

we hear that

AVS awards to be handed out

Work ranging from characterizing thin films and interfaces to supporting vacuum standards development and research to developing silicon-based molecular electronics will be honored next month at AVS's annual meeting, held this year in San Francisco. AVS: Science and Technology of Materials, Interfaces, and Processing will hand out five awards in recognition of recipients' achievements.

John C. Hemminger, dean of the school of physical sciences and professor of chemistry at the University of California, Irvine, will receive the Medard W. Welch Award "for outstanding contributions to the development of quantitative, molecular level understanding of many important interfacial processes, especially those related to atmospheric chemistry."

The Gaede-Langmuir Award will go to **Leonard J. Brillson** "for demonstration of the fundamental importance of semiconductor interfacial bonding, metallurgical reactions, and defect formation upon solid state material and device properties." Brillson is a professor of electrical and computer engineering, a professor of physics, and a Center for Materials Research Scholar at Ohio State University.

Siegfried Hofmann will receive the Albert Nerken Award "for seminal contributions to the quantitative characterization of thin films and interfaces, particularly planar nanostructures, by

sputter depth profiling." Hofmann is a staff scientist at the Max Planck Institute for Metals Research in Stuttgart, Germany.

The Peter Mark Memorial Award will go to **Mark C. Hersam** "for outstanding contributions to the development of silicon-based molecular electronics." Hersam is an assistant professor in the department of materials science and engineering at Northwestern University in Evanston, Illinois.

Jeffrey D. Kelley, an engineering and mechanical technician at NIST in Gaithersburg, Maryland, will receive the George T. Hanyo Award "for outstanding performance in technical support of vacuum standards development and research in the pressure and vacuum group at the National Institute of Standards and Technology."

COBE leader and team share cosmology prize

John Mather and NASA's former *Cosmic Background Explorer* (COBE) team are co-recipients of the 2006 Gruber Cosmology Prize for landmark studies confirming that the universe was born in a hot Big Bang.

Mather and the COBE team received the honor "for their groundbreaking studies of the spectrum and spatial structure of the relic radiation from the Big Bang," the prize citation said. "With these results, the COBE team, led by John Mather, set cosmology's agenda for decades to come and profoundly affected our understanding of cosmic evolution."

The instruments aboard COBE, launched in 1989, looked back over 13 billion years to the early universe and found that it was hot, dense, and almost uniform; that it contained weak fluctuations or lumps that grew into the galaxies and stars visible today; that the fluctuations were the consequence of a Big Bang; and that the universe is filled with diffuse radiation from previously unknown galaxies, according to the Peter Gruber Foundation, prize sponsor. COBE was NASA's first dedicated cosmology mission and was the culmi-

nation of a 15-year dream for Mather, who initiated the project in 1974 with a proposal to NASA. The COBE science team formed in 1976, and NASA's Goddard Space Flight Center in Greenbelt, Maryland, built the satellite.

Mather, senior astrophysicist at Goddard's observational cosmology laboratory and senior project scientist for the *James Webb Space Telescope*, collected the prize's gold medal and \$250 000 cash award on behalf of the other 18 members of the team during an August ceremony in Prague, Czech Republic. Mather received half the purse and the other team members split the other half. On the COBE team were **Charles Bennett**, **Nancy Boggess**, **Edward Cheng**, **Eli Dwek**, **Samuel Gulkis**, **Michael Hauser**, **Michael Janssen**, **Thomas Kelsall**, **Philip Lubin**, **Stephan Meyer**, **S. Harvey Moseley**, **Thomas Murdock**, **Richard Shafer**, **Robert Silverberg**, **George Smoot**, **Rainer Weiss**, **David Wilkinson** (who died in September 2002), and **Edward Wright**.

Created in 2000, the Cosmology Prize of the Gruber Foundation, based in St. Thomas, US Virgin Islands, recognizes honorees for their groundbreaking theoretical, analytical, or conceptual discoveries. The prize is co-sponsored by the International Astronomical Union in Paris.

in brief

The 2006 Dirac Medal is being awarded to **Peter Zoller**, professor of physics at the University of Innsbruck in Austria and scientific director of the Institute for Quantum Optics and Quantum Information at the Austrian Academy of Sciences. Zoller is being honored "for his innovative and prolific accomplishments in atomic physics, including his seminal work in proposing methods to use trapped ions for quantum computing and describing how to realize the Bose-Hubbard model and associated phase transitions in ultracold gases." Zoller will receive the medal and a \$5000 cash prize during a ceremony later this year in Trieste, Italy, where he will present a lecture. The Dirac Medal was established in 1985 by the Abdus Salam International Centre for Theoretical Physics in Trieste.

Carl A. Ventrice Jr left the University of New Orleans on 13 August for a position as associate professor in the physics department at Texas State University in San Marcos. Ventrice had started at UNO in August 1996 as an assistant professor of physics and was promoted to associate professor in 2000.



Hemminger



Brillson



Mather