

NEW PRODUCTS

Focus on software, data acquisition, and instrumentation

The descriptions of the new products listed in this section are based on information supplied to us by the manufacturers. PHYSICS TODAY can assume no responsibility for their accuracy. For more information about a particular product, visit the website at the end of its description. Please send all new product submissions to ptpub@aip.org.

Andreas Mandelis



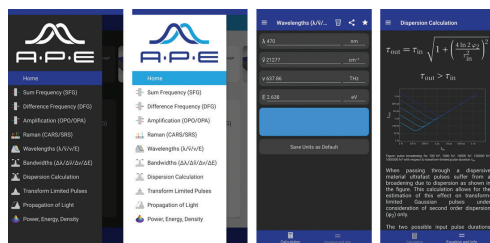
Triode high-voltage power supply

Spellman High Voltage Electronics has upgraded its triode high-voltage power supply, which is designed to drive thermionic scanning electron microscopes. The EBM-TEG series shares the same triode supply as the previous EBM but adds a detector drive with a photomultiplier tube,

scintillator, and collector outputs. The integrated unit provides a highly regulated, low-noise, ultrastable accelerator supply programmable from 0 to -30 kV at 170 μ A, and floating filament and bias supplies referenced to the accelerator to control the beam. High-voltage outputs drive the detector. Programming signals use differential analog inputs to minimize external noise and to offset voltages effects. A ground-referenced emission current monitor and a filament failure signal are provided, and the units are protected against overcurrent and overvoltage, arcs, and short circuits. **Spellman High Voltage Electronics Corp**, 475 Wireless Blvd, Hauppauge, NY 11788, www.spellmanhv.com

Downloadable calculator app

The latest version of the APE Optics Calculator app is available on Google Play. The app offers fast, easy access to commonly needed equations in ultrafast and nonlinear laser optics. Besides basic functions, the company has developed and integrated new features such as the ability for users to share calculation results with team members. Photon energy (measured in electron volts) has been added to most calculations, and explanatory text is offered for all calculations and more. **APE GmbH**, Plauener Strasse 163-165, Haus N, 13053 Berlin, Germany, www.ape-berlin.de

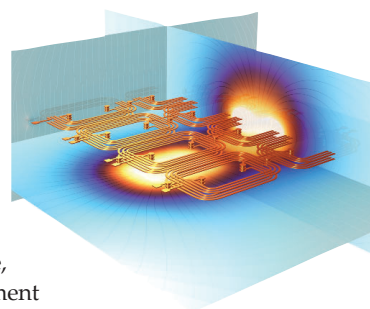


Compact hexapod for six-DOF motion

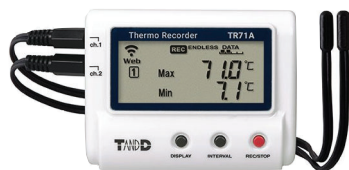
Aerotech's HEX150-140HL miniature hexapod positioning system can move with six degrees of freedom (DOF): precise translation in the x , y , and z directions and rotation around each of those axes (θ_x , θ_y , and θ_z). According to the company, the HEX150-140HL's minimum incremental motion and linear travel are better than those of other available products. The flexible system combines high precision and high load capacity, and its peak-to-peak specifications yield consistent, reliable six-DOF motion. It features minimum incremental motions of 20 nm in the x , y , and z directions and 0.04 arcsec in θ_x , θ_y , and θ_z ; high payload-lift capabilities up to 7.5 kg; back-driving resistance to 100 N; and multiaxis-motion coordination, including servo, stepper, and piezo. Easy to control and program with virtual pivot-point adjustment, the HEX150-140HL can address space-constrained, multiple-DOF applications that require a fine positioning resolution. Those include photonic device manipulation, optics inspection and alignment, optical wafer probing, and synchrotron and beamline sample manipulation. **Aerotech Inc**, 101 Zeta Dr, Pittsburgh, PA 15238-2811, www.aerotech.com

Modeling and simulation software

Comsol has updated its Multiphysics software for creating physics-based models and simulation applications. Version 6.0 introduces a feature for model management, a module for uncertainty quantification analysis, and updates and performance enhancements. The Model Manager enables efficient simulation-data management through version control; tracking changes; and advanced search functionality within models, computer-aided-design data, and other related external files. It provides a structured workspace where colleagues can collaborate within organizations and with external parties. Based on probabilistic design methods, the Uncertainty Quantification Module facilitates the production of more complete, accurate, and useful multiphysics models. Other updates in Version 6.0 include the improvement by a factor of 10 in speed and memory consumption performance for certain engineering applications, more efficient electromagnetic simulation of printed-circuit-board designs, and a new flow-induced noise realm for acoustics modeling. **Comsol Inc**, 100 District Ave, Burlington, MA 01803, www.comsol.com



NEW PRODUCTS



App for temperature-data logging

CAS DataLoggers reports that TandD has enhanced its T&D Thermo app for both iOS and Android users. With the mobile application, users of some TandD data loggers can carry out operations such as making settings, downloading recorded data, and viewing graphs via smartphones and tablets. Version 2.2 adds support for TandD's recently released TR-7A series of loggers. Background push notifications have been enabled to send alarm warnings from the WebStorage Service to mobile devices, provided users have confirmed that both their phones and the T&D Thermo App have "Background Refresh" enabled. (That separate utility does not replace the emailed warning notifications from the WebStorage Service.) The update also adds a function to output log and settings from the Settings Table Screen and a function to create PDF reports of data downloaded using Bluetooth or direct communications over a wireless local area network. **CAS DataLoggers**, 8437 Mayfield Rd, Unit 104, Chesterland, OH 44026, www.dataloggerinc.com

Antenna system for direction finding and monitoring

The R&S ADD557SR antenna system from Rohde & Schwarz features both vertical and horizontal polarization and covers the frequency range from 20 MHz to 6 GHz for direction finding, and from 20 MHz to 8.5 GHz for monitoring. It is suitable for use with R&S DDF550 wideband direction finders and DDF5GTS high-speed scanning direction finders in fixed, mobile, and transportable applications. The versatile system contains a separate omnidirectional-monitoring antenna output and can be switched between the two polarizations. To avoid saturating the active antenna elements and enable direction finding even in noisy situations, the system can be switched into passive mode in the very high and ultrahigh frequency ranges. The R&S ADD557SR is capable of superresolution: The advanced direction-finding technology can simultaneously determine the bearings of multiple emissions on the same frequency and spot signals in the spectrum that other emissions have concealed and that are undetectable to other direction finders, according to the company. **Rohde & Schwarz GmbH & Co KG**, Muehldorfstrasse 15, 81671 Munich, Germany, www.rohde-schwarz.com



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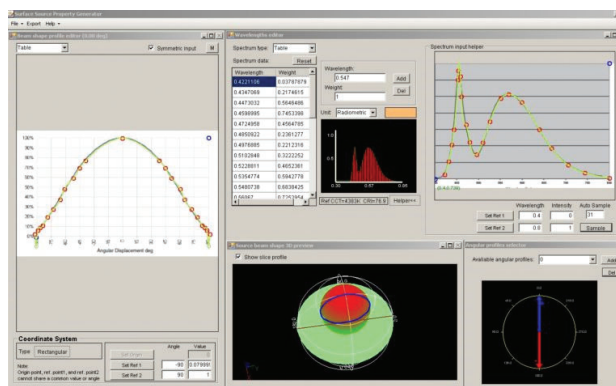
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Optical-design software

Lambda Research has unveiled TracePro 2022, the latest version of its software for the design and analysis of illumination and optical systems. The main improvements in the new release are the incorporation of a geometric modeler, KOSMOS/KCM, and an updated graphical user interface. The new modeler gives TracePro the capability to model asymmetric and free-form optical surfaces with the accuracy required for optical ray tracing. As a result, the company was able to expand the lens element capability to include a total of 20 different surface shapes, and it anticipates adding more shapes. Computer-aided-design translators such as STEP, IGES, and SAT are now bundled with TracePro at no additional charge. **Lambda Research Corporation**, 25 Porter Rd, Littleton, MA 01460, www.lambdaresearch.com

Software-defined test instrumentation

Liquid Instruments has released two updates to its new hardware platform, Moku:Pro, that increase the system's versatility and further enable it to replace a suite of common test instruments with one streamlined rack-mounted device. Multi-instrument Mode allows multiple instruments to be dynamically combined on a single field-programmable gate array (FPGA) chip. For the first time, according to the company, users can configure multiple test instruments to run simultaneously on a standalone piece of hardware and implement custom code directly onto the FPGA. With the Moku Cloud Compile subscription service, users can design and deploy custom signal-processing algorithms to Moku:Pro's FPGA. The cloud-based tool is fully compatible with the Multi-instrument Mode and delivers a complete solution to optimize custom-built test suites for specific applications and requirements. The new modes are designed to serve the quantum computing, aerospace, semiconductor, lidar, and automotive industries. **Liquid Instruments**, 740 Lomas Santa Fe Dr, Ste 102, Solana Beach, CA 92075, www.liquidinstruments.com



High-frequency mixed-signal oscilloscope

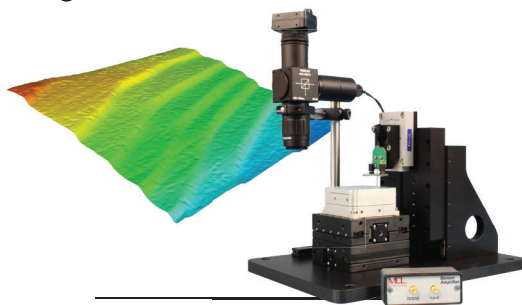
Tektronix has launched the newest version of its 5 Series mixed-signal oscilloscope (MSO). The 5 Series B MSO is more versatile and provides added support for power-integrity testing and enhancements for debugging and validation. Updates include a new auxiliary trigger input that allows the oscilloscope to be synchronized to an external signal without using any of the four, six, or eight input channels. The maximum frequency output for the optional built-in arbitrary function generator has increased from 50 MHz to 100 MHz, which enables higher-frequency stimulus for Bode plots and impedance measurements. A faster processor makes controls more responsive. For users working and collaborating outside the laboratory,

the 5 Series B MSO works with new tools for off-line analysis and cloud data storage. **Tektronix Inc**, 14150 SW Karl Braun Dr, PO Box 500, Beaverton, OR 97077, www.tek.com

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