

Policy

Shake up for science in the UK

The UK's recently installed Prime Minister Gordon Brown has created a new government department responsible for research, innovation and higher education. The Department for Innovation, Universities and Skills (DIUS) brings together what were previously separate functions in the former Department of Trade and Industry and Department for Education and Skills. The DIUS also includes the office of the government's chief science adviser, Sir David King. It is hoped that the new structure will enhance scientific research and its commercial exploitation.

The restructuring is accompanied by the appointment of a new science minister, Ian Pearson, 46. Previously the minister for climate change and environment in the Department for Environment, Food and Rural Affairs, Pearson replaces Malcolm Wicks, who had himself only been science minister for eight months.



Main man
Ian Pearson is the UK's new science minister.

Peter Cotgreave, director of the Campaign for Science and Engineering in the UK, welcomes the new emphasis on innovation within the DIUS. However, he warns that science will suffer if the department fails to work closely with the other newly created departments for Business, Enterprise and Regulatory Reform, and Children, Schools and Families.

The Institute of Physics, publisher of *Physics World*, also broadly welcomes the government's changes, but is concerned about a proposal to disband the House of Commons Select Committee on Science and Technology in order to match up the structure of the committees with the new government departments. The Institute's chief executive Robert Kirby-Harris believes that the committee's ability to cut across departmental boundaries has allowed it to get to grips with a wide range of scientific issues.

Edwin Cartlidge

Energy

Harsh light shines on free energy

An Irish firm that last year claimed to have built a device that can make energy from nothing has been forced to call off the first public demonstration of its technology. Steorn, which is based in Dublin, had planned to unveil the device at an exhibition in London last month. It blamed the malfunctioning of the device on "excessive heating" from lights in the museum's display area – rather than on a failure of the first law of thermodynamics.

Steorn hit the headlines last year after taking out a full-page advertisement in the *Economist* inviting scientists to review its thermodynamics-flouting machine (*Physics World* October 2006 p5). Three months later, the company selected 22 unidentified scientists to determine if the centuries-old search for free energy was over. With those closed-door evaluations still ongoing, Steorn decided to put its technology on display at the Kinetica Museum in London – the UK's first museum of "kinetic art".

The device consisted of a CD-sized plastic wheel adorned with 16 neodymium magnets that can rotate about two stationary magnets. After being given an initial push, the wheel was supposed to spin freely at about 250 revolutions per



Setback Steorn boss Sean McCarthy with his supposed free-energy machine.

minute – not only overcoming air resistance and mechanical friction, but also lifting a small 10 g mass. The firm deliberately did not include any sensors to measure the speed of the wheel. "If there are any wires sticking out, people get suspicious of some sort of hidden power supply," McCarthy told *Physics World*.

McCarthy admits to feeling sorry for all the would-be debunkers who, judging from posts to Steorn's website, planned to bring infrared sensors, magnetic Gauss meters and high-speed cameras to the demonstration. In preparing for this highly sceptical audience, the company's engineers had isolated their device in a plastic box to prove that a hidden fan was not blowing the wheel round. However, that precaution appears to have doomed the experiment, McCarthy claims, because it set up a "greenhouse" effect in the box that damaged the ball-bearings round the wheel's shaft.

Undaunted, Steorn plans to rebuild and defeat physics another day, although McCarthy does take one consolation from this apparent setback. "If we were in the business of doing tricks," he says, "then the demonstration would have worked."

Michael Schirber

Sidebands

Gamma-ray bursts measure up

A new instrument that can take images of gamma-ray bursts at seven different wavelengths at the same time obtained its "first light" last month. The GROND instrument, which has been installed on the European Southern Observatory's 2.2 m telescope at La Silla in Chile, will allow astronomers to accurately determine the distance to these extremely violent and intense stellar explosions. GROND will measure the "optical afterglow" of gamma-ray bursts – the rapidly fading optical and infrared radiation that is created when the shock wave created by the exploding star collides with interstellar matter. This afterglow fades away within hours and it has been difficult until now to make reliable observations at different wavelengths with a single telescope.

Review journals remain highly cited

Journals that contain review papers continue to remain among the most highly cited publications in physics, according to new data from information-services firm Thomson ISI. The most-cited journal for 2006 was *Reviews of Modern Physics*, which has an "impact factor" of 33.51. This number refers to how many citations were made in 2006 to papers that appeared in the journal in the previous two years divided by the total number of papers in that journal during that time. However, two other review journals – *Physics Reports* and *Reports on Progress in Physics* – have dropped a place to third and fourth after being brushed aside by a new journal *Nature Physics*, which comes second in the charts with an impact factor of 12.04 despite only being launched in October 2005.

Physics World scoops writing prize

An article in *Physics World* has won a prize for "best reporting on a science subject" at the annual awards of the Association of British Science Writers. The article, entitled "The troubled song of the sand dunes", was written by the magazine's features editor Matthew Chalmers (November 2006 pp25–28). It describes how sand dunes in the desert emit eerie, low-frequency noises that have baffled scientists and explorers since the time of Marco Polo. The judges said the article was "fascinating and beautifully written". Meanwhile, Oxford University theoretical physicist Frank Close won the prize for "best science writing in a non-science context" for his obituary in the *Guardian* of neutrino pioneer Raymond Davis. A separate article by Close entitled "Fears over factoids" appears in *Physics World* this month (see pages 16–17).