societies, the magazine appears

in 151 countries. Exhibitors are invited to the Exhibitor Lounge for coffee, sodas, water, popcorn, internet access, chairs and quiet. Free pens and other give-aways!

Precision Photonics #1100

Count on us for precision optics with nanometer-level tolerances and state-of-the-art photonic instrumentation. Our capabilities include highly robust epoxy-free optical bonding, ion-beam-sputtered dielectric coatings, custom etalons and micro-optics. Our precision instruments include <100-fs fiber lasers (1550 and 780 nm), supercontinuum sources, and servo controllers. We strive to provide price-competitive, short lead-time manufacturing along with the most advanced photonic instruments.

Princeton University Press #728

This year's list breaks new ground with the launch of the In a Nutshell textbook series. We are excited to be publishing three new textbooks in the series this Spring: Dan Maoz's Astrophysics in a Nutshell, Carlos Bertulani's Nuclear Physics in a Nutshell, and Elias Kiriatis's String Theory in a Nutshell. Princeton University Press Booth #728

PVD Products #509

PVD Products sells a complete line of deposition systems including magnetron sputtering, PLD, and evaporators for R&D and proto-type production. PVD also sells a complete line of magnetron sputter sources. We manufacture custom components such as substrate heaters, multi target manipulators and provide thin film deposition and SEM/EDS services

Quantum Design #608, 610

A leading manufacturer of fully automated material characterization systems for physics, chemistry, and industrial research including the ultra-sensitive Magnetic Property Measurement System (MPMS) SQUID magnetometer and the Physical Property Measurement System (PPMS) -designed for measurements from 50 mK - 1,000 K and magnet fields to 16 T. Turnkey measurements include magnetometry (VSM, AC, Torque), electrical transport (AC, DC, Hall effect), heat capacity, thermal conductivity, and thermopower. Now available: 50 mK valveless Dilution Refrigerator System and PPMS Nitro-Lab - operating from 77 K -1000 K with fields of up to 1 T using liquid nitrogen.

Raith USA, Inc. #902,904

Raith offers a variety of lithography products for research and development. These products range from attachments to SEMs and FIBs to complete turnkey systems with full wafer and mask handling capabilities. We offer a range of Electron Beam Lithography systems as well as our new ionLiNE Ion Beam Lithography system.

Rigaku #414

Rigaku provides the world's most complete line of X-ray diffraction and X-ray fluorescence instruments, including: benchtop XRD and WDXRF systems, single-element analyzers, the modular and extensible Ultima III and SmartLab XRD system with SAXS and in-plane capabilities, XRD-DSC, and Primus WDXRF spectrometers with mapping capabilities in both tube-above and tube below optics.

Scientific Instruments, Inc. #511
Celebrates their 40th year as a cryogenic industry leader with the introduction of the Si430 and Si440 Silicon Diode temperature sensors. These devices offer the highest interchangeability in the smallest package available anywhere. Combine it with one of their monitors or controllers for the best value in cryogenic system instrumentation.

Scientific Magnetics Ltd. #500
Scientific Magnetics offers standard and tailor-made superconducting and cryogenic solutions. We design and manufacture magnet systems from low and high temperature superconducting material, in liquid Helium cooled and cryogen free configurations. We will be exhibiting our SciMag standard NbTi and Nb3Sn magnet systems. Whether you require a simple solenoid in a bath cryostat or a magnet system with new or unusual features, you should be talking to us.

Signal Recovery #1005
Will be exhibiting items from their range of lock-in amplifiers, signal averagers, delay generators, preamps and optical choppers. On show are a new lock-in ideal for low temperature physics measurements, our unique 32-channel DSP lock-in, and a range of low noise preamplifiers. Call by and pick up a free catalog.

Silk Scientific, Inc. #1027
The UN-SCAN-IT software converts scanned images to (x,y) data at Full Scanner Resolution. Now you can automatically digitize strip charts, instrumental output, published graphs, old graphs, etc. UN-SCAN-IT also integrates peak areas, smoothes data, takes derivatives, and saves the data in (x,y) ASCII format. Windows and Macintosh versions for under \$350.

SPECS GmbH #1105
SPECS manufactures systems and components for surface analysis, mostly based on electron spectroscopy. In customized systems SPECS integrates facilities for thin film preparation and in-situ analysis in UHV. Main products are the hemispherical energy analyzer PHOIBOS (new: PHOIBOS HV & HiRes), the high resolution LEEM/PEEM-instrument and the high stability STM Aarhus.

Springer #725, 727, 824, 826
Visit Springer to save 20% (or more!) on world-leading books on all areas of physics, plus general interest books! Plus, get a FREE copy of any Springer journal on display, and find out about SpringerLink and Springer's FREE Tables of Contents e-mail alerts!

Staub Instruments, Inc. #515
Designs and manufactures Multi-technique Surface Analysis Chambers and innovative, high performance, reliable instruments for in-situ material analysis including: a full range of Electron Guns for analytical surface studies (flood, microfocus, general purpose, low energy); RHEED systems (new in CVD, PLD, PVD environments) to study structure and quality of thin films; CMA energy spectrometers (Auger, SAM, XPS, UPS) for analytical surface studies; SEM using our micro-focus guns; Photo-Electron Emission Microscopes (PEEM) for dynamic studies of chemical distributions; Single Flange ESCA packages, X-ray Sources.

Stanford Research Systems #905,907
SRS will be exhibiting their full line of scientific test equipment including lock-in amplifiers, photon counters, boxcar integrators, preamplifiers, delay generators, and more.

STAR Cryoelectronics #704
STAR Cryoelectronics offers advanced LTS and HTS dc SQUID sensors, high-performance PC-based SQUID readout electronics (pcSQUID), the popular Mr. SQUID® Educational Demonstration System, custom dc SQUID design and thin-film fabrication services, cryogenic TES and STJ detectors, cryogenic dewars, and custom SQUID systems.

Taylor & Francis Group LLC - CRC Press #825,827,829
We are a premier publisher of scientific and technical books, journals, and electronic databases. Visit our booth to browse our convention specials on new and bestselling titles in physics, pick up complimentary sample journal copies, and sign up for a free trial of our online database PHYSICSnetBASE.

Teachspin, Inc. #701, 703
TeachSpin's hands-on instructional apparatus sets the standard in advanced and intermediate teaching labs world-wide. And now, our lasers, mirror mounts, flexure translation stage and photodiode detectors are available for the research lab as well. Come try your hands on everything from Modern Interferometry and Diode Laser Spectroscopy to Muon Physics and Two-Slit Interference, One Photon at a Time.

The Institution of Engineering and Technology #1102
Inspec is a leading English-language bibliographic database providing access to the world's scientific and technical literature in physics, electrical engineering, electronics, communications, computers and computing, information technology and manufacturing and mechanical engineering. Inspec includes over 3,850 scientific and technical journals, 2,200 conference proceedings, and numerous books, reports and dissertations.

Topptica Photonics AG #1114
TOPTICA is a worldwide leading supplier for tunable diode and femtosecond fiber laser systems. The single frequency diode lasers cover the largest wavelength spectrum available in the market (205 - 2800 nm) at powers up to 1500 mW. Femtosecond lasers based upon latest telecom fiber technology are available from 500 - 2000 nm.

Varian, Inc. #804
A world leader in providing total vacuum solutions. Product offerings include primary, high and ultra-high vacuum pumps, leak detectors, vacuum valves, and gauging for all applications. Varian offers unique expertise in applications, support, and system design to integrate these superior components into optimized vacuum solutions.

Veeco Instruments #1021, 1023
Veeco Scanning Probe Microscopes (SPM) drive the world's leading-edge research in life science, materials science, semiconductor, electrochemistry, and many other applications. Don't miss Veeco's diDimension V, the world's most multifunctional SPM, and the di-Caliber, our compact, flexible, high-value SPM.

Vericold Technologies GmbH #523
Specializes in cryogen-free low temperature cooling equipment as well as X-ray spectrometers based on superconducting sensors. Products include low vibration 70 K and 4 K pulse tube coolers, 4K cryostats, Adiabatic Demagnetisation Refrigerators (ADR) and 3 He/4 He dilution refrigerators (DR). Thoroughly competent in cryogenic engineering as well as customized adaptations.

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