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APS
physics

2008 MARCH MEETING

MARCH 10–14 NEW ORLEANS WWW.APS.ORG/MEETINGS/MARCH

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, Inc.

#500, 502

ARS offers integrated Displex and Helitran Cryostats for Material Characterization. Cryostats are available for Optical, Transport, XRD, UHV and other applications. The Closed Cycle, ARS Displex Cryostats have been redesigned for a temperature range of sub 1.5–300K or 3–800K. With the lowest vibrations at the sample it is the cryocooler of choice for sample characterization. Low vibrations systems available for Mossbauer, Optical and Ellipsometry applications. ARS is introducing the low cost 77K closed cycle cryostats for optical and non-optical experiments as well as the Cryogenic Probe Station with up to 4 probes. ARS manufactures the Open and Closed Cycle cryocoolers, the vacuum shrouds, radiation shields and sample holders resulting in the most effective design with commitment to integrity and quality of the product.

Agilent Technologies

#200, 202

Offering a wide range of high precision Atomic Force Microscope systems to meet your unique research needs. Agilent's industry-leading environmental/temperature options and fluid handling enable superior control for materials & life sciences including electrochemistry & polymer applications. Ag-

ilent delivers worldwide support, provided by experienced application scientists and technical service personnel.

AJA International, Inc.

#401

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; RF/Ion/Plasma Sources.

American Institute of Physics

#700, 702

AIP offers an open-access publishing option, Author Select, to contributors to AIP journals. RSS feeds are available for AIP journal content by topic and for the journals' full content. Purchase an AIP Article Pack; prepay for a set number of articles from AIP journals for as low as \$2.50 per article.

American Magnetics Inc.

#419

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

#601,603

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, PROLA (Physical Review Online Archive), PR-Special Topics-Accelerators and Beams, PR-Special Topics-Physics Education Research and PR Focus. PROLA's fully searchable content and full-text articles includes everything published by APS back to 1893. 2008 marks the 50th anniversary of Physical Review Letters. Visit booth #601 for details.

Amuneal Manufacturing Corporation

#219

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, Inc.

#615

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 1.5×10^{-8} tan δ . 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.

Applied Surface Technologies #405

The CO₂ Snow Jet will be demonstrated. The Snow Jet cleaning process is a simple, yet novel surface cleaning process that can remove particles of all sizes and also organic residues from surfaces. This cleaning process works well for cleaning substrates, vacuum parts, analytical samples (AFM), optics, and many other applications. The Snow Jet process is, nondestructively, residue-free with no environmental limitations. Bring test samples!

AR RF Microwave Instrumentation #625

Will be exhibiting its new broadband amplifier, model 800A3 (800 watts, 10kHz to 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 #335

Featured is the MFP-3D™ AFM with unprecedented precision, accuracy and image resolution—setting the industry standard for advanced operation and flexibility. New advances include the new Piezo Force Module that enables very high sensitivity, high bias, and crosstalk-free measurements on piezoelectrics; iDrive for effortless fluid imaging; exclusive Dual AC imaging mode; and a variety of environmental accessories.

Attocube systems AG #213, 215

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—our nanopositioners solve your experimental task at the cutting edge. Our instruments enable one to analyze samples in various ways with atomic precision—even at Milli-Kelvin temperatures. Enhance your productivity and time efficiency by implementing our innovative products in experimental setups ranging from scientific research to industrial applications!

Blake Industries, Inc. #235

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

Bruker AXS Inc. #300

Provides advanced x-ray solutions for chemistry, life and material sciences. A wide range of single module CCD systems is available in the Platinum series of detectors which feature the newest 4K CCD chip, with lower noise, faster readout and highest sensitivity. Nanotechnology research systems include a range of powder diffraction and single crystal solutions.

Bruker BioSpin Corporation, EPR Division #334

Bruker 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, DEER, High Frequency and Pulse ENDOR/Triple instrumentation. The new EMXmicro and EMXplus series offer simplicity and reliability for traditional continuous wave EPR.

Cambridge Magnetic Refrigeration #307

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 #434, 436

Please stop by the Cambridge University Press booth. On display we have the classic books *Principles of Condensed Matter Physics* by Chaikin and Lubensky, and *Electronic Structure* by Martin. Exciting new titles include Mermin's *Quantum Computer Science*, Kardar's *Statistical Physics of Particles and Statistical Physics of Fields*, and *Methods in Molecular Biophysics* by Serdyuk, Zaccai and Zaccai.

Computing in Science & Engineering (CiSE) #703

CiSE is a bimonthly magazine providing computational tools and methods for 21st-century science. It is peer-reviewed and multi-disciplinary. APS members can subscribe for \$45/year (instead of \$75). Readers say that CiSE bridges the communication gap between researchers and IT professionals. Come by for free back issues, pens and CDs!

Cryo Industries of America, Inc. #319

Our new generation of cryogenic systems addresses the growing liquid helium shortage! The XE102 flow cryostat with lowest LHe losses ever, microscopy at 50% cryogen savings, DStat (storage dewar mount) with static losses only 0.020 l/hr and cryogen-free superconducting magnets with sample temperatures down to 1.5 K.

Cryogenic Control Systems, Inc. #513

Manufacturers of precision electronic instrumentation for both laboratory and industrial process control applications. Cryo-con offers a full line of cryogenic temperature controllers, monitors, cryogenic accessories and temperature sensors. We will be demonstrating our new 2 and 4 channel controllers perfect for He3 applications. Also on display will be our new 8 channel monitor and new sensors.

Cryogenic Ltd. #629

A recognised leader in the design and manufacture of 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. The company provides 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. Visit booth #619 to find out more on the wide range of low temperature systems offered by Cryogenic Ltd.

Cryomagnetics, Inc. #516

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 Inc. #412

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 nitrogen directly from the air in most locations around the world.

DCA Instruments #402

Designs and manufactures a wide range of UHV deposition systems and components. The products includes MBE, UHV sputtering, PLD and UHV cluster tools. These DCA deposition systems are suitable for deposition of thin films of semiconductors, magnetics, oxides, metals under UHV.

Dryogenic #305

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.

Electro Optical Components #318

Provides advanced components for laser and optoelectronic systems (UV to the far IR). Products include FEMTO signal recovery and lock-in amplifiers, and photoreceivers; DEXTER thermopile detectors; IFW UV detectors; INTEX IR Sources; IMM visible and IR laser diodes and modules; CO2 optics; NOC IR interference filters; LEYSOP E-O modulators and drivers.

Elsevier #439, 441

FEMTO Messtechnik GmbH #318

FEMTO offers a line of high quality specialty amplifiers for signal recovery and processing. These products include Low Noise Current Amplifiers, High and Low Frequency Voltage Amplifiers, Photoreceivers, High Speed GHz Amplifiers and Lock-In Amplifiers. New Products: HCA-S-400M-400 MHz photoreceivers. HCA-400M-5K-C high speed current (transimpedance) amplifier.

Gems & Crystals Unlimited #210, 212

Outstanding gemstones, diamonds, rubies, sapphires, emeralds, tanzanites, etc. Customized gold and platinum jewelry. Complete custom work, including engagement, anniversary and any special celebrations for you! Huge array of antique jewelry in gold, platinum and silver, cameos, cufflinks, pins and collectibles. Also available are crystals and minerals of excellent quality and price. Specialize in custom cutting of research minerals for industry, NASA, Goddard, etc. Jeweler@mindspring.com www.gemsandcrystalsunlimited.com.

GMW Associates #631
Resistive and HTS 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 Teslameters for control and mapping, NMR Teslameters for very high resolution and accuracy.

Hamamatsu Corporation #619
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.

High Precision Devices, Inc. #414
Will be exhibiting the popular Model 102 Denali Pulse Tube/ADR cryostat and introducing the new Model 103 Rainier Pulse Tube/ADR cryostat. Both of these cryostats incorporate Adiabatic Demagnetization Refrigerators (ADR) producing PT stage temperatures of 45K and 3K and ADR stage temperatures of 900mK and 45mK.

HTS-110 #709
A world leading firm in the development HTS magnet solutions. HTS-110 designs, manufactures and markets HTS products for the medical, scientific, energy and transportation industries. HTS-110 will be displaying a complete product range from small scale OEM components (HTS current leads and coils) to fully integrated, turn key magnet systems and HTS-NMR machines.

IET/Inspec #713
IET/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.

IOP Publishing #635, 637
IOP Publishing is not-for-profit, learned society publisher and a world leader in the electronic dissemination of peer-reviewed research. Stop by our booth #635 for a personal demonstration of our award-winning electronic journals service and new open-access community websites.

J.A. Woollam Co., Inc. #503
Offers a wide range of spectroscopic ellipsometers for nondestructive materials characterization, including thin film thickness (single and multilayer), optical constants, composition, growth/etch rates, and more. Instruments available for research and manufacturing metrology covering spectral ranges from vacuum ultra-violet to far infrared. Offering table-top, in-line, and in-situ.

Janis Research Company, Inc. #701
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.

Keithley Instruments #510
Keithley Instruments continues its leadership tradition in measurement innovation, providing the best in measurement tools from DC to pulse to RF for a variety of research applications in the physical sciences. New and featured products include the new Low Current 2635/2636 System SourceMeters®, 6GHz Vectors Signal Generators and Analyzers, and a new integrated CV option for the Model 4200 Semiconductor Characterization System.

Kepeco Inc. #234
Offers fast analog and digitally programmable instrumentation DC power supplies capable of producing one, two, or four quadrant outputs. Our new BTM series optimizes our bipolar operational amplifiers (BOP) for controlling correcting magnets. KLP series offers 1.2KW of programmable power in a 1U package with LXI Ethernet control.

Kimball Physics, Inc. #610
Electron Guns and Ion Guns: Energies up 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 #710
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 to 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. #511
Deposition systems and components for all vacuum applications, including: sputtering, e-beam evaporation, organics, and atomic layer deposition (ALD). Manufacturer/distributor of: vacuum chambers; subassemblies; standard and custom vacuum hardware; feedthroughs, vacuum pumps. Deposition materials and services including our exclusive NanoBond® for backing plate bonding to ceramics, oxides, or metals.

Lake Shore Cryotronics, Inc. #604, 606
Stop by booth 604 to see our Model TTP4 micro-manipulated probe station and to learn more about our full line of cryogen-free, cryogenic, magnet-based, load-lock, and high vacuum probe stations. Also on display will

be our Model 370 AC resistance bridge 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 #306
Genesys™AC/DC power supplies provide high power density, low ripple and complete user-friendly interfaces. Outputs to 600V and 1,000A. Genesys series contains extensive features that provide excellent performance and flexibility in materials research laboratories and test systems. Users now have a complete family with identical features and interfaces from 750W to 15kW.

Mackichan Software #501
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. #505, 507
The largest American manufacturer 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, SPM, fiber positioning, interferometry, single molecule spectroscopy, imaging and nanolithography.

Mantis Deposition #612
Provides high quality deposition components and systems for the thin-film coating community. Our products are designed for all cutting-edge materials research (MBE, Surface Science, PVD, nanocoatings...) and pre-production coating applications.

Materials Research Society #721
MRS, renowned for its Spring and Fall Meetings, now offers its members FREE unlimited online access to both the MRS Bulletin and the MRS Online Proceedings Library—over 20,000 proceedings papers covering a wide range of materials topics, from nano- and biomaterials, to semiconductors, polymers/organic materials, surfaces/interfaces/thin films, and more. Visit www.mrs.org/benefits for details.

NanoAndMore USA, Inc. #311
Sales of NANOSENSORS, NanoWorld and BudgetSensors AFM probes and accessories into North & South America. Digital Holographic Microscope, reflection and transmission mode, from Lyncee tec—produces real time 3D imaging with a capture rate up to 20MHz. NanoSight NanoParticle Size Analyzers – Reports total distribution of all particles in solution from 10nm to 1000nm.

Nanomagnetics Instruments #417
A leading expert in Scanning Hall Microscopy. LT-SHPM can give a resolution up to 50 nm and a magnetic resolution 6 nT/√Hz at 4K, which provides fast, quantitative and totally non-invasive data. Our mK-SPM is operational at mK-300K range and is compatible with most cryostat systems. PPMS®-SPM is designed to operate with Quantum Design PPMS. We can also produce SPMs for any kind of cryostat. RT-SHPM is designed for ambient conditions. All

can also operate as AFM, MFM or STM and can give realtime SHPM scans. Our user friendly Multimode AFM can also operate as STM and MFM as well as all modes of AFM.

Nanonics Imaging Ltd. #416
Ultimate resolution AFM/NSOM/SPM systems including the first multiple probe SPM system. Hallmarked by free optical and electron/ion beam axis integrated systems with confocal, microRaman, SEM's, FIB's, 10°K operation. Exposed AFM probes/tips allowing multiprobe operation and surpassing nanotube profiling with deep trench/sidewall capabilities, nanowire glass insulated electrical probes, Nanoheater thermal conductivity, gas/liquid nanochemical deposition.

Nanonis GmbH #241

National Research Council of the National Academies #340
The National Research Council of the National Academies offers awards for independent postdoctoral and senior scientific research in all disciplines of the related to 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.

Nature Publishing Group #540
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 Focus, a Division of Bookham #706
Leading supplier of Simply Better™ Photonics Tools for advanced research including spectroscopy, atomic cooling, quantum optics, THz research, nonlinear optics, OCT and laser interferometry. Products include single-wavelength & tunable lasers, detectors, modulators, motion control actuators & solutions, optomechanics, vacuum & ultra-clean solutions, optics and breadboards.

Nor-Cal Products, Inc. #201
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.

Omicron Nanotechnology USA #418
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).

Optical Society of America #704
Stop by the OSA booth to pick up materials on CLEO/QELS/PhAST, May 4–9, 2008, in San Jose, California, USA. This event fea-

tures world renowned keynote speakers, technical programming, short courses, business sessions and over 300 exhibiting companies at CLEO. Learn about individual and corporate membership, publications and other OSA activities.

OriginLab Corporation #410
OriginLab publishes data analysis and graphing software. We have two offices in the United States: Northampton and Wellesley Hills, Massachusetts. Our products provide comprehensive solutions for scientists and engineers who need to analyze, graph, and professionally present data. Please visit our booth to learn about our latest product, Origin 8.

Oxford Applied Research #400
Manufacturer of growth and processing equipment for semiconductor or thin film research. Products include RF atom sources for high quality oxide/nitride growth, a full range of RF and DC broad-beam ion sources for sputter-deposition or ion-beam assisted deposition, mini e-beam evaporators, thermal gas crackers and nanocluster deposition sources and systems.

Oxford Instruments #224-230
Designs, supplies and supports high-technology tools, processes and solutions with a focus on nanotechnology, physical and bio-science 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 #535, 537
Our list of books includes the recently published S. Weinberg: *Cosmology*, X.G. Wen: *Quantum Field Theory of Many Body Systems*, J. Zinn-Justin: *Phase Transitions and Renormalization Group*, R. Skomski: *Simple Models of Magnetism*, H. Bruus: *Theoretical Microfluidics*, A. Kavokin et al: *Microcavities*.

Park Systems, Inc. #705, 707
The XE-70 is the newest addition to its award winning Cross-talk Elimination (XE) series of AFM/SPMs. Like its more expensive siblings, XE-70 features decoupled XY and Z scanners to eliminate intrinsic bowing that exists with other tube-scanner-based AFM. With True Non-Contact mode imaging, 1-micron resolution on-axis optical viewing, flexible sample handling and other innovative technologies provide the winning combination of affordability and advanced SPM technology to the researchers.

Photonics Spectra #718
A 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 Today #703
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!

Princeton University Press #438

Princeton Scientific Corp. #512

Quantum Design #220, 222
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 77K–1000 K with fields of up to 1 T using liquid nitrogen.

Raith USA, Inc. #411, 413
We supply and support lithography solutions for the world's leading nanotechnology facilities. The Raith catalog includes lithography attachments for SEMs or FIBs and complete turnkey systems with full wafer and mask handling capabilities. Our newest products are the ionLiNE Ion Beam Lithography and Raith 150TWO Electron Beam Lithography systems. Both models have a full complement of options for nanoengineering research.

RHK Technology, Inc. #515, 517, 519
Make RHK your choice for integrated surface science at the atomic scale. Our UHV AFM, STM, MultiProbe systems, analytical and surface preparation instruments, and Controllers are specifically engineered for your advanced research. RHK delivers best-of-breed customized solutions with the performance and product support for a lifetime of experimental success.

Rigaku Americas Corporation #506
Provides one of the world's most complete lines of X-ray diffraction and X-ray fluorescence instruments, including: benchtop XRD and WDXRF systems, single-element analyzers, the modular and extensible Ultima IV 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.

Ripplon Software, Inc. #303
Creator of scientific software for magnetics and optics. Our product BiotSavart enables interactive exploration of the magnetic field from 3-D configurations of current-carrying conductors. Our product LensForge is an innovative easy-to-use lens design program.

Scientific Instruments, Inc. #240
A leading manufacturer of cryogenic temperature sensors, indicators, controllers, liquid level probes and transducers for laboratory, industrial and/or medical applications. SII, an ISO9001-2000 company is also involved in other products areas including petrochemical tank gauging systems for liquid natural gas (LNG) storage tanks and aircraft temperature probes.

Scientific Magnetics Ltd. #310
Manufactures standard and bespoke superconducting and cryogenic solutions. We design and manufacture magnet systems using low and high temperature superconductors,

in liquid Helium cooled and cryogen free configurations. We will be exhibiting cryogen free magnet systems and low- and ultra-low temperature experimental inserts. 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 #518

Will be exhibiting items from their range of lock-in amplifiers, signal averagers, delay generators, preamps and optical choppers. We will also be launching our new model 7124 precision lock-in that uses an analog fiber optic link to eliminate digital noise from the experiment. Call by and pick up a free catalog!

SPECS USA, Inc. #504

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 XPS, UPS, AES, ISS analysis in UHV. Main products are the hemispherical energy analyzer PHOIBOS, the high resolution LEEM/PEEM instrument and the high stability STM Aarhus.

Springer #435, 437, 534, 536

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Staub Instruments, Inc. #407

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 #605,607

SRS will be exhibiting our full line of scientific test equipment including lock-in amplifiers, delay generators, preamplifiers and more. We will also be introducing 3 new products at APS—stop by and visit with us.

STAR Cyroelectronics #623

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 #634, 636, 638

CRC Press - Taylor & Francis is a premier publisher of books, journals and electronic databases in physics and physical sciences.

Stop by our booth to peruse our latest offerings. All books will be available for purchase with a meeting discount and to pick up samples of our journals. For more information, visit www.crcpress.com.

TeachSpin, Inc. #404, 406

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 Institute of Pure and Applied Physics #600, 602

IPAP (The Institute of Pure and Applied Physics) Top-level international journals on physics and applied physics from Japan! The online journals—the JJAP, JPSJ, and PTP are read worldwide and over 1.02 million papers were downloaded. All issues are archived. From January 2008, the JJAP letter section has its own title, namely APEX (Applied Physics Express).

Time-Bandwidth, Inc. #301

Time-Bandwidth Products AG manufactures passively mode-locked tunable and fixed I pico and femtosecond DPSS lasers using out patented SESAM® technology. Wavelengths from 262nm to 1550nm are available at different rep rates and power levels to match your application in research or for industrial applications. U.S. Contact: Alain Bourdon (alain.bourdon@tbwp.com).

Varian, Inc. #627

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

Veeco Instruments #616, 618

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