

Engineering at MIT. Since 2011, he has been serving as co-director of the MIT Computation for Design and Optimization Program. In 2004, Buehler received the MRS Graduate Student Gold Award. In 2011, he received numerous honors,

including the Thomas J.R. Hughes Young Investigator Award, the Alfred Noble Prize, and the Leonardo Da Vinci Award. Buehler serves as editor or on the editorial board of numerous publications. He serves MRS in a number of

capacities, including judge and chair of the MRS Graduate Student Award subcommittee, as a volunteer writer for *MRS Bulletin*, and as a lead organizer of several symposia at MRS Meetings.



John Pendry to give plenary address on metamaterials at 2012 MRS Spring Meeting

John Pendry of Imperial College London will give the plenary address at the 2012 Materials Research Society Spring Meeting to be held April 9–13 in San Francisco. The plenary session will be held Wednesday, April 11, at 6:30 p.m. in the San Francisco Marriott Marquis.

In his presentation, Pendry will describe recent developments and future prospects in the area of metamaterials. The properties of a metamaterial depend on its interatomic structure rather than on the composition of the atoms themselves. In collaboration with a team of scientists at Duke University, Pendry has devel-

oped the concept of “transformation optics,” which prescribes how electromagnetic lines of force can be manipulated at will. This enabled a proposed recipe for a cloak that can hide an arbitrary object from electromagnetic fields, and has also many applications at optical frequencies to the study of plasmonic systems.



At the Imperial College London, Pendry has been head of the Condensed Matter Theory Group since 1981. He began his career in the Cavendish Laboratory, Cambridge, followed by six years at the Daresbury Laboratory where he headed the theoretical group. Among his honors are the Royal Medal from the Royal Society of London and the European Union’s Descartes Prize. Pendry received his PhD degree from the University of Cambridge.



Thomas P. Russell to present Kavli lecture on nanoscience at 2012 MRS Spring Meeting

Thomas P. Russell, the Silvio O. Conte Distinguished Professor of Polymer Science and Engineering at the University of Massachusetts, Amherst, has been selected for the Fred Kavli Distinguished Lectureship in Nanoscience. He will give a presentation at the 2012 Materials Research Society Spring Meeting to be held April 9–13

in San Francisco. The award recognizes both his pioneering research on polymer/nanoparticle composites and block copolymer thin films and his service to the materials community.

Russell has pioneered the analysis of polymeric thin films and the interfacial behavior of polymers and nanoparticles by neutron scattering and hard and soft

small-angle x-ray scattering and diffraction. He has also focused on understanding and improving nanopatterning through self-assembly in block copolymer thin films. His achievements in the vertical alignment of block copolymer microdomains and large-area homogeneous nanopatterns are major milestones in block copolymer self-assembly.

Among Russell’s honors is election to the National Academy of Engineering, and he is a fellow of the American Physical Society, the American Association for the Advancement of Science, the Neutron Scattering Society of America, the Polymer Division in the American Chemical Society, and the Materials Research Society. He also served on the MRS Board of Directors. Russell received his PhD degree from the University of Massachusetts, Amherst.





**2012 MRS
SPRING MEETING**

EXHIBITORS

Moscone West
Tuesday, April 10 - Thursday, April 12

- ACS Publications** Booth 605
pubs.acs.org
Journals

- AdValue Technology, LLC** Booth 427
www.advaluetech.com
Alumina Product; Quartzware; Zirconia Products

- Advanced Research Systems, Inc.** Booth 312
www.arscryo.com
Closed and Open Cycle Cryocooler; Cryogenic Probe Station; Helium Liquefiers

- Agilent Technologies** Booth 300
www.agilent.com/find/nano
Nanoindenters; Universal Testing Systems; Field Emission Scanning Electron Microscopes; Atomic Force Microscopes

- Agilent Technologies** Booth 304
www.agilent.com/chem
Laboratory Instrumentation

- AIP Publishing** Booth 617
www.aip.org
Physics Journals; Online Hosting; Conference Proceedings

- AIST-NT, Inc.** Booth 229
www.aist-nt.com
Atomic Force/Scanning Probe Microscopes; Combined AFM & Raman Spectroscopy Systems

- AIXTRON SE** Booth 508
www.aixtron.com
MOCVD/CVD/PECVD Equipment; OVPD and PVPD Equipment; AVD and ALD Equipment

- AJA International, Inc.** Booth 307
www.ajaint.com
Sputtering Systems; Sputter Sources; Sputter Targets

- Aldrich Materials Science** Booth 425
www.sigma-aldrich.com/matsci
Materials for Research in Polymer Science, Organic Electronics, Alternative Energy, Micro/Nanoelectronics, Nanotechnology

- Angstrom Thin Film Technologies LLC** Booth 616
www.angstromthinfilms.com
ALD; Thin Film; Nano

- Annealsys** Booth 214
www.annealsys.com
RTP; RTCVD; Annealing; MOCVD; Spray-CVD; LPCVD

- Applied Spectra, Inc.** Booth 326
www.appliedspectra.com
RT100 Series LIBS Instruments; J100 Femto LA System; Aurora LIBS Spectrometer

- Applied Surface Technologies** Booth 414
www.co2clean.com
CO₂ Snow Jet Cleaning; Surface Cleaning; Substrate Cleaning

- Arradance, Inc.** Booth 228
www.arradance.com
Atomic Layer Deposition; ALD University Research; Microchannel Plates; ALD Service; Benchtop ALD

- Asylum Research** Booth 313
www.AsylumResearch.com
Atomic Force/Scanning Probe Microscopes; Nanoindenter

- Attolight AG** Booth 216
www.attolight.com
Cathodoluminescence System; SEM

- BaySpec, Inc.** Booth 215
www.bayspec.com
Raman Microscope; Raman Moving Lab; Raman Benchtop 1064, 785, 532

- BioLogic USA** Booth 428
www.bio-logic.us
Electrochemical Research; Potentiostats; Fuel Cell/Battery Testing

- Blue Wave Semiconductors, Inc.** Booth 518
www.bluewavesemi.com
Substrate Wafer Heaters; Thin Film Deposition Systems; Thin Films and Coating Materials; R&D Services

- Bruker** Booth 301
www.bruker-axs.com
X-Ray Diffraction

- Buchi Corporation** Booth 419
www.mybuchi.com
Spray Dryer; Rotavapor

- Cambridge NanoTech Inc.** Booth 504
www.cambridgenanotech.com
Atomic Layer Deposition; Thin Film Deposition; Ultra Thin Coatings

- Cambridge University Press** Booth 607
www.cambridge.org/us
Books; Journals

- Carbolite, Inc.** Booth 219
www.carbolite.us
Laboratory Furnaces; Ovens; Incubators

- Chemat Technology, Inc.** Booth 100
www.chemat.com
Spin Coating; Dip Coating; Chemical Precursors

- CRAIC Technologies, Inc.** Booth 319
www.microspectra.com
Microspectrophotometers; Raman; Spectroscopy

- CRC Press-Taylor & Francis Group LLC** Booth 615
www.crcpress.com
Books; Journals; Online Products

- Cryogenic Limited** Booth 507
www.cryogenicusa.com
Superconducting Magnets; Measurement Systems; Cryogen Free Systems

- CrystalMaker Software Ltd.** Booth 325
www.crystallmaker.com
CrystalMaker; CrystalDiffract; SingleCrystal

- CSM Instruments Inc.** Booth 208
www.csm-instruments.com
Scratch Testers; Indentation Testers; Pin-on-Disk Tribometer; Testing Services

- EBARA Technologies, Inc.** Booth 519
www.ebaratech.com
Vacuum Pumps; Turbo Pumps

- Ecopia Corp.** Booth 205
www.ecopia21.co.kr
Variable Temperature Hall Effect Measurement System; Probe Station; RTP System

- Electron Microscopy Sciences** Booth 107
www.emsdiasum.com
Laboratory Supplies; Chemicals/Adhesives Equipment

- Elsevier** Booth 611
www.elsevier.com
Books; Journals; Electronic Products

- First Nano** Booth 517
A Division of CVD Equipment Corporation
www.firstnano.com
CVD Equipment; Gas/Chemical Delivery Systems; Gas Abatement Systems

- Fischione Instruments** Booth 308
www.fischione.com
Electron Microscope Accessories; Sample Preparation

- FUJIFILM Dimatix, Inc.** Booth 417
www.dimatix.com
Materials Deposition Printer; Materials Deposition Cartridge; Other Printheads and Systems

- Gamry Instruments** Booth 120
www.gamry.com
Potentiostats; Quartz Crystal Microbalance; Electrochemistry Accessories

- Gatan, Inc.** Booth 200
www.gatan.com
Materials Characterization; Nanotechnology; Photovoltaics

- Graphene Laboratories Inc.** Booth 614
www.graphenelab.com
Graphene Wafers; Graphene TCC; Graphene Nanopowders

- HeatWave Labs Inc.** Booth 415
www.cathode.com
Substrate Heaters; Cathodes; Electron Guns

- HORIBA Scientific** Booth 509
www.horiba.com/scientific
Raman; Spectroscopy; Ellipsometry

- Hummingbird Scientific** Booth 221
www.hummingbirdscientific.com
TEM Specimen Holders

- Hysitron, Inc.** Booth 412
www.hysitron.com
TI 950 TribolIndenter; TS 75 TriboScope; PI 95 TEM PicoIndenter

- Hysitron, Inc.** Booth 515
www.hysitron.com
PI 95 TEM PicoIndenter; PI 85 SEM PicoIndenter; Push-to-Pull

- ibss Group, Inc.** Booth 218
www.ibssgroup.com
GV10x DS Plasma Asher

- Integrated Dynamics Engineering** Booth 433
www.ideworld.com
Vibration Isolation; EMI Cancellation; Acoustic Control

- International Centre for Diffraction Data (ICDD)** Booth 306
www.icdd.com
X-Ray Powder Diffraction; Database; Software

- Janis Research Company, LLC** Booth 501
www.janis.com
Micromanipulated Probe Stations; Cryostats; Cryocoolers

- Japan Society of Applied Physics** Booth 608
www.jsap.or.jp/english
Journals, such as *Applied Physics Express*, *Japanese Journal of Applied Physics*

- JASCO** Booth 225
www.jascoinc.com
Raman; Portable Raman; Near Field; Thin-Film Thickness Analysis

- JEOL USA, Inc.** Booth 201
www.jeolusa.com
TEM; SEM; Auger/MicroProbe

- Johnsen Ultravac Inc.** Booth 220
www.ultrahivac.com
UHV Instruments; UHV Chambers; Surface/Cryo Products

- Kammrath and Weiss** Booth 217
www.kammrath-weiss.com
Microscopy Accessories; Tensile Testing; Heating & Cooling

- KD Scientific** Booth 121
www.kdscientific.com
Syringe Pumps; Syringes; Laboratory Research Instruments; Fluid Handling Instruments; Electro Spinning Instruments

- KP Technology Ltd.** Booth 102
www.kelvinprobe.com
Scanning Kelvin Probe Glovebox; Surface Photovoltaic Spectroscopy; UHV and Ambient Scanning Kelvin Probes

- Kurt J. Lesker Company** Booth 401
www.lesker.com
Pure Targets and Materials; Vacuum Components; Thin Film Deposition Systems; Target Bonding Services, UHV Manipulation

Lake Shore Cryotronics, Inc. www.lakeshore.com Hall Effect Measurement Systems; Probe Stations; Cryogenic Instruments and Sensors	Booth 309	Netzsch Instruments N.A. LLC www.netzsch-thermal-analysis.com Thermal Analysis; Thermal Conductivity; Thermal Expansion; Calorimetry	Booth 521	Solartron Analytical (AMETEK) www.solartronanalytical.com ModuLab MTS; 1260 Impedance Analyzer; Cryostats & Furnaces	Booth 520
MANTIS Deposition Ltd. www.mantisdeposition.com Nanoparticle Deposition; PVD; Thin Film Deposition Tools	Booth 103	NIST www.nist.gov/srm Standard Reference Materials; Data and Calibration Services	Booth 602	SolMateS B.V. www.solmates.nl Laser Deposition Equipment	Booth 527
Materials Analysis Technology Inc. www.ma-tek.com Materials Analysis; Failure Analysis; Reliability Testing	Booth 328	Nor-Cal Products, Inc. www.n-c.com Vacuum Components & Chambers; Flanges & Fittings; Valves	Booth 408	SonoPlot, Inc. www.sonoplot.com Microplotter; Printed Electronics; Materials Priner	Booth 232
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MTI Corporation www.mtixtl.com Multiple Zone Furnaces; High Vacuum Furnaces; PECVD Furnaces; Battery Research Equipment	Booth 321	Plasmaterials, Inc. www.plasmaterials.com Sputtering Targets; Backing Plates; Evaporation Materials	Booth 316	SunaTech Inc. www.sunatech.com OLED; OPV; Intermediates	Booth 612
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