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PRESS RELEASE

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Hydrogen Solutions to Replace Gasoline, Inventor will Keynote *nanoTX USA'08*

World-famed pioneer in nanostructures, who was once named Time Magazine's "Hero of the Planet," is greatly anticipated in the scientific and business community with exciting new advances

Dallas, Texas, March 24, 2008. Stanford R. Ovshinsky has become a living legend in the scientific and business communities, having once been profiled in a one-hour PBS program on *NOVA* entitled "Japan's American Genius." The most recent exciting advancement is his solid hydrogen storage system, a metal hydride solid which can be stored in a granular, inert form in compact tanks. It's as easy to fuel up a vehicle with this solid hydrogen as it is to gas up a conventional car. When the car needs fuel, a little energy from the battery system heats up the solid and releases hydrogen gas. Solid hydrogen is currently powering some internal combustion engines on modified Toyota Priuses, and the future looks promising for fuel cell implementation.

Stan Ovshinsky began in the field of nanostructures for a large number of applications as early as the 1950s and now has formed an independent new company called *Ovshinsky Innovation LLC*. Plans are to accelerate his work in energy and information that will lead to basic solutions for pollution, climate change gases and wars over oil. His objective now is to make photovoltaic and hydrogen storage competitive with fossil fuel. His company is working on what they're calling a regenerative fuel cell. They say it will be more affordable than current fuel cells because of the materials it's made of, and that it will be able to operate in a much wider temperature range.

Over his long career, Ovshinsky has mentored many brilliant young scientists. Dr. Zvi Yaniv, CEO and founder of Applied Nanotech in Austin, Texas, a sponsor of ***nanoTX USA'08*** worked with Ovshinsky

in the field of active matrix liquid crystal displays between 1982-1991 . "I am very thankful to Stan for giving me the opportunity to work with him and to pioneer the field of amorphous silicon diodes and transistors for the active matrix liquid crystal display technology", said Dr. Yaniv, upon hearing the news that Ovshinsky will keynote. "We all speak about nanotechnology as a new science. Stan envisioned years ago that a lot of the technological answers needed for the 21 century will come from researching and understanding how two-three molecules bind together up to the point that the agglomerate of these molecules achieves the properties of the bulk material. By definition - this is nanotechnology, and Stan can be considered one of its prophets."

Stan Ovshinsky also spends much time on his pet project, a cognitive computer, the next generation of smart computers.

Ovshinsky is the co-founder of Energy Conversion Devices, Inc. (ECD), the company he founded in 1960 with his late wife Iris. He is the primary inventor of ECD's technology including the Ovonic thin-film photovoltaic technology and its continuous web multi-junction roll-to-roll machine, the high-powered NiMH battery now used in everything from cell phones, to laptop computers, to electric and hybrid cars. These thin film photovoltaics have been turned into roof shingles, bring affordable energy to remote villages, even helped power the Mir space station. The Ovonic hydrogen technology as well as Ovonic Universal Memory (OUM), also known as Phase Change Memory (PCM), is receiving much positive attention from the semiconductor industry.

He has approximately 360 U.S. patents and is the author of over 300 scientific papers ranging from neurophysiology to amorphous semiconductors. He serves on various scientific, educational and civic boards and is the recipient of numerous awards, including the Diesel Gold Medal for Invention presented by German Inventors Association (Deutscher Erfinderverband) in recognition of his invention of the semiconductor switching effect in disordered and amorphous materials (1968); the Coors American Ingenuity *Award*, honoring "individuals who are changing, forever, the face of American business," given for his Ovonic solar cells which help provide the world's energy needs "as well as a host of other practical uses" (1988); the *Toyota Award for Advancement* for his development of the Ovonic nickel-metal hydride batteries for electric vehicles (1991); the *Karl W. Böer Solar Energy Medal of Merit*, awarded jointly by the University of Delaware and the International Solar Energy Society (1999); the International Association for Hydrogen Energy (IAHE) *Sir William Grove Award* (June 2000); the American Solar Energy Society *Hoyt Clarke Hottel Award* (July 2004) for "significant contribution to the advancement of

solar energy technologies"; The 2005 Innovation Award for Energy and the Environment by *The Economist* for "his pioneering work in the development of the NiMH battery"; the Frederick Douglass/Eugene V. Debs Award (November 2006) and the 2007 Walston Chubb Award for Innovation awarded by Sigma Xi, The Scientific Research Society (November 2007).

Stan Ovshinsky was inducted into the Michigan Chemical Engineering Hall of Fame (1983) and named Michigan Scientist of the Year by *Impression 5 Science Museum* (1987), named the Corporate Detroitier of the Year by *Corporate Detroit Magazine* (1993), and named "Hero

for the Planet" by *Time* magazine (1999). He and his wife, Iris, were named *Heroes of Chemistry 2000* by the American Chemical Society for "advances in electrochemical, energy storage and energy generation, including the development of Ovonic nickel metal hydride (NiMH) rechargeable batteries, regenerative fuel cells, solid hydrogen storage system, and amorphous silicon photovoltaics" and for having "made significant and lasting contributions to global human welfare." He was profiled in *Inventing Modern America: From the Microwave to the Mouse*, published by MIT Press in association with Lemelson-MIT Program (December 2001), as one of the 35 American Inventors over the past century "who helped to shape the modern world." The Stanford R. Ovshinsky Award for Excellence in Non-Crystalline Chalcogenides was established in 2001 to honor Stan Ovshinsky's pioneering work in the field of Non-Crystalline Chalcogenides. Interviewed in the documentary "Who Killed the Electric Car?" His nickel metal hydride batteries enabled the creation of the electric and hybrid cars. A volume of his papers since 1985, "The Science and Technology of an American Genius: Stanford R. Ovshinsky," edited by Hellmut Fritzsche and Brian Schwartz, is to be published by World Scientific Publishing, Singapore.

He is a fellow of both the American Physical Society "for his contributions to the understanding, applications and development of amorphous electronic materials and devices" and of the American Association for the Advancement of Science. He is a senior member of the Institute of Electrical and Electronic Engineers; a member of Sigma Xi; a life member of the Society of Automotive Engineers; member of the Consulting Board of the Journal of Optoelectronics and Advanced Materials; a member of the American Chemical Society; a member of the Michigan Center for Theoretical Physics, University of Michigan.

Before anyone was even buying music on CD, Stan Ovshinsky had figured out how the compact disk would be the perfect medium for a data storage technique and opened the door for rewritable CDs and

DVDs that can physically change thousands of times and hold much more data than a conventional floppy disk.

About *nanoTX USA'08*

nanoTX USA is an international conference and trade expo held each early Autumn in Dallas, Texas, and is the centermost nanotechnology event in the Americas during *International Nanotechnology Week™*, this year October 2-3. The event highlights advances in nanoscience, explains how nanotechnology is being used today and how it will impact a broad range of industries tomorrow, including: electronics, energy, aerospace, defense, biomedicine, robotics, chemicals and more.

Exhibitor highlights, speakers, the latest on emerging business and nano technology, and other top minds at this event, are featured each week exclusively on the BIZ Radio Network. Learn details and hear archived programs at www.PromiseOfTomorrow.biz

As the most comprehensive nanotechnology conference and exposition in the American hemisphere, ***nanoTX USA*** partners globally with ***nano tech Japan***, the largest and most successful nanotechnology event in the world and held in Tokyo early each year.

nanoTX USA has established a reputation for delivering solid content, compelling panel discussions, early-stage investment opportunities and a world-class roster of presenters. For more information and to register, please visit www.nanotx.biz.

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