

## **Carbon Nanotechnologies, Motorola and Johnson Matthey Awarded Grant for Micro-Fuel Cells Research & Development**

HOUSTON, TX, SCHAUMBURG, Ill. and WEST CHESTER, PA, 29 - September 2004 – The National Institute of Standards and Technology (NIST) awarded Carbon Nanotechnologies, Inc., Motorola, Inc. (NYSE: MOT) and Johnson Matthey Fuel Cells, Inc. (London SE: JMAT) a \$3.6 million grant to develop “free standing” carbon nanotube electrodes for micro-fuel cells in order to meet the ever-growing demand for more power and longer run times in portable microelectronics. The Advanced Technology Program award from NIST supports a 3 year, \$7.4 million project to exploit the unique properties of single wall carbon-nanotubes (SWNT) in order to achieve significant breakthroughs in fuel cell performance, durability and manufacturability.

“It is a privilege to be associated with such great technology focused companies in this project and we are pleased that NIST sees the merit and the potential in this technology,” states Professor Richard E. Smalley, a 1996 Nobel Laureate and Carbon Nanotechnologies, Inc. chairman and co-founder. “Single wall carbon-nanotubes will enable many new products and I believe that fuel cell development will be an early beneficiary of their powerful properties. Carbon nanotechnology should prove to be one of the great enablers in solving our country’s energy problems.”

Hand-held electronic devices are increasing in sophistication with their demands for electrical power seemingly rising exponentially. Rechargeable battery technology is mature, and unlikely to satisfy this demand. Small fuel cells have the potential to provide the power required, but this potential has not yet been recognized. In the longer term, success of the “hydrogen economy” is critically contingent upon increasing performance and durability, while decreasing associated manufacturing costs of present-day proton exchange membrane (PEM) fuel cells. These capabilities will be particularly important in fuel cells for distributed power generation and automotive applications.

If successful, the technology would enable not only dramatically improved compact PEM fuel cells for a host of current hand-held electronic devices, but would also enable the design and commercialization of more powerful next generation “wireless” devices.

The Advanced Technology Program, managed by the National Institute of Standards and Technology, provides cost-shared funding to industry for high-risk R&D projects with the potential to spark important, broad-based economic benefits for the United States. The awards are made on the basis of a rigorous peer-reviewed selection process. For more information, visit the ATP web site, [www.atp.nist.gov](http://www.atp.nist.gov).

### **About Carbon Nanotechnologies**

Carbon Nanotechnologies, Inc. is the world leader in the manufacture of single wall carbon-nanotubes. The company has more than 450 customers worldwide and has several pilot plants to produce single-wall and other small-diameter carbon nanotubes at its location in west Houston. CNI’s portfolio of 100 patents and applications includes approximately 650 composition of matter claims, more than 40 of which have been issued or allowed thus far.

**About Motorola**

Motorola, Inc. (NYSE: MOT) is a global leader in wireless, broadband and automotive communications technologies that help make life smarter, safer, simpler, synchronized and fun. Sales in 2003 were US\$27.1 billion. Motorola creates innovative technological solutions that benefit people at home, at work and on the move. The company also is a progressive corporate citizen dedicated to operating ethically, protecting the environment and supporting the communities in which it does business. For more information:

[www.motorola.com](http://www.motorola.com).

**About Johnson Matthey**

Johnson Matthey PLC (London SE: JMAT) is a specialty chemical company focused on its core skills in precious metals, catalysts and specialty chemicals. Sales in 2003 were \$8 billion. Johnson Matthey Fuel Cells, a Johnson Matthey business unit in which Anglo Platinum, the world's leading primary producer of platinum group metals, has a 17.5% stake, is a world leader in the design, development and manufacture of anode and cathode electro-catalysts, Membrane Electrode Assemblies (MEAs) for PEM fuel cells and Direct Methanol fuel cells, and fuel processor reactors and catalysts to convert natural gas, LPG, gasoline or other hydrocarbon fuels to a hydrogen-rich gas stream for fuel cells and other applications.

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