APS March Meeting in Chicago

The highlights will include symposia on technological innovation, on the liquefaction and utilization of coal, and on physicists in unusual settings.

Moving westward after its annual meeting in New York City, The American Physical Society will congregate in Chicago for its second general meeting of the year. The conference will be lengthened for the first time to five days, 19–23 March, to accommodate the largest number of papers ever presented at a Society meeting—175 invited and 1783 contributed. The Chicago Marriott Hotel will serve as APS headquarters.

Registration and information areas will be on the seventh floor of the Marriott Hotel. Those arriving early can register on Sunday evening, 18 March, from 6:00 to 10:00 pm. Regular registration will begin at 8:30 am the following morning. The fee for members is $20, for nonmembers $30. The fee will be only $2 for students and for members who are either retired or, alas, unemployed.

With only a few exceptions, all morning sessions will begin at 9:00 am, all afternoon ones at 2:00 pm.

APS program

On the Saturday and Sunday preceding the meeting, the APS divisions of high polymer physics and condensed matter physics will offer short courses at the Marriott Hotel. They are, respectively, "Scattering Methods in Polymer Science" (Indiana Room) and "An Introduction to Metallurgy: Microstructures and Mechanical Properties of Metals" (Iowa Room).

The APS Forum on Physics and Society will sponsor two symposia. On Monday morning, "Physicists in Unusual or Alternative Settings" will include talks by Joseph G. Asbury and Donald W. Connor (both from Argonne National Laboratory), who will speak, respectively, on "The Economics of Energy Technology Assessment" and "Physics as Training for the Rational Bureaucracy". Other speakers are Hans Severiens (Merrill Lynch) and Harry Ploss (Zurich–American Insurance Company). On Friday morning, the Forum will sponsor a symposium on "Technological Innovations." Speakers will be Betsey Ancker-Johnson (Associate Laboratory Director at Argonne National Laboratory and former Assistant Secretary of Commerce for Science and Technology), William Norris (Control Data Corporation), George Lockwood (Monterey Abalone Farms) and Elmer H. Burack (University of Illinois).

Another symposium of general interest will be one on "Scientific Policy and Funding," organized by the division of chemical physics. Joel Snow of the Department of Energy will discuss the research policies of that agency. George Pimentel (deputy director of the National Science Foundation) will speak on "Plurality, Continuity, and Flexibility: Essentials in Funding of Basic Research." N. B. Hannay will give a talk on "The Balance between Public and Private Sector" and David E. Mann (Department of the Navy) will examine "Military Research Policy: Problems and Prospects."

Coal will be the focus of two symposia organized by the Committee on Applications of Physics. On Monday morning, "Physics and Coal Utilization" will have as speakers W. Spackman (Penn State), Philip Kosky (General Electric R&D Center), Atam P. Sikri (Department of Energy) and Kenneth E. Templemeyer (Argonne National Laboratory). The "Physics and Coal Liquefaction" symposium on Monday afternoon will feature talks by D. N. Neskora and G. Sorel (both from Exxon Research and Engineering Company), V.U.S. Rao (Pittsburgh Energy Technology Center–Department of Energy) and Nancy O'Fallon (Argonne National Laboratory).

Technical symposia of interest include three sponsored by the division of condensed matter physics. On Tuesday afternoon, "Muon Spin Rotation" will be the common focus of invited talks by Robert H. Heffner (Los Alamos), Anthony T. Fiory (Bell Labs, Murray Hill), Wilhelm B. Gauster (Sandia), Kenneth G. Petzinger (College of William and Mary) and Jesse H. Brewer (University of British Columbia). A symposium on "Phase Transitions in Two Dimensions," meeting at the same time, will have as speakers D. Bishop (Bell Labs), David Butler (University of Pittsburgh), Ahmet N. Berker (Harvard), John P. McTague (UCLA) and Charles C. Grimes (Bell Labs, Murray Hill). On Wednesday afternoon, a symposium on phase changes will take place. James S. Langer (Carnegie-Mellon University) will discuss "Instabilities and Pattern Formation in Crystal Growth." C. M. Wayman will examine "Martensitic Transformations, Memory Alloys, and Energy Conversion". Roy K. Crawford will look at "Neutron Scattering from Solid Rubidium near the Solid–Liquid Transition." The "Theory of Two-Dimensional Melting" will be discussed by David R. Nelson (Harvard).

Ceremonial sessions

The Society will have two ceremonial sessions at this meeting, on Tuesday morning and afternoon, both in the Grand Ballroom North of the Marriott Hotel. Lewis Branscomb, the APS president, will present four awards in the morning and two in the afternoon. Each of the nine prizewinners will give a brief talk describing the work for which he has been recognized.

Joel A. Appelbaum and Donald R. Hamann, both of Bell Laboratories in Murray Hill, will receive the Davisson–Germer Prize, an award sponsored by Bell Laboratories that recognizes outstanding work in atomic or surface physics. They will be cited for their "pioneering analysis of the electronic structure of semiconductor surfaces."

The Irving Langmuir Prize in Chemical Physics, donated by the General Electric Foundation, will be awarded this year to

Donald S. McClure of Princeton University. The award cites McClure's early work on the singlet and triplet states in organic molecules and crystals and on optical spectra of transition-metal ions "which was basic to the development of these fields." The award also describes as "outstanding" his work during the past decade on magnon sidebands in MnF_2, on the role of ionic interactions in the intensity of spin-forbidden transitions, on the Jahn–Teller effect in ionic crystals, and on $3d$–$4s$ and $3d$–$4p$ transitions in solids. The award committee observed that "his pioneering work involved a combination of careful experimentation and penetrating analysis which has stimulated other investigators and opened new areas of research."

George Pimentel, deputy director of the National Science Foundation, will receive the Earle K. Plyler Prize. This award, sponsored by the George E. Crouch Foundation, recognizes notable contributions to molecular spectroscopy. The prize committee praised Pimentel "for his development of and contributions to chemical lasers, matrix isolation spectroscopy, and rapid scanning infrared spectrometers." They pointed out that "his infectious enthusiasm for everything spectroscopic . . . has helped us see new worlds."

The APS High Polymer Physics Prize, sponsored by the Ford Motor Company, will go this year to E. W. Fischer of the University of Mainz, West Germany. The award cites his investigations of the structure, morphology and properties of amorphous and crystalline polymers.

John K. Hulm (Westinghouse Research Laboratories, Pittsburgh), J. Eugene Kunzler (Bell Laboratories, Murray Hill) and Bernd J. Matthias (Bell Laboratories and University of California, San Diego) will share the APS International Prize for New Materials sponsored by the International Business Machines Corporation. The prize committee pointed out that their discovery of intermetallic compounds and alloys exhibiting unusually high superconducting transition temperatures, and their demonstration that these materials retain their superconductivity under conditions of high currents and fields, has opened up "the practical application of superconductivity to electric power technology and the magnetic confinement of plasma in future thermonuclear fusion reactors."

The Oliver E. Buckley Solid State Physics Prize, endowed by Bell Laboratories, will be presented to Marvin L. Cohen (University of California, Berkeley). It will recognize his "timely explanations and novel predictions of electronic properties of solids through the imaginative use of quantum mechanical calculations."

A no host cocktail party will be held in the Marriott Hotel's Chicago Ballroom Rooms A–E from 6:00 to 8:00 pm, fol-

CHICAGO CONVENTION AND TOURISM BUREAU

The Chicago Water Tower, constructed in 1869

lowing the ceremonial sessions. The APS will provide hors d'oeuvres.

AIP activities

The American Institute of Physics will conduct a placement center during the meeting in the Denver–Houston Room on the fifth floor of the Marriott Hotel. The center will arrange personal interviews between physicists seeking employment and representatives of employers who are attending the meeting. The placement center will be open from 9:00 am to 5:00 pm Monday through Thursday and from 9:00 am to 12:00 noon on Friday. The AIP placement director, David Kraft, will also meet by appointment with those registrants wishing to discuss employment problems.

Over 50 companies will be present at the meeting's physics show, displaying and offering information on the latest models of research instruments, apparatus and materials. Managed by AIP's Edward Greeley, the show will include laser, x-ray, photoacoustic and photon spectroscopy equipment, cryogenic apparatus, multichannel analyzers and electro-optic equipment. Seven publishers will also be in attendance displaying their latest books and journals. The physics show will be on the seventh floor of the Marriott Hotel, in the Grand Ballroom Center and South. The exhibit hours are 10:00 am to 5:00 pm on Tuesday and Wednesday, and 10:00 am to 4:00 pm on Thursday.

Audrey Likely, AIP's director of public relations, will manage a press service located in the Indiana, Illinois and Iowa Rooms on the sixth floor of the Marriott Hotel. The service will distribute news releases, present selected papers in lay language, and set up interviews by science writers of the authors of newsworthy papers.

Registrants can obtain information on the APS Insurance Program from Herbert Freidman, the program administrator, at his desk in the registration area on the seventh floor of the hotel. —CBW □

Invited papers and special events

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MORNING

Chemical Physics: Scientific Policy and Funding *Snow, Mann, Hannay, Pimentel*

Committee on Applications of Physics: Physics and Coal Utilization *Spackman, Korsky, Sikri, Tempelmeyer*

Committee on Applications of Physics: Semiconductor Devices *Kroemer, Di Maria, Chatterjee, Gibbons*

Condensed Matter Physics: Superconductivity Nonequilibrium and Transport Processes *Pethick, Gray, Dynes, Gurvitch, Roberge*

AFTERNOON

Forum on Physics and Society: Physicists in Unusual or Alternative Settings *Asbury, Connor, Severiens, Ploss*

Committee on Applications of Physics: Physics and Coal Liquefaction *Neskora, Rao, Sorel, O'Fallon*

Electron and Atomic Physics: Resonance Phenomena on Surfaces *McRae, Cole, Tong, Schatz*

Condensed Matter Physics: Spin Glasses *Schuller, Hardiman, Murani, Levin, Andres*

tues.

MORNING

Ceremonial Session: *Hamann, Appelbaum, McClure, Pimentel, Fischer*

Condensed Matter Physics: Novel Materials *Shirane, Chiang, Ong, Tsang, Stormer*

Committee on Applications of Physics: Magnetic Devices *Archer, Kurtzig, Shilling, Strnat*

Condensed Matter Physics: Light Scattering *Bray, Van Duyne, Koteles, Lyons, Sandercock*

AFTERNOON

Ceremonial Session: *Hulm, Matthias, Kunzler, Cohen*

Condensed Matter Physics: Muon Spin Rotation *Heffner, Fiory, Gauster, Petzinger, Brewer*

Condensed Matter Physics: Phase Transitions in Two Dimensions *Bishop, Butler, Berker, McTague, Grimes*

Chemical Physics: Laser Spectroscopy *Jortner, Schwartz, Netzel, Fayer*

EVENING

Cocktail Party (Chicago Ballroom Rooms A–E—no host)

wed.

MORNING

Condensed Matter Physics: Superionic Conduction *Foster, Farrington, Strom, Wolf, Nowick*

Condensed Matter Physics: Amorphous Semiconductors *Abkowitz, Grest, Taylor, Shah, Brodsky*

Committee on Applications of Physics: Optical Fiber Communications *Yariv, McIntyre, Marcatili, Gloge*

Biological Physics: Dynamics of Biomolecules I *Karplus, Petsko, Parak, Eisenstein*

AFTERNOON

Condensed Matter Physics: Excitations in Fluids *Aldrich, Pelizzari, Mazenko, Ahlers, Schwarz*

APS Committee on Education–AAPT Joint Symposium: Demonstrations in Physics *Jeong, Brisse*

Condensed Matter Physics: Phase Changes *Langer, Wayman, Crawford, Nelson*

Biological Physics: Dynamics of Biomolecules II *Richards, Woodward, Wuthrich, Thomas*

thurs.

MORNING

High Polymer Physics: Highly Conducting Polymers *Baughman, MacDairmid, Street, Vogel*

Plasma Physics: A Neutron Source: Inertial Confinement Fusion *Logan, Goldstein, Mead, George, Stratton*

Biological Physics: Raman Spectroscopy of Proteins and Nucleic Acids *Van Wart, Krimm, Johnson, Peticolas*

Condensed Matter Physics: Electron–phonon Interactions in d-Band Metals *Moore, Pinski, Crabtree, Harmon, Wakabayashi*

AFTERNOON

Chemical Physics: Coherent Processes in Molecular Systems *Silbey, Schmidt, Brewer, Burland*

Electron and Atomic Physics: Atoms and Molecules in Flames and Plasma *Eckbreth, Fontijn, Bondybey, Smyth*

Biological Physics: Diffusion in Physics and Biology *Benedek, Rubin, Finkelstein, Pollack*

Condensed Matter Physics: Metal–Nonmetal Transitions *Thomas, Castner, Economou, Flynn, Bundy*

fri.

MORNING

Forum on Physics and Society: Technological Innovations *Johnson, Norris, Lockwood, Burack*

Cosmic Physics: Astrophysics *Lamb, Hubbard, Turner, Ipser*

Condensed Matter Physics: Surfaces of Metals *Mills, Louie, Petroff, Wang*

AFTERNOON

Chemical Physics: New Methods fot the Determination of Adsorbate Structure and Orientation *Li, Shirley, Smith, Winograd*

Condensed Matter Physics: Electronic and Magnetic Structure of d-Band Materials *Pickett, Korenman, Hubbard, Himpsel*