Newspaper Clips

September 13, 2014

Indian Express ND
13/09/2014 P-6

BRAINSTORMING

IT seems to be a busy period for the higher education sector. While HRD Minister's retreat with vice-chancellors of 39 central universities is currently on in Chandigarh and the IIT Council is set to meet on September 22, a big meeting has been called by the University Grants Commission in Delhi Monday. The UGC meet will see principals of 250 deemed/ private colleges deliberate on, among other things, regulatory issues.

Tribune ND 13/09/2014 P-8

Irani wants national ranking system for quality education

TRIBUNE NEWS SERVICE

CHANDIGARH, SEPTEMBER 12

To monitor the quality and performance of Indian universities annually, the Human Resource Development (HRD) Ministry is pushing the idea of a national ranking system.

HRD Minister Smriti Irani, who is in the city for two-day retreat meetings with the vice-chancellors of central universities, today proposed drafting of ranking plan and its implementation.

Sources said some representatives of the universities pointed out that there was a gap between the infrastructure and funding of various universities and institutes in the backward areas and they would not be able to cope with the competition.

Irani proposed a single Act for all central universities. She talked about introducing e-learning strategy under which free-for-all e-libraries would be launched. To keep tabs on fake degrees, she suggested digitisation of degrees of all institutes. About staff crunch in universities, she said the authorities failed to find eligible candidates for senior posts. "One-circular, one-test should be devised to admit students to any institute across the country," she said.

HRD Minister Smriti Irani in Chandigarh. PRADEEP TEWARI

Who is director of IIM-Lucknow?

TNN | Sep 12, 2014,

Lucknow: Who is the director of the Indian Institute of Management, Lucknow (IIM-L)?

While a mail from the Union human resource development ministry (MHRD) on September 8 had asked Prof Devi Singh to "wait" in IIM-L till further orders, the very next day a letter from MHRD said that the senior most faculty, Prof Rajiv Kumar Srivastava to be appointed as interim IIM director, has left the question wide open.

While the campus wondered who was in charge, a clarification from the chairman of the board of governors, JJ Irani, said the person mentioned in the MHRD letter to take charge as the interim director is currently on leave and would be resuming office on September 15. On the same day, said Irani, the final decision is expected to come.

After Singh's second term as IIM-L director expired on March 9, he was given a six-month extension by MHRD. The order, however, said Singh will remain director until the new incumbent takes over. His extension expired on September 8, the day a mail from MHRD landed here, asking Singh to wait till further orders.

A day later, MHRD issued a letter addressing JJ Irani which reads, "competent authority have directed to assign additional charge of director IIM-L to Prof Srivastava for a period of six months with effect from 09-09-2014 or till appointment of regular director or until further order, whichever is earliest."

Sources from MHRD said appointment of the senior most professor as the interim director till the completion of appointment of regular director is a tradition It's a directive that IIM-L will have to follow, said sources.

Director-designate on leave, says IIM-L

- Hindustan Times (Lucknow)

- A day after Hindustan Times carried a front page report ‘Confusion after IIM-L brass sleep on MHRD order’, the premiere B-School issued a press note on Friday to clarify the developments taking place at the Indian Institute of Management, (IIM-L) Lucknow in the past few days.

The statement reads: “Dr JJ Irani, chairman, Board of Governors, IIM Lucknow today said that he had seen the letter which had been sent by the MHRD. The person who has been named in the letter to take charge as the interim director, IIM Lucknow is currently on leave and would be resuming office on Monday (September 15). His decision is expected on the same day.”

It further says: “Dr Irani will be on IIM Lucknow’s Noida campus on September 15 and he would make sure that an interim director is appointed till sanction is received from the MHRD regarding appointment of a permanent director who has been shortlisted by a properly constituted selection committee.”

Strang ely, t his premier institute did not reveal all of this when Hindustan Times contacted the senior officials for their version several times since September 9. Irani received the MHRD letter on September 9 that says additional charge be given to Prof Rajiv Kumar Srivastava, senior most professor.

Yet Irani's email communication to this scribe dated September 10 read: "Devi Singh was given extension till further orders."

In response to HT's front page story, Devi Singh on Friday mailed to this newspaper: "Do you think someone who has done it for 15 years will hang around for 4-5 days? I wanted to immediately hand over charge to him (interim director) and go. But Prof Srivastava wanted time to think over and agreed to let chairman know only by next Monday (September 15) morning. Chairman is scheduled to call him on Monday at 10 am."

35 IIT-B students on academic rehab

http://timesofindia.indiatimes.com/city/mumbai/35-IIT-B-students-on-academic-rehab/articleshow/42380192.cms

Mumbai: Around 35 of 874 students who got admission to the premier IIT-Bombay last year, after clearing two levels of entrance tests, had to be put on an academic rehabilitation programme (ARP) this academic year. Students are put through ARP following poor performance in their course work. Aniket Ambhore (22), who died on September 4 after falling from the sixth floor of one of the institute's hostels, was also an ARP student. Though an official case of suicide is yet to be registered, preliminary investigation shows it could be one, say cops.

Earlier, the undergraduate academic performance evaluation committee used to terminate studentship if the student accumulates more than five backlogs in the first two years of his stay at the campus. The ARP was designed to help students who are unable to cope with the academic requirement at the institute for several reasons. During the course of ARP, a student gets to work in close coordination with a faculty member. Ambhore, a fourth-year dual-degree engineering student, who had several backlogs from the first two years at the institute, was also put off regular course work.

"The institute usually sends a regular student to ARP only after meeting students and their parents on overseeing the performance. The meeting emphasizes the seriousness of the situation to them," said the professor. In the initial years, the responsibility of mentoring and monitoring ARP students is undertaken by the ARP committee.

"A student is allowed to exit the ARP and join regular course work only after the report from the faculty coordinator and department mentor is taken and the student's performance in the semester is evaluated. The student is transferred back to the regular curriculum if he performs during his ARP course. An institute may terminate a student if he fails to perform even after spending a lot of time under ARP but this has not happened so far," said an institute official.

Times of India ND 13/09/2014 P-21

Mars rover completes 2-yr trek to reach its lab

Ready To Start Key Studies

Kenneth Chang

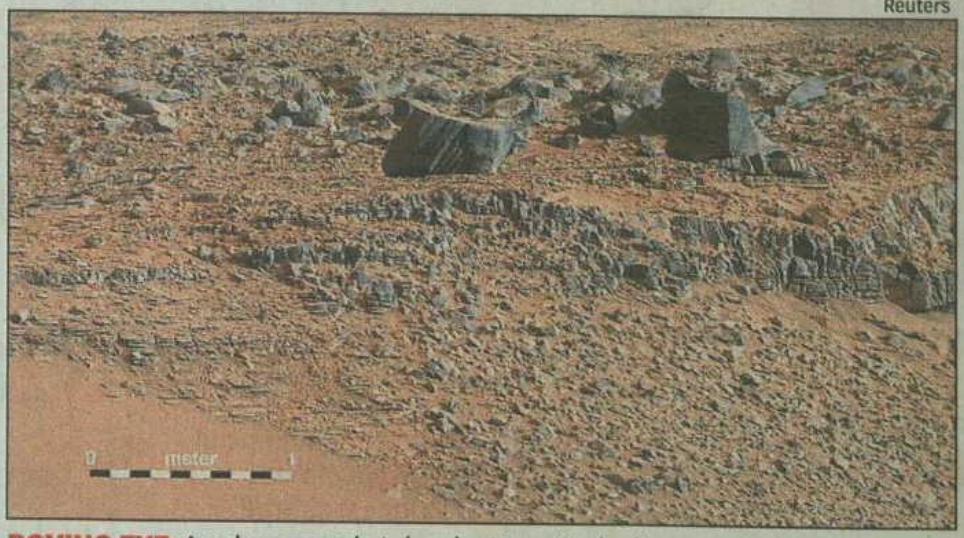
After two years of Mars enthusiasts asking, "Are we there yet?" the mission managers for Nasa's Curiosity rover can finally yell back, "Yes, we're there!"

The Curiosity rover has reached the destination where it will begin its main science investigations, the base of a three-mile-high mountain that the science team has named Mount Sharp. As it makes its way up the mountain, it will cross layers of rock that contain clues to the early geological and environmental history of Mars when it was warmer and wetter.

"We are here to tell everyone that the next phase of research on Mars for Curiosity can now begin," James L Green, the director of Nasa's planetary science division, said on Thursday.

The rover landed in August 2012 after an eight-month cruise from earth. The trip to Mount Sharp has taken longer than expected, partly because of diversion for scientific measurements and because Curiosity needs to be driven with care. NYT NEWS SERVICE

Reuters



ROVING EYE: A colour mosaic taken by Mars Curiosity rover's Mast Camera

Nasa panel: Curiosity lacks scientific focus

Srinivas Laxman | TNN

Mumbai: Nasa's $2.5 billion Curiosity mission which touched down on Mars' Gale Crater on August 6, 2012 amid much global excitement, has now come in for severe criticism from the agency's own panel.

Though the panel has given the mission a "very good rating", it does not measure up to the "excellent" given to the Cassini mission to Saturn.

The panel, called the Planetary Science Review Panel, has been left with the impression that the Curiosity team believed it was "too big to fail". The project's chief scientist, John Grotzinger, also failed to appear in person and answer the panel's inquiries. Though the panel recommended funding for an extended mission of Curiosity, it said the mission "lacked specific scientific questions and testable hypotheses".

For the full report, log on to www.timesofindia.com

Times of India ND 13/09/2014 P-21

Quantum talk: In a first, sound of atom captured

London: For the first time, scientists have used sound to "talk" to an artificial atom, demonstrating a curious phenomenon in quantum physics that sees sound waves take on the role of light.

The interaction between atoms and light is well known and has been studied extensively in the field of quantum optics. However, to achieve the same kind of interaction with sound waves has been a more challenging undertaking.

The researchers at the Chalmers University of Technology in Sweden have now succeeded in making acoustic waves couple to an artificial atom. "We have opened a new door into the quantum world by talking and listening to atoms," said Per Delsing, head of the experimental research group.

"Our long-term goal is to harness quantum physics so that we can benefit from its laws, for example, in extremely fast computers. We do this by making electrical circuits which obey quantum laws, that we can control and study," said Delsing.

An artificial atom is an example of such a quantum electrical circuit. Just like a regular atom, it can be charged up with energy which it subsequently emits in the form of a particle.

BIG ACHIEVEMENT

This is usually a particle of light, but the atom in the Chalmers experiment is instead designed to both emit and absorb energy in the form of sound.

"According to the theory, the sound from the atom is divided into quantum particles," said Martin Gustafsson, the research article's first author. "Such a particle is the weakest sound that can be detected."

"Due to the slow speed of sound, we will have time to control the quantum particles while they travel. This is difficult to achieve with light, which moves 1,00,000 times more quickly," said Gustafsson.

The study appears in the journal Science. PTI

Economic Times ND 13/09/2014 P-9

MOLECULAR MAGIC

Scientists are working with advanced materials on a wide range of human activity, from energy storage to clothing, solar cells to therapeutics to create a more benign environment, but the biggest impact will be in healthcare, writes Hari Pulakkat

Lung cancer is one the most common cancers in the world. It is difficult to detect and usually diagnosed in late stages, and hence not curable. So it is necessary to catch the disease early, before it has spread to other parts of the body. Scientists around the world have been working to develop newer diagnostic methods for lung cancer, and some of them look very promising.

At the Indian Institute of Technology (IIT) in Kanpur, professor of chemical engineering Ashutosh Sharma, doesn't use sophisticated imaging equipment. Instead he is trying to smell the lung cancer in the breath of patients. He has established the proof of principle and developed a prototype, a hand-held device that can detect molecules in the breath of lung cancer patients.

The device has a zinc oxide nanofibre that can detect a molecule that could be a signature for lung cancer. Sharma is a materials scientist and nanotechnologist, among the hundreds of thousands working around the world to develop devices that will make the world healthier and easier to live. An Infosys Prize winner two years ago, Sharma and his collaborators are lining up an impressive array of products that would be useful in many fields. These include biological imaging materials, tests for the detection of breast and lung cancer, nanolenses and reusable adhesives.

The work of material scientists has applications in a wide range of human activity, from energy storage to smart clothing, solar cells to displays, medical diagnostics and therapeutics to biomimetics. "All engineering disciplines are now based on materials," says Sharma.

Here are a few samples, taken at random. New materials promise us solar cells of high efficiency, thereby taking us to a new era of renewable energy.

They promise us new ways of energy storage, thereby multiplying the effect of efficient solar cells. They are spawning a new generation of sports equipment, and a new kind of footwear that will generate energy as we walk or clothing that could warn us of impending health risks.

Advanced materials promise a more benign environment over the next few decades, as they replace the thousands of dangerous substances that have been built and are used over the century. These new materials will be in our homes, in our fields, in our food, in our cars, in our hospitals. But in the short term their biggest impact will be felt in healthcare, as they bring in precise diagnostics and methods of treatment for serious diseases.

Despite the development of several expensive drugs, cancer treatment has not progressed significantly over the years because of the toxicity of chemotherapy.

Something that is toxic to cancer cells will usually be toxic to normal cells as well, unless we find a way to deliver the drug only to the cancer cells. This is what a large number of researchers around the world are trying, and with some success.

For targeted anticancer drug delivery alone, McKinsey estimates the economic impact to be between $150 billion and $500 billion a year by 2025

At the Harvard Medical School, assistant professor Shiladitya Sengupta is trying to join the drugs to other molecules that could go only to cancer cells.

They now use cholesterol tethered to some popular cancer drugs, and this combination is less toxic and more potent than the drug on its own. "We start with material that exists in the body," says Sengupta. They stand less chances of rejection by the body's immune system.

It is still early days in this game, and molecules of unimaginable complexity would be engineered in the future to do precise tasks in the body. Close to Shiladitya's lab, associate professor and tissue engineer Jeff Karp is developing a number of new materials and techniques to solve serious medical problems.

Among his recent innovations, developed in collaboration with Praveen Amula of the Bangalore-based Institute for Stem Cell Biology and Regenerative Medicine, is a drug-secreting gel that will slow down tissue rejection after transplants.

Tissue engineers normally take a body organ, strip away all unwanted cells to create a scaffold, and then use stems to grow back the organ specific to a person. This method is still some way from the market, but is touted as a panacea for organ failure. While this method is being perfected, many scientists are developing mechanical parts with bio-compatible materials to serve the same function as the diseased organ. Artificial kidneys and retinas are much closer to reality than their natural counterparts.

A report by McKinsey last year picked advanced materials as one of the technologies that will have a significant impact in our lives by 2025. For targeted anticancer drug delivery alone, McKinsey estimates the economic impact to be between $150 billion and $500 billion a year by 2025. And the full potential of advanced nanomaterials, according to McKinsey, will only begin to be felt over the coming decade.

With a large national programme, Indian labs are beginning to produce prototypes of nanomaterial-based products that might be ready for commercialisation in a few years. At IIT Bombay, D Bahadur, professor of metallurgical engineering and materials science, works on a few medical and non-medical applications of the technology. One of his products is a magnetic nanoparticle that can deliver cancer drugs precisely and with strong effects.

Bahadur is developing a promising method for cancer therapy. He combines the drug with magnetic nanoparticles within a capsule that take it to the cancer cells like a shot. Then he increases the temperature in the tumour to above 43 degree centigrade using an external magnetic field, a technique called hypothermia.

This kills the cancer cells selectively without damaging the healthy tissue. "The combination of drug delivery and hypothermia is very powerful," says Bahadur.

As often happens, a technology is useful in multiple fields, and magnetic nanoparticles are no exception. Bahadur and his colleagues are using the magnetic nanoparticles for removal of toxic metal ions and bacteria from water.

The product is still in development, as are several others around the country in other leading scientific institutions. They will rewrite our industries a decade from now.

Deccan Herald ND
13/09/2014 P-12

Experiment by Nasa bolsters search for alien life

WASHINGTON, AGENCIES: Nasa scientists have successfully simulated the atmosphere of alien worlds in the lab, yielding positive results for astronomers searching for life beyond earth.

"When we ran these experiments, we found that in some cases there was a significant amount of ozone that built up in the atmosphere, despite there not being any oxygen flowing into the atmosphere," explained Shawn Domagal-Goldman from Nasa's Goddard Space Flight Center in Greenbelt, Maryland, the US.

This has important implications for our future plans to look for life beyond earth, he added.

The research strengthens the argument that methane and oxygen together, or methane and ozone together, are still strong signatures of life.

The paper appeared in the *Astrophysical Journal.*

IIT-I's industry-academia conclave begins today

— By Our Staff Reporter, September 12, 2014 12:22 am

Indore : The Indian Institute of Technology, Indore (IIT-I) will commence the 3rd edition of its industry academia conclave-2012, on Friday. The two-day conclave will see representatives from top-notch companies in the country. This year's theme is 'Nurturing and unifying the cycle – Technology, Industry and Research.'

The IIT-I uses to organize industry-academia conclave in the first quarter but this year it deferred the conclave to September, nearly a month ahead of campus placements, in a bid to ensure better placements and internships to its students.

The first two batches of the IIT-I could not witness 100 per cent placements and the institute does not want the same for its third batch so believing that the conclave will help in bettering placements scenario, the conclave would be held before the campus recruitment.

The campus placements at the IIT Indore are likely to commence in the second half of October.

"The current corporate scenario is predominantly based on the concept of demand and supply and thus the industries have increasingly become more and more market oriented. Likewise even the process of recruitments is largely governed by the business environment. In the wake of such developments, we have recognised the imminent need to modify the academics adopting a pragmatic approach that facilitates learning patterns that suit the industry demand," the IIT Indore said.

Representatives of many niche industries like Microsoft, IBM, TCS, Xilinx, Eicher, Volvo, National Instruments, Freescale Semiconductors, Siemens, Sasken Communication Technologies, Mahindra, Impetus, Cummins, CSC Technologies, CoreEL Technologies and Scientech Technologies would take part in the conclave which is aimed at exploring avenues of collaborative research with the support of the companies.

Important highlights and takeaways of IAC 2014

Panel discussions will enable interaction between the industry personnel, faculty members and students

Faculties and students would be able to gauge the industry requirement

The industry would benefit from the on-going R&D and could fund specific research projects.

The direct interaction between students and industry personnel.

The exchange of perspectives amongst the industry personnel and the academia would provide an impetus for the various research and development opportunities that would lead to efficient and holistic industrial processes.