



TODAY'S THEME

TECHNOLOGY

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UP IN THE SKY

A new gadget helps star gazers identify celestial bodies. **Page 4**



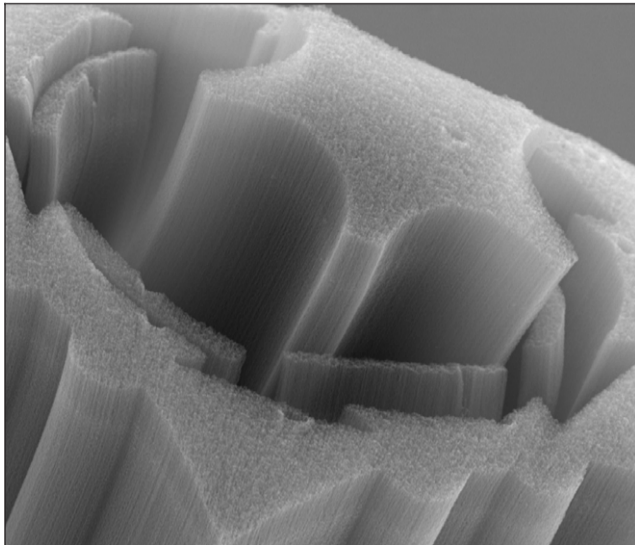
TERABYTE

New drives from SimpleTech. **Page 2**

12 LENGTH, IN MILLIONTHS OF A METER, OF THE WORLD'S SMALLEST SCULPTURE OF A BULL. SOURCE: RIKEN NANOPHOTONICS LABORATORY.

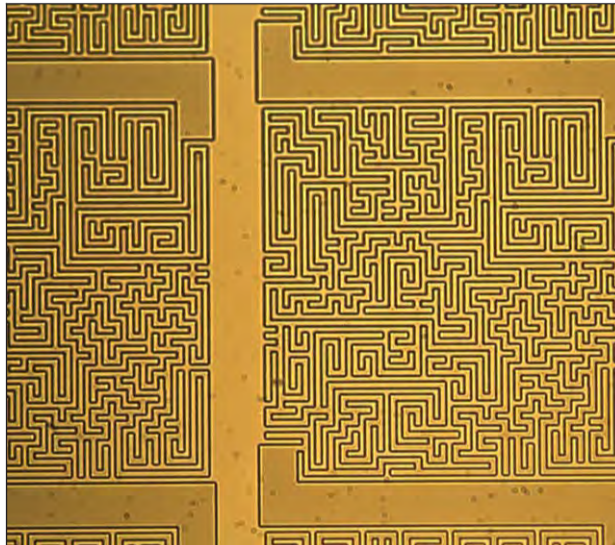
INSIDE INNOVATION

MICRO VISIONS



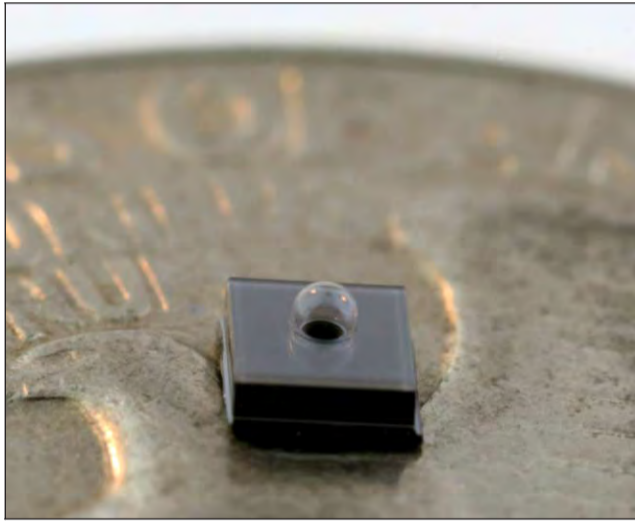
COURTESY MIT

STARBURST: Vertically aligned carbon nanotubes are by Anastasios John Hart and Ryan Wartena of MIT.



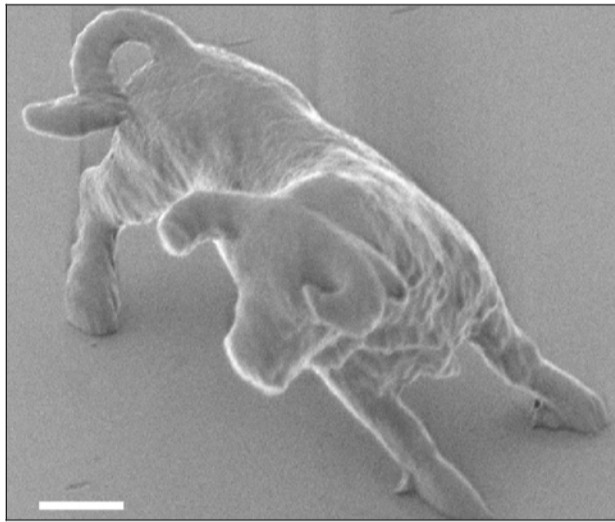
COURTESY UCI

CHANNELS: A maze used in experiments challenges biological molecules to find the shortest path out.



COURTESY UCI

BUBBLE: Glass spheres are used in gas confinement chambers in nuclear magnetic resonance gyroscopes.



COURTESY PROFESSOR SATOSHI KAWATA, RIKEN RESEARCH

BULL: Sculpture is about 12 micrometers long and was made using plastic that solidifies when it absorbs light.

Beauty is a byproduct of microfabrication research.



COLIN STEWART
REGISTER COLUMNIST

Worldwide, research into new techniques for microscopic manufacturing seeks to invent useful innovations, but already it is creating intriguing new images. The microscopic photos on these pages are a sample of designs captured by researchers in Japan, at the Massachusetts Institute of Technology and at UC Irvine. The photos are offshoots of research that seeks to develop devices such as miniature gyroscopes, "medical laboratories on a chip," biological computers, and nanoscale test equipment.

MORE ONLINE

See a video and slide show of more microscopic art online at ocregister.com/money

Some of the images, such as the "Seed of Life," were created simply for their beauty. Others, such as the microscopic sculpture of a bull, demonstrate the potential of microfabrication technology. Most are fortuitous byproducts of cut-

SEE **TECH** • PAGE 4

Drivers wanted to test GPS

Dash Navigation uses the Internet, its own customers for traffic information.



TAMARA CHUANG
REGISTER COLUMNIST

I've been waiting for GPS navigation to evolve beyond the box, and the day is nearly here. **Dash Navigation** launched a national trial Monday and is looking for 2,000 good people to play with the future of traffic. And it's giving folks in the Orange County area special preference.

Its gadget, the Dash Express, sits on a car's dashboard and offers the usual navigation features - voice and visual direc-

SEE **DASH** • PAGE 5



COURTESY DASH NAVIGATION

COMMUNICATOR: The Dash Express gets live traffic reports from sources including other drivers in the Dash network.

New Century tries to help ex-workers find jobs

Job fair draws many big-name lenders, a sign of the industry's overall health.

By **MATHEW PADILLA** and **JOHN GITTELSON**
THE ORANGE COUNTY REGISTER

A week ago, **New Century Financial** laid off 500 workers in Orange County. On Monday, it invited them back - for a job fair.

Recruiters from about 45 companies participated, including some of the biggest names in

lending: **Countrywide Home Loans**, **Washington Mutual** and **Indymac**.

The interest from recruiters shows that despite the meltdown in the subprime market, the overall mortgage industry is still kicking.

New Century last week became the largest subprime lender in the nation to file for bank-

ruptcy. It simultaneously cut 3,200 jobs nationwide, or about half its staff.

At Monday's job fair, about 200 former workers networked with potential employers who were looking for sales representatives.

Marc Zavata, a recruiter for Countrywide Home Loans, piled up résumés on a display table that offered job seekers key rings, candy bars and pens, as well as brochures about employment at Countrywide.

"We have lots of openings now," Zavata said. "We're expanding in sales because of the market. We're picking up business where other companies are losing."

Despite New Century's bankruptcy, Zavata said, the company had quality workers. "When they're competing against you and taking part of your market share, that speaks to their quality

SEE **JOBS** • PAGE 8

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www.ocregister.com/money

INDEXES END DAY MOSTLY UNCHANGED; OIL PRICES DOWN \$2

Wall Street ended an erratic session essentially flat Monday as investors grew anxious about upcoming first-quarter earnings and the possibility that interest rates won't be declining anytime soon. A \$2 drop in oil prices gave support to the major indexes.

- Dow 30 industrials**
Close: 12,596.14
Change: +8.94
- Nasdaq composite index**
Close: 2,469.18
Change: -2.16
- S&P 500 index**
Close: 1,444.61
Change: +0.85
- 10-year Treasury yield**
Close: 4.75%
Change: none
- Oil Nymex per barrel**
Close: \$61.51
Change: -\$2.16

Shares of **Dow Chemical Co.** rose 5 percent after a British newspaper reported a group of Middle Eastern investors and U.S. buyout firms was preparing a bid for the huge chemicals and plastics maker. **Page 3**

ENDOCARE EXECS CHARGED

Former **Endocare** Chairman Paul Mikus and ex-Chief Financial Officer John Cracchiolo were indicted for booking bogus sales in a fraud that prosecutors say cost investors more than \$200 million. **Page 3**

U.S. FILES CHINA TRADE CASES

The Bush administration said it is filing two new trade cases against China over copyright piracy and restrictions on the sale of American movies, music and books there. **Page 3**

PREDATORY LENDING TARGETED

The Defense Department will propose curbs on what it considers predatory lending to military service members and their families such as payday loans, car title lending and tax refund anticipation loans, a draft of the proposal showed. **Page 3**

AIRLINE RESURRECTS PEANUTS



Southwest Airlines, which celebrates peanuts as an on-board snack and a marketing ploy, is a two-flavor carrier again. The most profitable U.S. airline recently resumed serving honey-roasted peanuts after a two-year absence because its supplier agreed to provide them for the same price as the dry-roasted variety, a spokeswoman said. The move reverses Southwest's abandonment of honey-roasted nuts in 2005 to save money and restores its practice of switching varieties in alternate years. The low-fare carrier offers the nuts on all its flights - 94 million packets in 2006 - and often describes its ticket prices as "peanuts."

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AMD REVENUE FALTERS

Advanced Micro Devices said Monday that it will revamp its business plans in the aftermath of a deep decline in first-quarter revenue. The chip maker disclosed that its revenue for the quarter will be about \$1.23 billion, or about \$400 million less than it forecast in January, because of sluggish demand for its chips and falling prices. In reaction to the poor first-quarter results, AMD said it will reduce its capital spending by \$500 million this year without significantly affecting its production capacity. It also will reduce discretionary spending and will cut new hiring, perhaps as much as 5 percent. AMD employs about 16,700 people worldwide.

CORRECTION

The deadline to file and pay 2006 federal income tax is April 17 this year. Because of a reporting error, the date was wrong in a column on Page 1 of the Marketplace section in the April 8 edition of the Register.

We will promptly correct factual errors. Call 714-796-7951 or e-mail corrections@ocregister.com. Legal demands for correction must be in writing and sent to the publisher at Box 11626, Santa Ana, CA 92711-1626

HOW TO REACH THE MARKETPLACE TEAM

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PHOTOS: ANA VENEGAS, THE REGISTER

CLEANEST CREW: Wearing special suits to avoid contamination, doctoral candidates Lily Wu and Jesper Eklund display a silicon wafer used in their research at UCI. Wu works in micro-fluidics and Eklund works in the MicroSystems Laboratory. UCI's microfabrication complex was launched in 1998.

TECH BRIEFS

Disappointing sales stats hurt Conexant revenue

Conexant Systems Inc., a Newport Beach communications chip maker, said Monday that its second-quarter revenue fell 18 percent in the fiscal second quarter because of lower-than-expected sales from several products.

Second-quarter revenue totaled \$200 million, down from \$242.6 million the year before. Analysts polled by Thomson Financial expected revenue of \$222.8 million.

The company said declines in set-top box revenue were due to program schedule delays with service providers in the U.S. and Europe as well as less demand. The company's multifunctional peripheral products shipments, which are components of "all-in-one" printers that fax and copy documents, were hurt by higher-than-expected inventories at key customers. DSL products were hurt by above-average pricing pressure.

The stock, which closed Thursday at \$1.65 on the Nasdaq stock market, is off 19 percent year to date.

Meade's mySky guides star gazers

Meade Instruments in Irvine unveiled mySky on Monday, a handheld gadget to help star gazers learn what they're looking at.

The device uses GPS so it knows the user's location in proximity to the sky. It can identify up to 30,000 objects above, displaying color images on a small LCD screen. It also includes video, audio and text to educate users.

The mySky comes out in May for \$399. Visit meade.com/video/mysky for a sneak preview.

Acacia adds another licensee

Acacia Research Corporation, a Newport Beach intellectual property company, said Monday that Stock Building Supply Holdings has licensed a patent from Acacia covering credit card fraud protection.

Stock Building supplies building materials and construction services to homebuilders in the U.S.

Western Digital expands AV drives

Western Digital Corp., the Lake Forest hard drive company, has a new family of AV drives targeting products that record audio and video, such as personal video recorders, surveillance systems and set-top boxes.

AV drives are more durable than computer hard drives because of they need to run all the time.

Western Digital's new drives use 60 percent less power than standard drives, can record multiple files simultaneously and are relatively quiet - these emit less than one sone, which can barely be heard by the human ear. The drives have been rated to last 1 million hours.

TECH: Tiny artworks

FROM PAGE 1

ting-edge research.

Laser maker **Newport Corp.** has established the Technology and Applications Center in Irvine to supply equipment to researchers working on microscopic analysis and microfabrication.

Among the experts recently hired there is senior scientist Tommaso Baldacchini, a specialist in laser-carved structures about 20-millionths of a meter high. Those include micro-sized bridges, towers, cables, vases and pyramids - fascinating experimental structures that are preliminary versions of components that will function in micromachines of the near future.

At UCI, much of the researchers' micro-level manufacturing occurs at the Integrated Nanosystems Research Facility in the Samueli School of Engineering.

The \$5 million-a-year, 31-clean-room microfabrication complex was founded in 1998 to lower barriers to innovation by making nanotechnology more easily available to faculty and private-sector researchers, says the nanotech center's director, G.P. Li, professor of computer science and biomedical and electrical engineering.

Mark Bachman, the center's associate director and an asso-

ciate professor in the same departments as Li, says, "Nanotechnology used to be a specialized toy for electrical engineers, but we're a full-service clean room, where anyone can learn how to use it." The facility is used by biologists, chemists, physicians and civil engineers.

Typically, they begin their research elsewhere, such as the UCI MicroSystems Laboratory run by Professor Andrei Shkel, then move on to micro-scale manufacturing in the facility's clean rooms. Later, photos of their micro-device are taken with a scanning electron microscope at the Carl Zeiss Center in UCI's nearby CalIT2 building.

Current projects at the nanosystems center include miniature radio antennas that can shift their configuration to improve reception where the signal is weak.

Bachman says the technology could be ready for use by the U.S. military in two years, for wireless home networking in three to five years, and in cell phones within five to 10 years.

Home-networking and cell-phone companies are already in touch with UCI to discuss plans for incorporating the technology into consumer products, Li and Bachman say. Because of confidentiality agreements, they would not identify the companies.

CONTACT THE WRITER:
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or 714-796-7841



NANO LAB: Postdoctoral student Sungmu Kang works in UCI's Integrated Nanosystems Research Facility, where students of different disciplines work on microfabrication.

"Nanotechnology used to be a specialized toy for electrical engineers."

MARK BACHMAN
UCI ASSOCIATE
PROFESSOR

TECHBYTES

GLOSSARY

Bunny suit: Nickname for the coverall garment worn by workers in nanotech and semiconductor clean rooms. The bunny suit is designed to prevent fragments of skin or hair from contaminating the room's materials and equipment.

TECHNOLOGY 101: NANOTUBES

WHAT: Tiny, hollow cylinders formed from atoms of carbon or other elements.

HOW BIG: Diameter is about 1 nanometer (one-billionth of a meter). Length is about 1 millimeter (one-thousandth of a meter)

WHY: Nanotubes are lightweight but stronger than steel. Depending on the atoms' alignment, they conduct electricity or are semiconductors.

POTENTIAL USES: Materials for autos, planes, buildings, fabrics. Chemical sensors. Circuitry.

Sources: answers.com, pcmag.com

COMPANY SPOTLIGHT: UCI MICROSYSTEMS LAB

WHAT: UCI laboratory researching and developing micro-electro-mechanical systems, or MEMS.

WHO: Lab director is Andrei M. Shkel, associate professor of mechanical and aerospace engineering.

WHERE: Samueli School of Engineering.

NEWS: Current research involves MEMS sensors, actuators, gyroscopes and accelerometers.

INFO: oxide.eng.uci.edu/lab/general.htm; (949) 824-6314.