

Edgar Filing: CVD EQUIPMENT CORP - Form 8-K

CVD EQUIPMENT CORP
Form 8-K
April 30, 2007

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 8-K

Current Report

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): April 25, 2007

CVD Equipment Corporation
(Exact name of Registrant as Specified in its Charter)

| | | |
|---|--------------------------|--------------------------------------|
| New York | 1-16525 | 11-2621692 |
| (State or other jurisdiction of incorporation) | (Commission File No.) | (IRS Employer Identification No.) |

1860 Smithtown Ave. Ronkonkoma, New York 11779
(Address of Principal Executive Office)

Registrant's telephone number, including area code: (631) 981-7081

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (SEE General Instruction A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2 (b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4 (C) under the Exchange Act (17CFR 240.13e-4 (c))

Item 8.01 Other Events.

On April 27, 2007 the University of Cincinnati issued the attached revised press release "UC Researchers Shatter World Records with Length of Latest Carbon Nanotube Arrays". According to the release, a new world record has been achieved by researchers at the University of Cincinnati, who developed a novel composite catalyst and optimal synthesis conditions for oriented growth of multi-wall Carbon nanotube (CNT) arrays, thus producing the longest aligned CNT arrays. CNTs are of great interest because of their outstanding mechanical, electrical and optical properties, and because of their potential applications in nanomedicine, aerospace, electronics and many other areas. CVD Equipment Corporation developed and built the Easy Tube System and our First Nano division grew the long CNT arrays in our laboratory. First Nano is a division of CVD Equipment Corporation. See Exhibit 99.1.

Item 9.01 Financial Statements and Exhibits

Edgar Filing: CVD EQUIPMENT CORP - Form 8-K

(c) Exhibits

Exhibit

Number Description

99.1 Press release, dated April 25, 2007, by the University of Cincinnati titled "UC Researchers shatter World Records with Length of Latest Carbon Nanotube Arrays"

SIGNATURE

Pursuant to the requirements of the Securities and Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

CVD EQUIPMENT CORPORATION

/s/ Leonard A. Rosenbaum

Leonard A. Rosenbaum, Chairman of the Board, President and CEO

Dated April 30, 2007

1

Exhibit 99.1

University Of Cincinatti

UC Researchers Shatter World Records with Length of Carbon Nanotube Arrays University of Cincinnati researchers lead the world in the synthesis of extremely long aligned carbon nanotube arrays. The research has implications for medical, aerospace, electronic and other applications.

Date: 4/27/2007

By: Wendy Beckman

Phone: (513) 556-1826

Other Contact: Vesselin Shanov

Other Contact Phone: (513) 556-2461

Photos By: Vesselin Shanov and Mark Schulz

UC engineering researchers have developed a novel composite catalyst and optimal synthesis conditions for oriented growth of multi-wall CNT arrays. And right now they lead the world in synthesis of extremely long aligned carbon nanotube arrays.

Carbon nanotubes (CNTs) are of great interest because of their outstanding mechanical, electrical and optical properties. Intense research has been undertaken to synthesize long aligned CNTs because of their potential applications in nanomedicine, aerospace, electronics and many other areas.

Especially important is that long CNT arrays can be spun into fibers that are - in theory - significantly stronger and lighter than any existing fibers and are electrically conductive. Nanotube fibers are expected to engender revolutionary advances in the development of lightweight, high-strength materials and could potentially replace copper wire.

2

Exhibit 99.1

Years of effort by UC researchers Vesselin Shanov and Mark Schulz, co-directors of the University of Cincinnati Smart Materials Nanotechnology Laboratory, along with Yun YeoHeung and students, led to the invention of the method for growing long nanotube arrays. Employing this invention, the

Edgar Filing: CVD EQUIPMENT CORP - Form 8-K

UC researchers (in conjunction with First Nano, a division of CVD Equipment Corporation of Ronkonkoma, New York) have produced extremely long CNT arrays (18 mm) on their EasyTube System using a Chemical Vapor Deposition (CVD) process.

Moreover, in a re-growth experiment on a separate substrate, they produced an 11-mm long CNT array. This array was then successfully peeled completely off the substrate. Without additional processing, the same substrate was reused for a successive growth that yielded an 8-mm-long CNT array.

Shanov notes that their research has had four major milestones this year already.

"First, we were able to grow the arrays up to 18 mm," he says, ticking off the achievements. "Second, we produced a uniform carpet of 12-mm carbon nanotube arrays on a 4-inch wafer, which moves the invention into the field of scaled-up manufacturing for industrial application. Third, we filed a patent application on the inventions at the US Patent and Trademark Office and, fourth, we were invited to participate in a very prestigious workshop (invitation-only) organized by NASA and Rice University, where we presented our latest results. The workshop focused on "Single Wall Carbon Nanotube Nucleation and Growth Mechanisms." This event was attended by the best scientists in the world working on synthesis carbon nanotubes, from Japan, China, Europe and the United States. Our presentation was accepted very well and confirmed that with the current record of 18-mm-long carbon nanotube arrays, and also with the big area growth on 4-inch wafers, we are leading in manufacturing extremely long CNT arrays."

3

Exhibit 99.1

The Fine Print and Nano Details

The UC substrate for growing CNT arrays is a multilayered structure with a sophisticated design in which a composite catalyst is formed on top of an oxidized silicon wafer. Its manufacturing requires a "clean room" environment and thin-film deposition techniques that can be scaled up to produce commercial quantities. CNT synthesis is carried out in a hydrogen/hydrocarbon/water/argon environment at 750 degrees Celsius. The achievement of growing centimeter-long nanotube arrays provides hope that continuous growth of CNTs in the meter length range is possible. Leonard Rosenbaum, president and CEO of CVD Equipment Corporation, is looking forward to continuing the partnership with UC to bring this technology from the laboratory into full-scale production. UC is also partnering with another company to develop production of long CNT arrays that can be spun into fibers.

This research was supported by National Science Foundation (NSF) grant CMS-051-0823 (program directors Shih-Chi Liu & K. Jimmy Hsia) and the Office of Naval Research (program director Ignacio Perez) through North Carolina A&T SU (program directors Jag Sankar & Sergey Yarmolenko). CVD Equipment Corporation engineers developed and built the EasyTube System used by First Nano to grow the long CNT arrays.

Other Nano News at UC

11/29/2006 University of Cincinnati Researchers Grow Their Longest Carbon Nanotube Ever

A nanospace race has raged to successfully grow a nanotube array suitable for many uses. And today a UC research team, in conjunction with First Nano, is ahead - by a thousandth of a hair.