

東大や東北大の高輝度光源計画などに見られるように少し世の中が短波長の方に向かっていきます。これまで UVSOR に深く関係してこられた研究者の中にも研究内容を SPring-8 向きに移しつつある方がおられます。そのような中で、少し波長の長い領域（とは言ってもレーザーでは届かない領域で分子科学研究にも欠かせない領域）の研究が弱体化している感もあり、UVSOR の当面の方向としては軟X線の低いエネルギー領域に重点を置いてアンジュレータビームラインを整備するなどの施策が必要であると痛感しました。平成10年度からの施設予算減の中、UVSOR は苦しい競争を強いられています。現在、内部スタッフの自助努力によって、専用ビームラインや実験環境が着実に整備されている段階にあり、近く新しい成果が出

せるものと思っています。その一方、予算難を少しでも解消できるチャンスを活かして、共同利用ビームラインの再整備も適宜行うつもりです。これについては、内部でもいろいろと検討して行きますが、利用者の方からの積極的な新しい提案をお願いしたいと思います。特に、若手研究者の参加を大いに期待しているところです。

なお、初日の夜に、UVSOR の三階でバンケットが行われ、この日のために用意されたシャンパンとワインを全員で堪能し、夜遅くまで白熱した議論が続いた事を付記して報告を終わりにしたいと思います。最後になりましたが、ワークショップ開催に際し、いろいろとお手伝い頂いた UVSOR 秘書の萩原さんを始めとするスタッフの皆さんに感謝いたします。

＜研究会報告＞

The 4th Hiroshima International Symposium on Synchrotron Radiation

Qiao Shan (Hiroshima Synchrotron Radiation Center)

Supported by The Council of HSRC Research Promotion (広島大学放射光科学研究センター利用促進協議会), The 4th Hiroshima International Symposium on Synchrotron Radiation was held in March 16-17, 2000 by HSRC, Hiroshima Synchrotron Radiation Center of Hiroshima University in the Higashi-Hiroshima campus of Hiroshima University. Beginning from 1997, the symposium is held in March of every year. Near 100 people took part in the 4th symposium. The current status reports of HSRC, NewSUBARU, Pohang light source, Beijing synchrotron radiation facility, National Synchrotron Radiation Laboratory in Hefei, China, BESSY I and BESSY II and the application of synchrotron radiation to different fields were reported in the 2 days symposium.

In the first day's morning, after the opening address by Prof. Taizo Muta, the Vice-President of Hiroshima University and Dr. Hidehiko Tsukamoto, the president of The Council of HSRC Research Promotion, the current status and future perspectives of Hiroshima Synchrotron Radiation Center was reported by Prof. Masaki Taniguchi, the director of HSRC. The HSRC project was approved by Japanese government in 1995. Only after 5 years, 11 beamlines have been constructed and 6 are opened to users. The experiments going on include: XAFS measurements for bulk and surface states; photoemission and inverse photoemission spectroscopies of solids; the lattice distortion accompanied with phase transition of solid; surface modification by the irradiating of

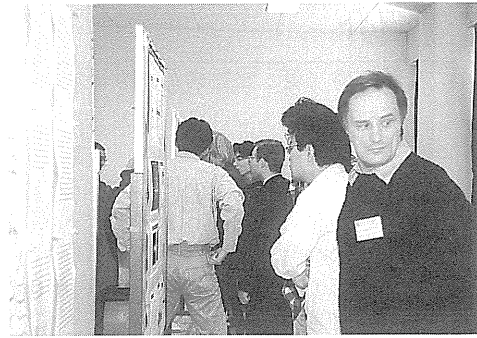
synchrotron radiation; photochemical surface reactions induced by core electron excitation; circular dichroism of biopolymers. For the other five beamlines which are still under fine adjustments, following researches are scheduled: high-resolution and low-temperature photoemission spectroscopy of d and f electron systems; photoemission spectroscopy of metal-semiconductor interfaces; photoionization and ionic photofragmentation of molecules; ultraviolet and soft x-ray emission spectroscopy of solids; magnetic circular dichroism of solids. In its future plan, HSRC is expected to cover the fields of material science, life science, characterization technology and particle beam technology researches. Then Prof. Ainosuke Ando from SPring-8 reported the present status of NewSUBARU. The main aims of this facility are to develop the R & D towards new light sources for short or coherent radiation and to promote fundamental studies for the industrial applications. The operation test of the longest undulator in the world that is 10.8 meters long and the result of lithography experiments were reported. In the final, Prof. Mihiro Yanagihara from Tohoku University reported the polarimetric characterization for synchrotron radiation soft x-rays using multilayer elements.

After lunch, more than 20 posters are shown in the poster session focussing on the activities of HSRC.

After the poster session, Prof. Se-Jung Oh from Seoul National University reported the current status and scientific activities of Pohang light source. It now has 18 beamlines



The opening address by Prof. Taizo Muta, the Vice-President of Hiroshima University.



Poster session.



Prof. Se-Jung Oh from Seoul National University was talking about the current status and scientific activities of Pohang light source.

either in operation or under construction. The research fields include photoemission spectroscopy, x-ray scattering, X-ray diffraction, small angle X-ray scattering, magnetic spectroscopy, microprobe X-ray fluorescence, lithography, LIGA, XAFS, micro-spot PES/XAS. Then Prof. W. F. Pong from Tamkang University, Taiwan reported the research on magnetic orientation and electronic structure of Zn-Ni ferrites by magnetic circular dichroism measurements. After a short coffee break, the status and research activities of Beijing synchrotron radiation facility were reported. In Beijing, currently 9 beamlines and 11 experimental stations are opened to users dedicated to lithography, LIGA, microprobe fluorescence analysis, topography, high pressure diffraction, XAFS, diffuse scattering, soft x-ray optics, X-ray diffraction, small angle X-ray scattering, photoemission spectroscopy, and VUV spectroscopy researches. The construction of 2 new multipole wigglers and 3 new beamlines will be finished by 2002. In the final, Prof. Xinyi Zhang from University of Science and Technology of China reported some recent progresses at National Synchrotron Radiation Laboratory at Hefei, China. There are 6 beamlines and corresponding experimental stations opened to users for x-ray lithography, XAFS, photochemistry, time-resolved spectroscopy, soft x-ray microscopy and photoelectron spec-

troscopy researches. A 6 Tesla superconducting wiggler has been setup in recently, so that the radiation of shorter wavelength near 1 \AA is already available for users. Construction of 8 new beamlines and experimental stations, which are dedicated to surface physics, x-ray diffraction and scattering, LIGA, atomic and molecular physics, photoacoustic and photothermal spectroscopy, infrared and far-infrared spectroscopy, soft X-ray magnetic dichroism, metrology and spectral radiation standard researches, will be completed in the fall of 2001.

After the reports, participators of the symposium visited HSRC and in the evening a warmly party with light meal and drink was hold.

In the second day, at first the talks were focused on the quantum wire systems. Dr. Oliver Rader from BESSY reported the current status of BESSY I and BESSY II firstly and then talked about the studies about Cu, Co wires on stepped Pt surface, Gd/W(110) system, Au wires on Ni(110) and thick Mn film on W(110). Then Prof. Han Woong Yeom from Yonsei University, Korea reported the studies about one-dimensional quantum wires of In, Al, Pb, Ag, Ca on Si(001) and Si(111) surfaces, the epitaxial ultrathin films of Ag on Si(001), the various surface phases of SiC(001). These studies lead to fascinating findings of 1D charge density wave, quantum well states, Peierls transition, commensurate-incommensurate transition, 0D and 1D fluctuations. Then Prof. Yohji Shindo from Fukui University reported the use of Mueller matrix method in the instrumental design and data analysis of VCD spectrometer. In the final, Prof. Toshio Ibuki of Kyoto University of Education reported the staus of BL27SU beamline of SPring-8 and the current studies of core-excited molecules. He reported the deformation of CO_2 molecular after the O 1s core-exciting, and the decay channel to form H_2^+ ion from the O K-shell excited H_2O molecules.

From this symposium, the cooperation relations between HSRC and other synchrotron radiation facilities are extended and its influence is sure can be seen in the future synchrotron radiation research activities.