

### Easy Access to NASA Langley Technologies

In an effort to move hundreds of technologies with commercial potential from an ever-growing inventory to the private sector, NASA Langley Research Center has designated certain technologies eligible for expedited licensing with nominal fees and minimal negotiations. These technologies are on display at the new Technology Portfolio web site, <http://www.mtac.pitt.edu/tech>.

The Technology Portfolio contains a brief summary of each technology along with links to the patent, information on licensing options and sample licensing agreements, instructions on how to prepare a commercialization plan and license application, and contact information for a representative from the Mid-Atlantic Technology Applications Center (MTAC). MTAC developed the Technology Portfolio web site under Langley's direction and is managing the maintenance of the site as well as related outreach activities.

To ensure that NASA's technology assets and know-how contribute to U.S. economic growth, it is critical that they are quickly and effectively translated into improved production processes and marketable, innovative products. This web resource will make the transfer of technology from Langley to industry a simpler and more efficient process for both parties.

For more information, contact: Joe Gielas, telephone: 412.383.2500.

### Pittsburgh Hosts the NGSi 2000 Planning Workshop

Pittsburgh will host the first meeting of an exciting new initiative designed to bring together sensor technology users, manufacturers, and researchers. Hosted by the Mid-Atlantic Technology Applications Center (MTAC) of the University of Pittsburgh, the Next Generation Sensor Initiative (NGSI) is being established to foster collaborative partnerships to improve the productivity and competitiveness of U.S. industry. With its goal of accelerating the development of advanced sensor technologies, NGSI combines the needs, talent, and resources of: industries that manufacture products and monitor processes; manufacturers of sensors; and federal, state, university, and private research and development laboratories.

NGSI will hold its inaugural workshop October 31–November 1, 2000 at the Sheraton Station Square Hotel in Pittsburgh. Some of the topics on the agenda include:

- Sensors of the future—industry trends
- Sensor needs—user/industry roadmaps
- Development activities in federal laboratories and universities
- Sensor manufacturers' plans and future goals
- NGSI operational plans
- Industry focus group planning breakout sessions

The goal of this workshop is to identify opportunities for collaborative partnerships for new sensor technology development. In order to have a productive session, attendance is limited and reservations will be accepted on a first come/first served basis. For more information, call 412.383.2500 or visit <http://ngsi.mtac.pitt.edu>.

### Fuel Cells: Energy for the Future?

Once thought of as exotic power sources for highly specialized applications such as space travel, today's fuel cell counterparts are finding their way into more down-to-earth applications such as automobiles and residential or office-building electricity needs. Fuel cells are projected to be a \$100 billion market by 2010, and a number of corporate alliances are taking shape to grab this potential market. These include: Plug Power Inc. with General Electric and Ballard Power with DaimlerChrysler and Ford Motor. Indeed automakers are believed to have spent upward of \$1 billion on fuel cell technology. Even utility companies have jumped into the fray. For example, Avista Laboratories—a subsidiary of its Washington parent—is developing fuel cells. Siemens Westinghouse Inc., a unit of Siemens AG, has built a hybrid fuel cell capable of generating 220 kW of power for the U.S. DOE research program. This hybrid device combines a fuel cell with a gas turbine.

Notwithstanding all this frenetic R&D activity, fuel cells are not quite ready for mass markets. For one thing, units for homes and cars still cost way too much. It is estimated that costs will have to be slashed to about \$50 per kW for mobile applications and an order of magnitude higher for home and commercial markets.

### Say Yes to NO

Twenty years ago, this molecule got no respect and was much maligned for its environmental effects such as smog and air pollution. Most people would have scoffed at the idea that NO is an important biological signal molecule capable of regulating physiological processes. However all this changed with the publicity engendered by the recent Nobel Prize in Physiology or Medicine that was jointly awarded to Furchgott, Murad, and Ignarro. The serendipitous chemical discovery underlying the wonder drug, Viagra, also undoubtedly contributed to the hoop-la—Viagra works by enhancing NO's effects of dilating blood vessels. This molecule has been implicated in the regulation of blood pressure, prevention of clotting, in pathogenic and anti-tumor activity, and even in learning and memory. On the other hand, it appears to have a dark side to it in its role in septic shock, certain neurologic diseases, and even migraine headaches.

The search for both NO-releasing as well as NO-inhibiting drugs is one of the hottest fields in biomedical sciences as are new types of sensors for this molecule. It even boasts its own scientific journal entitled *Nitric Oxide*.

*(Ed. Note: The electrochemistry of NO will be the topic of the plenary lecture to be given by Carl Djerassi at the fall meeting in Phoenix, AZ.)*

*These news items originated from various media releases. Further information may be obtained by contacting the Editor, K. Rajeshwar, [raj@utarlg.uta.edu](mailto:raj@utarlg.uta.edu).*