

### current events

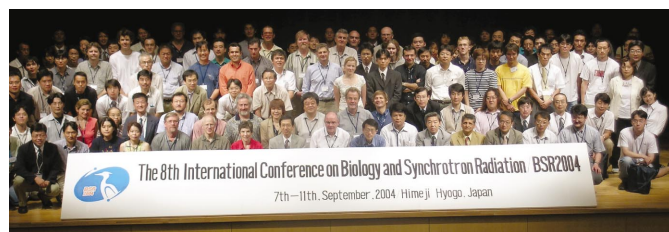
This section carries events of interest to the synchrotron radiation community. Works intended for this section should be sent direct to the Current-Events Editor ([s.hasnain@dl.ac.uk](mailto:s.hasnain@dl.ac.uk)).

#### BSR2004 in Himeji

The 8th International Conference on Biology and Synchrotron Radiation took place in Himeji, Japan, during the week of 7–11 September 2004. The meeting attracted some 300 delegates, with nearly half of them involved in crystallographic studies. All other major techniques including XAFS, SAXS, microscopy and circular dichroism were well represented. The conference was organized into ten mini-symposia with some 50 oral presentations and 160 posters. There were four special lectures, three on crystallographic studies (one each on membrane proteins, time-resolved crystallography and the calcium pump) and one on medical imaging/therapy. Johann Deisenhoffer, who shared the Nobel Prize with Robert Huber and Hartmut Michel in 1988 for the first structure of a membrane protein [*Nature (London)*, (1985), **318**, 618–624], suggested that the rate of progress in the structure determination of membrane proteins is increasing exponentially in a manner similar to that of the soluble protein [see White (2004), *Protein Sci.* **13**, 1948–1949]. By 2025, over 2000 structures of membrane proteins should be determined.



Colleagues from the UK and Japan on the occasion of the announcement that the UK would be hosting the 9th International BSR Conference in 2007.



Participants at BSR2004.

The meeting attracted participants from several countries, including Taiwan, China and Korea where synchrotron radiation activities are expanding rapidly. In addition to an excellent scientific and cultural experience, international delegates were exposed to a memorable experience of a typhoon (number 18) as they arrived in Japan (see below). On 10 September, the organisers arranged a ‘Japanese-style’ barbecue banquet at an exclusive golf club, ‘Tatsuno Classic’. On this occasion, Johann Deisenhoffer (pictured below) thanked the organisers on behalf of the international community for



Johann Deisenhoffer thanking the organisers on behalf of the international community.

putting together an excellent meeting. Samar Hasnain informed the delegates of the unanimous decision to hold the next conference in summer 2007 in the UK, where Louise Johnson, Director of Life Sciences at Diamond, would be the Joint Chair. He invited delegates to send comments about the conference so that their views could be taken up in the early stages of planning of the meeting. The nature of the meeting has changed since the first international conference in Frascati in 1986 in response to the development of the field, and should continue. The UK, like Japan, has already been the host of this conference, hosting the Second International BSR (at that time named Biophysics and Synchrotron Radiation) meeting which was held in Chester (4–8 July 1988), for which the IUCr provided partial sponsorship.

#### Typhoon's impact on SPring-8's roof

The year 2004 has seen many typhoons in Japan. On 7 September, the welcoming reception date for the BSR2004 conference, a severe typhoon, number 18, hit the Kansai area. The Shinkansen network stopped south of Osaka and local trains stopped south of Kobe. This typhoon resulted in significant damage to the roof of SPring-8, which had shown some signs of minor damage from typhoon number 16 only a couple of weeks earlier. The roof repair is expected to take place early in 2005 and the start-up in 2005 is yet to be determined.

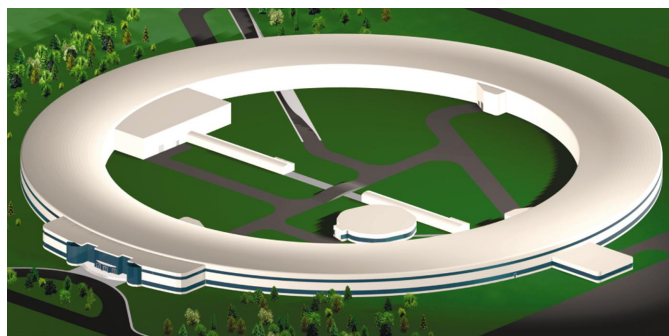


The damaged roof of SPring-8.

### Brookhaven plans NSLS-II

Brookhaven National Laboratory recently organized a workshop for the next light source facility at Brookhaven, NSLS-II. Although the current NSLS has been continually updated since its commissioning in 1982, today the practical limits of machine performance have been reached. In order for the productivity of its user community to continue, and in order to tackle the 'grand challenge' scientific problems of tomorrow, plans to upgrade the NSLS are under way. The centrepiece of the proposed NSLS-II will be a state-of-the-art medium-energy electron storage ring designed to deliver world-leading X-ray brightness and flux, more than 10000 times brighter than the current NSLS. This facility, which will also include full-energy injection for constant intensity as well as a dedicated infrared ring, is expected to have profound impact on a wide range of scientific disciplines and initiatives and lead to many exciting discoveries in the coming decades. Two keynote scientific speakers, the 2003 Nobel Prize in Chemistry recipient, Professor Roderick MacKinnon of Rockefeller University, and Dr Paul Horn, the Vice President for Research and Development at IBM, gave stimulating talks that hinted at the new exciting science NSLS-II will enable. Strong political and administrative support for NSLS-II came from New York Congressman Sherwood Boehlert, Chairman of the House Committee on Science, Patricia Dehmer, Associate Director of the Department of Energy Office of Basic Energy Sciences, and New York Congressman Tim Bishop. Dehmer said, 'NSLS-II is something we need to do.' She added, 'I want you to know that I give you my commitment that NSLS-II will happen. Never doubt my resolve, never doubt your own power, never doubt the power of a great idea.'

In his talk, MacKinnon described his Nobel Prize-winning research involving the structural determination of cell membrane proteins called ion channels, which was performed, in part, at the existing NSLS. In the meantime, however, there are still many other membrane proteins to study, which, according to MacKinnon, make up between 25 and 30% of all proteins. 'We know almost nothing



An artist's impression of NSLS-II.

about this important class of proteins', he said, and emphasized the role that NSLS-II would play in changing that fact, 'There is no other way to study these proteins at the level a synchrotron allows'. MacKinnon also stressed the importance of the facility's location in the northeastern United States. NSLS-II would service the many research institutions in the region, he said, and it is essential for researchers whose work requires frequent visits to have local access to the facility.

### Funding for Phase 2 beamlines of Diamond announced

On 8 October 2004, the UK's Science Minister, Lord Sainsbury, announced an additional funding of £120M (USD \$200M) for the Phase 2 beamlines of Diamond. Announcing on behalf of the Government, five of the Research Councils and the Wellcome Trust, he said that this will enable the development of an additional 14 experimental stations by 2012. He said that this 'Phase 2' funding will significantly extend the scientific capability of Diamond, with applications in medicine, biology, materials science and much more.

### UK's synchrotron radiation users meeting at Diamond

This year's venue for the UK's synchrotron radiation users meeting was Milton House, close to the Diamond site. This was the first synchrotron radiation users meeting in Oxfordshire, the county for the new synchrotron facility being built in the UK. At last year's users meeting it was decided to hold the meeting in alternate years at the two synchrotron sites. Apart from the main scientific event, the highlight of the occasion was a tour of the experimental hall of Diamond.



Some participants of the UK's synchrotron radiation users meeting on the tour of the Diamond experimental hall are photographed with Dame Louise Johnson (front row, second from right), Life Sciences Director at Diamond.