

2009 March 16-20 AMERICAN PHYSICAL SOCIETY Meeting

PITTSBURGH

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AAAS

#722

The American Association for the Advancement of Science, AAAS, publishes SCIENCE and is the world's largest general scientific society. An international membership organization, AAAS works to advance science and serve society. AAAS programs in science policy, international cooperation, and science education help make the world a better place.

Advanced Research Systems, Inc.

#300,302

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

#100

Offers 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 applications. Agilent will introduce the 5600 large stage AFM

with Scanning Microwave Microscopy (SMM), the exclusive mode for high spatial resolution of electromagnetic properties.

AJA International, Inc.

#201

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.

Ambios Technology Inc

#430

Ambios Technology, Inc. provides world class high resolution surface measurement and visualization systems to academic and industrial research customers across the globe. In addition to surface profilometers, the company manufactures scanning white light interferometers and (AFM/SPM) scanning probe microscopes.

American Institute of Physics

#408,410

AIP offers an open-access publishing option, Author Select, to contributors to any AIP journal. 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.

#613

AMI offers liquid helium cooled and cryogen free superconducting magnet systems for a wide range of applications. These systems are offered with sample inserts going down to a few mK using He3 cryostats or dilution refrigerators. Different types of SPM probes are also available for use with our standard magnet systems. AMI also works with indus-

try partners to produce cryogen free dilution refrigerators for our MAXes (multi-axis) magnets. Near zero loss liquid helium Dewars are also available for use with our magnet systems. These use 4K pulse-tube or GM cryocoolers to recondense helium back into the Dewar, thereby facilitating use of existing magnets and sample inserts. AMI also offers custom cryogen free magnets to fit compact goniometers. These are very popular for use in synchrotron facilities around the world. Other product offerings include power supplies for superconducting magnets, low loss current leads, liquid helium level instrumentation and cryogenic autofill systems.

American Physical Society

#403,405

The American Physical Society is the publisher of the world's most prestigious and widely-read physics research publications: Physical Review, Physical Review Letters, Reviews of Modern Physics, PR-Special Topics-Accelerators and Beams, PR-Special Topics-Physics Education Research, PR Focus, PROLA, and Physics. Physics is a new, free online publication from APS that features expert commentaries on selected papers in Physical Review and Physical Review Letters. For more information on Physics, please visit booth 403.

Amuneal Manufacturing Corporation

#628

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. #222
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 1.5×10^{-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.

Angstrom Sciences, Inc. #431
Our mission is to help our customers create the most productive and cost-effective thin-film applications possible - by delivering the world's most advanced magnetrons, a full range of deposition materials, and a comprehensive program of technical support.

Anter Corporation #330
Anter is a manufacturer of thermophysical properties measuring equipment. Products include thermal conductivity meters, dilatometers for thermal expansion (CTE) and sintering studies, and thermal diffusivity/specific heat capacity by laser flash method from -180 to 2800C for metals, ceramics, composites, polymers, carbon/graphite, nanomaterials, thermal interface materials, insulation, coatings, films, liquids, pastes, powders, etc. Testing services available. ISO9001:2000 Certified.

AR RF Microwave Instrumentation #623
AR RF/Microwave Instrumentation 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 #509,511
The AFM/SPM technology leader introduces the Cypher™ AFM, the first new small sample AFM in over a decade. Cypher is the world's highest resolution AFM, combining the accuracy and control of closed loop with the power of atomic resolution for the most accurate images and measurements possible today. Included are SpotOn™ automated laser alignment, high-speed AC imaging with cantilevers smaller than 10um, integrated acoustic/vibration isolation, and thermal control for image and measurement stability. Asylum's MFP-3D family of AFMs will also be exhibited, including the MFP-3D-BIO, SA (Stand Alone), and CF (confocal) will also be exhibited. The MFP-3D family offers compatibility with commercial inverted optical and confocal microscopes for large and small samples, sample viewing from both top and bottom, and long-range and low-noise force measurements. Asylum's award-winning quantitative MFP NanoIndenter is also featured.

attocube systems AG #635,633
attocube systems AG manufactures and distributes a complete line of easy-to-use scanning probe microscopes and nanoposition-

ing systems for temperatures in the range from 300 K down to 10 mK! The innovative nanopositioners are also compatible with ultra high vacuum environments as well as high magnetic fields up to 31 Tesla.

Blake Industries, Inc. #224
Blake Industries is a leader in supplying high precision x-ray and neutron instrumentation to research labs, university and synchrotron beam lines worldwide. We are the exclusive distributors for Huber instruments in the U.S., Mexico and Canada with multiple installations at all the North American Synchrotrons and have been supplying x-ray users for over 40 years.

Bruker AXS Inc. #304
Bruker AXS 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 #211
Bruker highlights spin counting without a standard reference sample. The new Xenon EPR software coupled with new hardware make it work. Also featured are the EMXmicro and EMXplus series for routine measurements. The Elexsys series provide the ultimate in CW, Pulse-EPR, DEER, High-Frequency, and ENDOR instrumentation.

Cambridge University Press #715,717
Publishes high-quality textbooks and monographs by world-class authors in condensed matter physics. Recent titles on display include: Sander's Advanced Condensed Matter Physics; Pethick & Smith's Bose-Einstein Condensation in Dilute Gases (2nd edition); Di Ventra's Electrical Transport in Nanoscale Systems; El-Batanouny & Wooten's Symmetry and Condensed Matter Physics.

COAX, Co. Ltd. #230
Coax is a worldwide supplier of semi-rigid coaxial cables in Japan, offering unique cables using various materials like Nb, NbTi, CuNi, SUS, BeCu, Brass etc. diameter 0.33mm to 9.62mm. These are good solution for cryogenic, non-magnetic, vacuum and superconducting requirements. SMA, SSMA, K, MMCX and other types of connectors are available.

Computing in Science & Engineering (CiSE) #406
CiSE is the magazine of computational tools and methods. Published bimonthly by AIP, it's written for those at the intersection of science, engineering, computing, and mathematics. The magazine is peer-reviewed. Subscriptions are \$47/year for APS and DCOMP members. Stop by for free back issues, t-shirts, CDs and pens!

Cryo Industries of America, Inc. #328
Liquid helium shortage - 2.5 years intensive research produces improved efficiency! CRYO invents new insulating technique (XE technology) that provides breakthrough efficiencies. Dstat storage dewar mount 0.020 l/hr, VTI Dewars 0.025 l/hr, XE microscopy 40% less LHe consumption, helium/nitrogen Liquefiers, Computerized Automatic Temperature System (CATS), cryogen free 1.5K continuous!

Cryogenic Control Systems, Inc. #207
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. On display will be our newest addition to our controller line, the Model 24, four channel temperature controller, plus substantial upgrades to our line of temperature controllers. Stop by booth # 207 and demo our products.

Cryogenic Ltd. #625
A market leader in high field superconducting magnet technology, providing measurement systems with up to 25 Tesla in Cryogen Free or liquid helium cooled environment. The measurement platforms allow for the study of electrical, magnetic or thermal properties of material. Including the Vibrating Sample Magnetometer, AC Susceptibility, specific heat, Seebeck effect, Hall Effect and Resistivity, He-3 inserts, DR for temperatures down to 10mK, NMR/ESR measurements and SQUID Magnetometers.

Cryomagnetics, Inc. #529
Offerings a complete superconducting magnet system, related electronic instrumentation, and cryogenic accessory line. With the recent acquisition of Cryoconcept, we can now offer dilution refrigerators and other ultra-low temperature inserts. Our compact C-Mag cryogen-free superconducting magnet systems are available in optical or room temperature bore configurations. C-Mag systems are also available with variable temperature and dilution inserts. Cryomagnetics is committed to staying at the forefront of superconducting magnet technology and welcomes the opportunity to discuss your requirements.

Cryomech Inc. #407
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.

Dryogenic #200,202
Dryogenic is the only company in the world selling 100% cryogen-free, integrated low-temperature physical property measurement instruments. The DMS-1000 measures electrical, magneto & thermometric properties at 100mk/14T - without any liquid Helium!

Dynaflow, Inc. #209
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. 3DYNAPS® allows simulation of nonlinear free surface problems such as bubble dynamics, underwater explosion, ship wave hydrodynamics, and fluid structure interactions.

Easylab Technologies LTD #607
easyLab: the de facto provider of instruments that enable science under pressure. easyLab design, develop, manufacture, supply and support scientific equipment that extend the boundaries of experimental science into the extreme condition of high pressures. Our products include diamond anvil and clamp cells, EDM micro-drillers, photolumines-

cence and Raman spectrometers for DACs and more.

Electro Optical Components/FEMTO

Messtechnik GmbH #610
Electro Optical Components (EOC) provides technologically advanced components for laser and optoelectronic systems from the UV to the far IR. Our products include FEMTO signal recovery amplifiers and photoreceivers; thermopile, UV and diamond detectors and arrays; IR and visible laser diodes and modules; optics and coatings (including CO₂); interference IR filters. FEMTO manufactures sophisticated tools for signal recovery. These include ultra low noise and high speed current amplifiers, low frequency, wideband and high speed voltage amplifiers, low noise and high speed photoreceivers and low noise lock-in amplifier modules and boards.

Elsevier #719,721
Elsevier is passionate about publishing trusted, leading-edge STM information pushing the frontiers and fuelling a continuous cycle of exploration, discovery and progress. Please visit our stand and request more information on publishing your next article with an Elsevier journal.

GMW Associates #229
Fluxgate, Hall effect and NMR Magnetic Field Measurement Instrumentation covering fields from 1nT to 20T. Magnetic Current Transducers for isolated, non-contact electric current measurement from 10 μ A to 25kA with frequencies from dc to 500MHz. Permanent, Resistive and HTC Superconducting Magnet Systems with fields to 7T for thin-film measurements, materials development, biological studies, magnetic sensor test and calibration, magneto-optics and magnetic processing.

High Precision Devices, Inc. #231
High Precision Devices (HPD) 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 #528
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.

IOP Publishing #705,707
A not-for-profit, learned society publisher and world leader in scientific publishing and the electronic dissemination of peer-reviewed research. Stop by for a personal demonstration of IOPscience, our innovative new journals platform, and join us in celebrating the 20th Anniversary of Journal of Physics: Condensed Matter.

J microTechnology, Inc. #129
Supplier of probing equipment and accessories for applied physics research and product development. Products include micro probe stations, positioners, microwave/low noise/shielded/kelvin/ probes, optics, camera systems and thermally controlled

shielded device holders (chucks). Products are used by universities and industry/government world wide.

J.A. Woollam Co., Inc. #606
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 models.

Janis Research Company, Inc. #505
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.

Kepco Inc. #228
Kepco manufactures programmable DC power supplies with one, two or four quadrant (BOP) outputs. The latter are ideal for inductive loads such as beam correcting magnet applications. Bench top and OEM switch mode power supplies are also offered.

Kimball Physics, Inc. #604
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.

Kurt J. Lesker Co. #210
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. Manufacturers of next generation ferroelectric memory materials and N-type and P-type transparent conductive oxides as sputter targets and evaporation pellets.

Lake Shore Cryotronics, Inc. #402,404
With over 40 years of experience, Lake Shore offers the most comprehensive line of cryogenic measurement instrumentation and sensors. Temperatures down to 10 mK can be measured and controlled with our controllers, monitors, transmitters, and AC resistance bridge. Temperature sensors include Cernox, platinum, germanium, and ruthenium oxide resistive sensors, as well as silicon and GaAlAs diodes, and thermocouple wire. Other products include VSM systems, Hall effect measurement systems, cryogenic probe stations, a superconducting magnet power supply, a full line of magnetic measurement instrumentation, Hall probes and field sensors, Helmholtz coils, electromagnets, and electromagnet power supplies. Our knowledgeable staff will be on hand to discuss your research requirements.

MacKichan Software #507
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. #502,504
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 #102
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 #709
The Materials Research Society (MRS), renowned for its Spring and Fall Meetings, now offers its members FREE unlimited on-line 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.

MDC Vacuum Products, LLC #534
Stocks thousands of off-the-shelf components for high and ultra-high vacuum applications. Our product line consists of flanges, fittings, valves, roughing hardware, vacuum gauge tubes, single crystal sapphire and fused silica viewports, electrical and fluid feedthroughs, motion and manipulation instruments, thin film electron-beam evaporation systems and surface science chambers.

n Point, Inc. #530
Manufactures ultra-precision motion and control devices for nano-scale research and manufacturing. Our products are used in applications ranging from life science to the semiconductor industry. Our expertise in closed-loop rapid scanners has made nPoint the leading provider to customers that depend on high-speed and high-resolution performance.

NanoAndMore USA, Inc. #627,629
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 #104
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 #531
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.

National Research Council of the National Academies #713
The National Research Council of the National Academies offers awards for independent postdoctoral and senior scientific research in all disciplines 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 #706
Offering 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.

NMR Technologies, Inc. #331
Inventor of the micro-miniature refrigerator, MMR has become the world's leading supplier of micro-cryogenic research tools—for solid-state characterization, materials research, biological and medical research, and much more. Only with MMR can you build your own system modularly. For example, starting with a simple chamber, then perhaps adding temperature control. Or adding Hall or Seebeck measurements. Easily. Only with MMR.

Ocean Optics #609
Ocean Optics is a diversified photonics technology firm and a global leader in optical sensing. With full-service locations in the United States, Europe and Asia, we serve a wide range of markets, including process control, consumer electronics and medical diagnostics.

Office of Naval Research #103,105
The Office of Naval Research (ONR) coordinates, executes, and promotes the science and technology programs of the United States Navy and Marine Corps through schools, universities, government laboratories, and nonprofit and for-profit organizations. It provides technical advice to the Chief of Naval Operations and the Secretary of the Navy and works with industry to improve technology manufacturing processes. ONR plays a critical role in advancing scientific knowledge to support the generation of naval technology with a vision focused on future capabilities, hedging against the uncertainty of warfare.

Omicron Nanotechnology USA #329
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 #204
Origin 8 provides data exploration, analysis and graphing capabilities for scientists and engineers. Create customizable reports using easy-to-use tools for data exploration, statistics, curve fitting, and peak analysis. Organize data and results using the new multi-sheet workbook. Point and click to customize publication quality 2D, 3D, contour and image graphs.

Oxford Instruments #214,216
Oxford Instruments NanoScience is a leading manufacturer of scientific equipment supplying ultra low temperature and high magnetic field sample environments for physics, chemistry and materials science research applications. The product range includes dilution refrigerators, 3He inserts, superconducting magnets, optical and spectroscopy cryostats and an increasing range of Cryo-free® products.

Oxford University Press #723725
Visit OUP at the March APS to view our new titles including Aranson, Tsimring: 'Granular Patterns', V. Agranovich: 'Excitations in Organic Solids', W.T. Grandy: 'Entropy and the Time Evolution of Macroscopic Systems', Garrison, Chiao: 'Quantum Optics', W. Gotze: 'Complex Dynamics of Glass Forming Liquids', Mezard, Montanari: 'Information, Physics, and Computation'.

Park Systems, Inc. #205
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.

Pfeiffer Vacuum #335
Physics Today Exhibitor Lounge
Physics Today magazine reaches 125,000 scientists and engineers working in the \$564 billion physics market. Published by AIP for 10 physics societies, the magazine travels to 30,000 readers outside the USA. Advertisers and other exhibitors are invited to the Exhibitor Lounge for coffee, sodas, water, popcorn, internet access, chairs and quiet.

PNAS #724
PNAS, is an authoritative source of high-impact, original research that broadly spans the biological, physical, and social sciences. PNAS publishes cutting-edge research articles, insightful commentaries, and topical special features along with a variety of other thought provoking content. PNAS is published weekly in print and daily online. Stop by the PNAS booth to learn about our direct submission process, pick up one of our many highlights collections, and provide any comments about the journal.

Princeton University Press #708
Princeton books lead the way in contemporary science. Explore Earth's future climate with David Archer's *The Long Thaw*; probe physics' big questions in Sébastien Balibar's *The Atom and the Apple*; and relish Robert

Park's provocative discussion in *Superstition*. New to our textbook list is also Gerald Mahan's *Quantum Mechanics in a Nutshell*.

Quantum Design #218,220
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.

Radiant Technologies #203
Radiant's Precision materials testers are designed unlike any other test instruments in the world. They can characterize the individual material properties of dielectric response, remanent polarization, piezoelectricity, pyroelectricity, and electrical leakage with no configuration change. We have also just introduced a unique educational tool for science and engineering education. The EDU is a fully functional test instrument for the non-linear electroceramics like those used for industrial sensors and actuators.

Raith USA, Inc. #307
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 Raith150TWO Electron Beam Lithography systems. Both models have a full complement of options for nanoengineering research.

RHK Technology, Inc. #630,632,634
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 #608
Rigaku provides the world's most complete line of X-ray diffraction and X-ray fluorescence instruments and components, including benchtop XRD and XRF systems, X-ray optics and detectors, the Saturn and SCXmini CCD-based single crystal diffractometers for small molecule crystallography, the Ultima IV and SmartLab® multi-purpose diffractometers with SAXS and in-plane capabilities, and the ZSX Primus series of high-powered WDXRF spectrometers with mapping capabilities, in either tube-above or tube-below configurations.

Royal Society Publishing #727
The Royal Society publishes journals covering the whole of the sciences. Of interest to APS delegates: *Proceedings A*: publishes the latest research in all aspects of the physical sciences. *Philosophical Transactions A*: each theme issue is devoted to a specific area of the mathematical, physical and engineering sciences. *Philosophical Transac-*

tions A: each theme issue is devoted to a specific area of the mathematical, physical and engineering sciences. Proceedings A publishes the latest research in all aspects of the physical sciences.

Scientific Magnetics Ltd. #429

Manufactures standard and bespoke superconducting and cryogenic solutions. We design and manufacture magnet systems from low and high temperature superconductors, in liquid Helium cooled and cryogen free configurations. We will be exhibiting cryogen free magnet systems and, through our partnership with BlurFors Cryogenics Oy, cryogen free low and ultra low temperature experimental inserts.

Signal Recovery #411

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

SPECS GmbH #611

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 #617,619,716,718

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Staib Instruments, Inc. #306

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 #310,308

SRS will be exhibiting their full line of scientific instruments including lock-in amplifiers, delay generators, preamplifiers, laser diode controllers, optical shutters, and much more.

STAR Cyroelectronics #429

Offers advanced LTS and HTS dc SQUID sensors, high-performance PC-based SQUID readout electronics (pcSQUID), the popular Mr. SQUID Educational Demonstration System, custom LTS and HTS thin-film fabrication services, custom SQUID systems, TES microcalorimeter and STJ detectors, and microcalorimeter spectrometers for X-ray microanalysis.

Taylor & Francis Group LLC - CRC Press #730,732, 734

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publisher of scientific and technical books and journals. Visit our booth to browse and receive special discounts on recently published titles such as Solid State Engineering Physics, Introduction to the Physics and Chemistry of Materials, Concepts in Quantum Mechanics, and many others. Please inquire with press editors if interested in developing a new book project.

Teachspin, Inc. #506,508,510

A premier provider of advanced and intermediate laboratory apparatus, will be featuring four new instruments. Noise Fundamentals, Where Noise is the Signal, has never before been shown. Pulsed/cw NMR, Quantum Analogs and the Torsional Oscillator are now in labs world-wide. Come play with these and many of our other hands-on experiments.

Tegam, Inc. #101

TeraGrid/University of Chicago #729

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The Johns Hopkins University Press #711

The Physical Society of Japan (JPS) #409

The Physical Society of Japan (JPS) is an organization of some 20,000 physicists, researchers as well as educators, and engineers. The JPS was founded in 1877 as the first society in natural science in Japan. The JPS publishes the Journal of the Physical Society of Japan (JPSJ), which is devoted to the rapid dissemination of important research results pertaining to all fields of physics.

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University of Pittsburgh Department of Physics & Astronomy #131

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WVNano Initiative/WVU #728

WVU is the founder and technical lead of the WVNano Initiative, the State of West Virginia's focal point for nanoscale science, engineering and education (NSEE) research, workforce development, and economic development. At WVU, WVNano is a cross-cutting faculty driven effort that is the catalyst for campus NSEE discovery and innovation, shared resource stewardship, and culture.

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