AONSA

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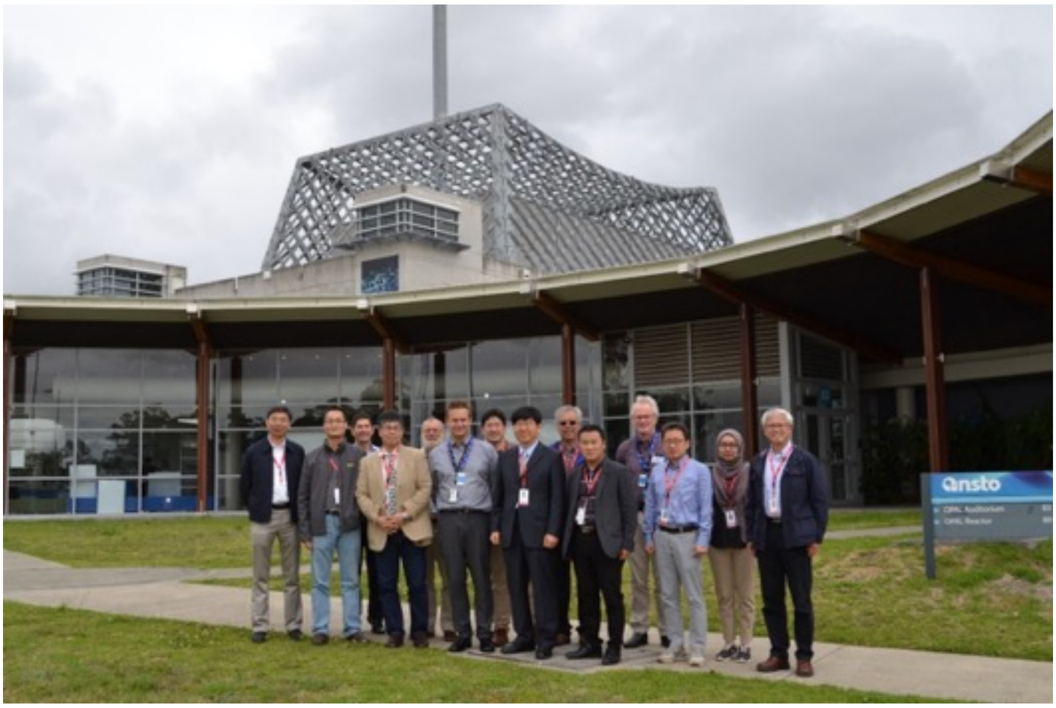

The 16th Asia-Oceania Neutron Facility Directors Meeting in Australia

Contents

President's message

By Brendan Kennedy

I think that is light at the end of the tunnel. Having just attended the AONSA Facilities Directors Meeting in Sydney I was very excited to hear about the progress at the China Spallation Neutron Source and China Advanced Research Reactor. The former is now offering user support on the day one instruments, and the first results have been published. Other exciting news came from Japan where a timetable to restart JRR3- has been agreed upon. This good news was tempered by regulatory and funding issues at HANARO, that serves as a reminder of the importance in continuously communicating to our non-neutron using colleagues the importance of these facilities. Since it is not inconceivable that all four facilities will be open for business in 2021, coupled with the reliable operation at the other centres in Australia (OPAL), China (CMRR), India (BARC) and Japan (J-PARC), I am willing to claim that it is a light!

I recently had the chance to attend the 10th AONSA neutron school hosted by ANSTO. It is pleasing to see all member societies represented at this school and the obvious enthusiasm from the students suggests demand for neutrons in our region will continue to grow. Like AOCNS these Schools are a key activity of AONSA and serves as a valuable way to encourage interactions across the region. The Indonesian Neutron Scattering Society co-hosted the very successful ICA-IUMRS 2018 meeting in Bali and I was grateful for the opportunity to talk about AONSA activities at this meeting.

Finally as 2018 draws to a close we will be starting a new diary. The first commitment you should add to yours is the 3rd AOCNS which will be held in Kenting, Taiwan November 17-21 2019.

Report on the 21st AONSA Executive Committee Meeting

The 21st AONSA Executive Committee Meeting was held on Saturday November 17th, 2018, in Australia. The venue was the 4th floor conference room of Tradies Caringbah near ANSTO, from which the Sydney harbor was barely visible. Sixteen participants joined the meeting, consisting of six Executive Committee (EC) members, seven observers representing neutron facilities in the Asia-Oceania region, and three special observers. Tracy Rushmer (Macquarie U.) and Shih-Chun Chung (NSRRC) newly joined the meeting as EC members representing ANBUG and TWNSS, respectively. Thitirat Rattanawongwiboon (TINT) and Julie Andrianny Murshidi (Nuclear Malaysia) were also new observers representing Thai and Malaysian communities. Garry McIntyre, the Research Leader of Australian Center for Neutron Scattering, also attended as the special observer.

The most intensively discussed item of the 21st EC meeting was the selection of 2019 AONSA Young Research Fellows. The selection committee, lead by Dongfeng Chen, had not arrived at the conclusion due to the discrepancy between the better rated candidates and the availability of hosting facilities. After all, three fellows were selected, one for J-PARC and two for ANSTO. Dongfeng Chen also made a report on the 5th AONSA Prize, where Mahn Won Kim, the 1st President of AONSA, was determined to be the winner among three candidates.

The summary report of the 10th AONSA Neutron School, which was just completed at ANSTO, was given by Tracy Rushmer of ANBUG. The AONSA has provided the financial support of US$3,000 to the school following new guidelines, which was approved by the EC members *ex post facto* at the 21st EC. Sungil Park of KAERI reaffirmed that the 11th AONSA Neutron School will be held in Daejeon, Korea. The date will be late August when the HANARO reactor is likely to be in operation. Hsiung Chou reported that TWNSS is busy organizing the 3rd AOCNS in Kenting, Taiwan. They had difficulty reserving the venue due to the conflict, which forced the conference schedule to begin on November 17th, Sunday, and end on 21st, Thursday.

In the afternoon, the member societies and observer communities reported on their recent activities. Since the date of the 11th AONSA Neutron School at HANARO is too late for the next EC meeting, Guangai Sun of CMRR accepted the proposal to host the 22nd EC meeting in Mianyang in late May of next year. The 23rd EC will be held in Taiwan during the 3rd AOCNS. After the meeting closed, the participants climbed down the two floors for dinner.

Jae-Ho Chung
(Secretary of AONSA)

Photos of the 21st AONSA EC and FD Meeting in Australia

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Report on the 16th Asia-Oceania Neutron Facility Directors Meeting

The 16th Asia-Oceania Neutron Facility Directors Meeting was held on 16 November 2018 at ANSTO. The participants were Fangwei Wang (CSNS), Sungil Park (HANARO), Kenji Nakajima (J-PARC, in place of Toshiji Kanaya), Jamie Schulz (OPAL), Kai Sun (CARR) and Guang-ai Sun (CMRR, in place of Gong Jian). In addition, Brendan Kennedy (U Sydney), Dongfeng Chen (Chin Inst of Atomic Energy), Jae-Ho Chung (KNBUA/Korea U), Hsiung Chou (TWNSS/ National Sun Yat-Sen Univ.), Shih-Chun Chung (TWNSS/NSRRC), Julie Andrianny Murshidi (Malaysian Community/Nuclear Malaysia), Garry McIntyre (ANSTO) and David Vittorio (ANSTO) participated as observers. Masayasu Takeda (JRR-3), S. M. Yusuf (BARC), and Iwan Sumirat (BATAN) apologized for not coming to the meeting. Heidi Welton (ANSTO) provided logistics to the meeting. Sungil Park chaired the meeting.

As usual, the attendees introduced themselves, confirmed the purpose and role of the FDM, approved the agenda, and reviewed the last meeting notes. Next, facility representatives gave reports about their facilities according to the previously agreed standard format.

The first speaker was Fangwei Wang, who reported on the progress made at CSNS. The Chinese Spallation Neutron Source received the operating license and is churning out data from three day-one instruments. He mentioned that three new instruments received funding and that construction would start in 2019.

HANARO received permission to restart from Korea's nuclear regulator. For the past few months, more instruments became online, and a total of nine instruments are ready for operation. The primary concern for the reactor is the strengthening regulation that hinders continued operation.

Kenji Nakajima, on behalf of Toshiji Kanaya, reported more stable operation of J-PARC MLF with the new targets. Target #8 achieved a stable 1 MW operation. Now Target #9 is tested at lower power.

OPAL reactor and Australian Centre for Neutron Scattering achieved impressive milestones such as 10-year 100-cycle operation and 1,000 publications, Jamie Schulz reported. The new reflectometer, Spatz, transferred from Germany saw first neutrons, and Quokka received a new detector. AONSA Neutron School was underway at ACNS at the time of the meeting.

Kai Sun reported much progress made at CARR, the China Advanced Research Reactor. While the reactor awaits the operation license, it now operates over 50 days a year. Two new instruments are open to users, increasing the total of working instruments to eleven.

The 20 MW research reactor in Mianyang, CMRR, is operating superbly for more than 150 days a year. Guang-ai Sun reported that six more instruments are going to be built, adding to already existing eight instruments.

Because some of the directors could not make it to the meeting, the chair read reports from BARC, BATAN, and JAEA. BARC commissioned a new neutron powder diffractometer designed for studying magnetic materials in Dhruva reactor and held the XVIII School on Neutrons as Probes of Condensed Matter from 28 Oct to 1 Nov in Mumbai. BATAN operates the 30 MW RSG-GAS at 15 MW. The Indonesian reactor houses eight instruments. JAEA is hopeful that JRR-3 would resume operation in 2020. Proposals for the Japanese reactor are diverted to overseas facilities through the transferring program and travel support by the Institute for Solid State Physics, Tokyo University.

There was a lively discussion on the challenges, opportunities, and cooperation of neutron facilities afterward, especially on the new regulation that limits neutron source operation in Korea. Before the meeting, Toshiji Kanaya proposed regional coordination to forward users to other facilities to mitigate the loss. The directors did a quick survey on the spot and found that all reactors in the region usually recover from trips in a few days unless the problem is considered severe by the house engineers.

Regarding the facility report standardization, directors discussed the practice of selecting high impact publications. J-PARC uses the category normalized citation impact (NCI) and selects top 10%. ANSTO uses the journal impact factors (JIF). Brendan Kennedy pointed out that the impact factors are uneven among disciplines.

Before the meeting, Masayasu Takeda proposed a discussion on the future of neutron scattering at a time when Synchrotron radiation and other microscopic tools are advancing rapidly. The participants were hopeful that, at least in the region, neutron scattering was gaining momentum and soon rival other regions regarding the facilities and throughput.

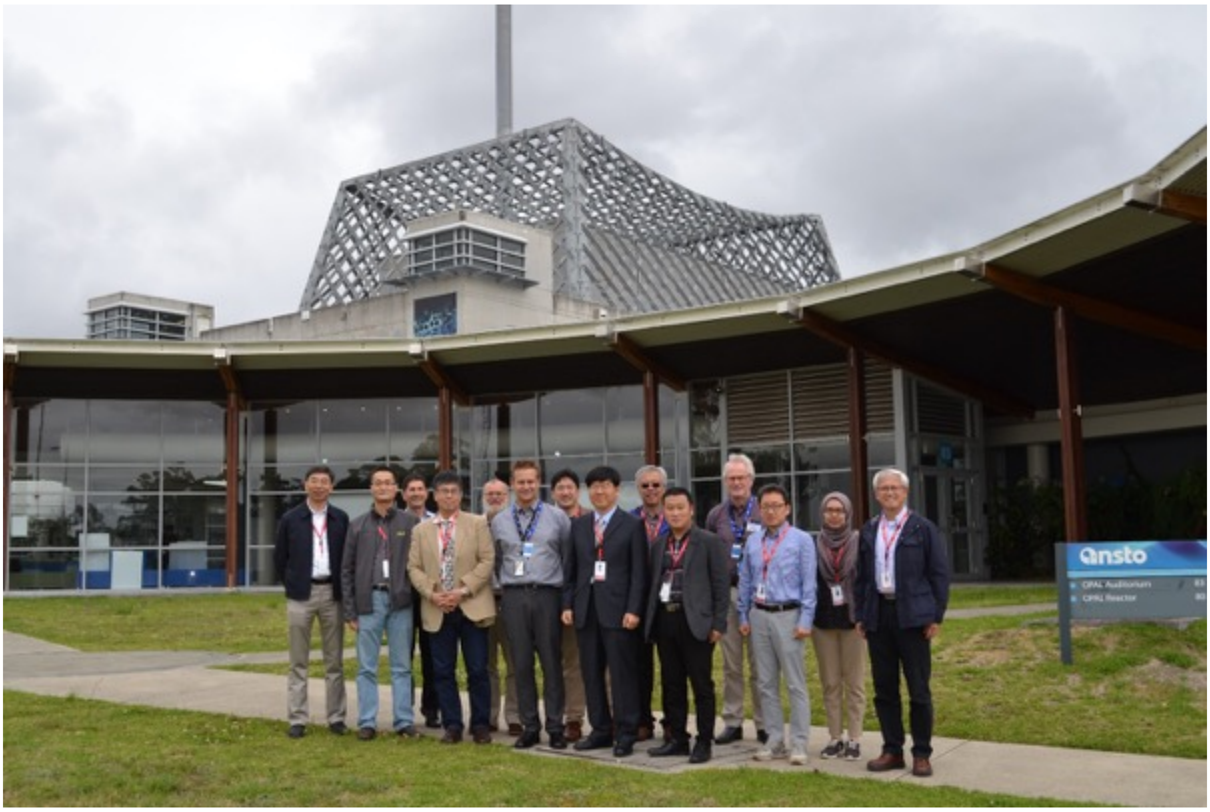
Regarding the AONSA Young Research Fellow program, participants discussed how many fellows facilities could host in 2020. The directors shall come back with solid numbers at the next meeting.

Facility homepage generously set up by Taku Sato, was introduced by the chair. Located within the AONSA website, it features Purpose and Role of FDM with a possibility of future expansion.

After lunch, the participants had a chance to join the group of international students of the AONSA Neutron School in their presentation session. After the meeting had a successful closure, the participants had a chance to tour the reactor and the neutron scattering facility. Later, the local hosts gave rides to the participants to the Bridge Restaurant, where all enjoyed a delightful dinner.

Mianyang hosts the next FDM in the first half of 2019.

Sungil Park
(KAERI)



Participants of the FDM pose for a group photo: Fangwei Wang, Kai Sun, David Vittorio, Kenji Nakajima, Brendan Kennedy, Jamie Schulz, Dongfeng Chen, Sungil Park, Shih-Chun Chung, Guang-ai Sun, Garry McIntyre, Jae-Ho Chung, Julie Andrianny Murshidi, and Hsiung Chou (from left to right)

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Reports from neutron associations

Report from the Australian Neutron Beam User Group (ANBUG)

ANBUG
AUSTRALIAN NEUTRON BEAM USERS GROUP

ANBUG is run for the benefit of members and all profits from our User conferences are used to offer student prizes and travel bursaries. We promote neutron scattering to the community, especially to students and early career researchers.

Activities in 2018 included the AONSA neutron scattering school held in Lucas Heights on Nov. 12-16th. We had 34 participants from 9 different countries (1 China, 4 India, 1 Indonesia, 1 Malaysia, 1 Japan, 6 New Zealand, 7 South Korea, 1 Taiwan, 1 Thailand, 1 Hong Kong and 10 Australians). Five out of 13 lectures were female and 3 out of 10 tutors were female.
99 abstracts were submitted and around 100 participants. Table 1 shows the gender distribution in abstract submissions.

Gender	%, in initial 55 abstracts	%, in selected 35 abstracts	% selected
Female	20	15	75.0
Male	31	20	64.5
Unknown	2		

Table 1: AONSA 2019 School statistics

The AINSE/ANBUG Neutron Scattering Symposium (AANSS 2018) was held the following week, from Nov. 19th to 21st. We congratulate the organizing committee, Chaired by Gail Iles, Katy Wood, Richard Mole, Kelly Cubin, Tilo Soehnel, Gary Byrant and Michelle Durant, for a very successful meeting.

The scientific programme was of excellent quality and we were delighted to welcome several speakers from other AONSA countries. The meeting opened with a traditional 'Welcome to Country' by a local aboriginal elder. Kicking off the scientific programme was a plenary by Professor Yun Liu from the Australian National University, who is the ANBUG incoming vice-president.
Overall, 50% invited talks were female, 42% female chairs and 50% female student prize winners. Table 2 shows the overall statistics of the meeting.

Delegate type	Female	Male	Grand Total
Career	13	41	54
ECR	3	7	10
Retiree		1	1
Student	7	23	30
Sponsor	1	3	4
Grand Total	*24*	*73*	*99*

Table 2: Statistics for the AANSS 2019 meeting

A big congratulations to Grace Causer, who won the inaugural ANBUG PhD thesis award! Her research focused on magnetic material using the Platypus and Taipan instruments at ANSTO.
ANBUG thanks Ian Gentle for his leadership in 2018 as ANBUG President. Tracy Rushmer is the incoming president and we welcome Yun Liu of ANU as incoming vice-president.
ANBUG currently has 390 members.

Tracy Rushmer
(Macquarie University)

Participants of the AONSA 2018 School held at Lucas Heights, November 12th-16th, 2018

Student prize winners with President ANBUG (Ian Gentle) and Chair (Gail Iles) AANSS meeting Nov. 19th-21st, 2018 at Lucas Heights.

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Report from Chinese Neutron Scattering Society (CNSS)

Status of neutron sources in China: the China Spallation Neutron Source (CSNS) passed national acceptance on Aug.23, 2018. The review committee agreed that the performance of the CSNS has reached or is even better than the planned acceptance goal. The highest neutron efficiency of the target station and the three initial instruments reached the international level. The review committee concluded that some significant innovative technologies in accelerators, target station and instruments were achieved at CSNS. So far, 25 user sample experiments from 20 research groups have been conducted with the three instruments. During the first circle of CSNS, 62 proposals were submitted through the "CSNS User Service System", of which 32 user proposals were accepted, and 5 of them were from foreign neutron users. The China Advanced Research Reactor (CARR)：in the second half of 2018, two new facilities of Cold Triple Axis Spectrometer (CTAS) and Neutron depth profiling (NDP) have finished their commissions. Up to now, there are 11 neutron facilities is ready for opening to users and have been used to study new energy materials, thermoelectric materials, superconducting materials, magnesium alloys, high-temperature alloy, aerospace components and so on. Moreover, some research results were published in international journals such as Electrochimica Acta (EA). The China Mianyang Research Reactor (CMRR) has run 180 days in 2018. The number of users has reached to more than 80 and the results have been published about 40 papers in JACS, Nano energy and et al. The second phase has been started, including six different type neutron scattering instruments.

During Oct.14-17,2018, the 6th National Conference on Neutron Scattering and workshop on Application of National Neutron Facilities — 2018 organized by the Chinese Neutron Scattering Society (CNSS) was held in ShangHai,. The conference was sponsored by the Chinese Neutron Scattering Society (CNSS)and Fudan University,and was jointly organized by China Spallation Neutron Source (CSNS), China Institute of Atomic Energy (CIAE) and the China Mianyang Research Reactor(CMRR).There were more than 170 attendees from 60 universities, research institutes and companies. The recent progress of CSNS, CMRR and CARR was informed at the conference. 70 speakers shared their latest research achievements in 4 themes: the progress of neutron instruments, large-scale neutron scattering, neutron diffraction and structure, neutron inelastic scattering. 2 winners（Dr.Yinguo Xiao and Dr.. Xingye Lu） of Young Outstanding Paper Awards, presented by Academician Hesheng Chen.

Five users, from Nanjing Agricultural University, City University of Hong Kong, Shanghai Institute of Advanced Studies, Institute of Physics, CAS, and Sun Yat-sen University have been sent both in China and abroad to carry out neutron experiments with partial financial support provided by CSNS.

During the 6th National Conference on Neutron Scattering, the 7th Plenary Meeting of CNSS was held in Shanghai on Oct. 15, 2018. Several teams of neutron scattering applications in various fields were established and the team leaders were elected.

Hesheng Chen
(CNSS)

News from Indonesian Neutron Scattering Society (INSS)

Conferences

In the second half of this year, INSS has become the co-sponsor of two conferences. The first one was *International Union of Materials Research Society – International Conference in Asia* (IUMRS – ICA), organized in Bali, 31 October – 2 November 2018. The conference has been attended by around 300 participants from 20 countries. Quite a lot of neutron scientists have taken part in as keynote and invited speakers, including the president of AONSA, Prof. Brandon Kennedy. The event authorized by IUMRS was jointly organized by materials societies of several countries and officially opened by Prof. Evvy Kartini, as the president of Materials Research Society – Indonesia (MRS-Ina), and also the president of INSS.

Fig. 1 Photo session of IUMRS – ICA 2018.

The second conference co-organized by INSS was *The 4th International Conference on Functional Materials Science* (ICFMS) 2018, in Bali, 13 – 15 November 2018, attended by around 150 participants from seven countries, presenting research results on muon, neutron and synchrotron sciences, besides the functional materials as the main topics. This event is biannual activity authorized by *Functional Materials Science Network*, a research and academic collaboration between RIKEN Nishina Center with some Japanese universities and five Indonesian universities (ITB, UNPAD, ITS, UGM and UI).

Fig. 2 Group photo of ICFMS 2018.

Neutron School and Workshop

An Indonesian student, Putu Eka Dharma Putra, from Institut Teknologi Sepuluh Nopember (ITS), has participated in *2018 AONSA Neutron School* at Australia Center for Neutron Scattering (ACNS), Sydney, 11 – 16 November 2018. Meanwhile, the workshop on *Neutron and Synchrotron Applications for Materials Research and Industry* has also been conducted at Physics Study Program, Lambung Mangkurat University (ULM), Banjarbaru, South Kalimantan, on 28 November 2018. This one-day workshop with more than 60 local participants has introduced theoretical backgrounds, facilities and applications of neutron and synchrotron X-ray scattering for materials research and analyses of industrial activities. The workshop was jointly organized by INSS and ULM, involving Dr. Iwan Sumirat (BATAN) and Prof. Darminto (ITS) as lecturers.

Fig. 3 Asian participants of 2018 AONSA Neutron School, Sydney. One of them was Indonesian student, Putu Eka Dharma Putra (right).

Fig. 4 Lecture given by Dr. Iwan Sumirat (right) in workshop of ULM, Banjarbaru.

Evvy Kartini & Darminto
Indonesian Neutron Scattering Society (INSS)

JSNS

Report from JSNS

Activity of JSNS

The member number of the JSNS is almost unchanged around 620. Now, the number of the member is 619 including 54 students and 25 seniors.

The JSNS prizes were decided to be presented to following persons.

[Achievement Award]

Dr. Koji Niita
(Research organization for Information Science and Technology (RIST)).
The title is
"Development of the PHITS code and its application to the optimum shielding design for neutron scattering instruments".

[Incentive Award]

1. Dr. Yusuke Onuki
(Frontier Research Center for Applied Atomic Sciences, Ibaraki University).
The title is
"Development of neutron diffraction techniques for microstructure control".

2. Dr. Takuro Kawasaki
(J-PARC Center, Japan Atomic Energy Agency)
The title is
"Research and development related to pulsed neutron diffractometer at J-PARC".

Furthermore, an award of the president choice was chosen in this year. This prize is awarded every two years. The president selected 5 manuscripts that he thought excellent among the documents published in the JSNS journal 'Hamon' from Nov 2016 to Aug 2018. Following 5 articles were selected. Here, introduced are the titles and the authors.

1. "Sterile Neutrino Search at J-PARC MLF"
S. Hasegawa and T. Maruyama
2. "Novel Neutron Scattering Techniques using Neutron Transmission Spectra"
Y. Oba, S. Morooka, H. Sato, N. Sato, R. Inoue and M. Sugiyama
3. "Hidden Order and Quantum Spin Liquid States in the Pyrochlore Magnet $Tb_2Ti_2O_7$"
H. Takatsu
4. "Tensile Strength Tests on Thin-walled Aluminum Cylinders for Designing a Sample Cell using Neutron Experimental Study"
K. Kiriyama and T. Ito
5. "Clarification of Refrigerant Boiling Behavior in an Evaporator Utilizing Neutron Imaging"
T. Fuse, T. Okamura, S. Inoue, T. Matsuno, R. Iwata, T. Yamauchi, T. Shimazu, Y. Matsumoto, T. Shinohara, T. Kai, T. Ueda and K. Murao

"The 18th Annual Meeting of the Japanese Society for Neutron Science" is held on December 4th (Tue) and 5th (Wed), 2018 at Ibaraki Pref. Culture Center, Mito. The Chairman is Prof. Toru Ishigaki (Ibaraki Univ.). A special Lecture is presented by Prof. Nobuhiro Kosugi (IMSS, KEK). The lecture title is "Prospect of neutron science viewed from synchrotron radiation science". More than 200 members are expected to attend. A public lecture is arranged on December 8 (Sat) as usual.

About the next annual meeting, the JSNS general assembly and some award lectures will be performed during the next AOCNS in November 2019 in Taiwan.

The 3rd Neutron and Muon school

The school was held at J-PARC in Nov. 20-24, 2018. JSNS is one of support organizations of this school. This School aims at widening the neutron and muon user societies and provides lectures of both neutron and muon science, and opportunities of the hands-on experiments at MLF of J-PARC. Totally, 35 postgraduate students and early-career researchers came from China (8), India (5), Korea (1), Thailand (1), UK (1), Russia (1), and Japan (17) attended this school. Lectures were provided by 9 neutron and 4 muon related science. Students were divided into ten groups and a variety of hands-on experiments were carried out at each group.

Group phot of the school attendees

Photo during a hands-on experiment

<u>Present status of neutron sources in Japan</u>

Hokkaido University neutron source, HUNS, has been upgraded and passed the inspection by the regulatory authority on 15 Oct. They have started neutron experiments.

In RIKEN neutron source, RANS, for easy-to-use cold neutron source, a methyl-benzene based cold moderator is developed. A cold neutron spectrum was obtained, and Bragg edge transmission experiment was performed.

Nagoya University Accelerator driven Neutron Source (NUANS) has started the neutron experiments and neutron transmission images were already obtained.

Neutron sources other than JRR-3 are running now.

Yoshiaki Kiyanagi
(Nagoya University)

Recent activities from KNBUA

The SXNS-15 (Surface X-ray and Neutron Scattering - 15) Conference, sponsored by KNBUA was held on July 15-19, 2018 at the Science Hall of the Pohang Accelerator Laboratory in Pohang, Korea. The conference is emphasized in the novel techniques for surface x-ray and neutron scattering including instrumentation and source development. The covered topics of the conference were *in-situ* and *in-operando* surface studies, nanostructured surfaces and interfaces, surface and interfaces in soft matter, biological interfaces, emergent interfacial materials, and dynamics of surfaces, interfaces and nanostructures. Total 141 people registered and 112 talks including both orals and posters were presented during the 5-days conference. During the conference, 4th-generation synchrotron facility (X-ray free electron laser) and Gyeongju, one of the historic cities in Korea, city tours were chosen as excursion venue of the conference [http://www.sxns15.org/].

During the Sept. 4th ~ 7th, the 4th international grazing incidence small angle scattering conference (GISAS 2018) was also held in Gyeongju HICO, Korea. This small working group conference was started in 2009 at DESY, Hamburg. Since the conference has become a world's leading international event in the field of grazing incidence small and wide angle scatterings with synchrotron X-ray and neutron sources in a broad range of advanced sciences and technologies.
KNBUA also sponsored this conference. Furthermore, this specialized conference is held in conjunction with synchrotron radiation in the polymer science conference (SRPS). For GISAS, there were 80 participants and 120 participants were for SRPS. In total, there were 130 oral presentations in this 3-day conference [http://www.2018srps-gisas.org/gisas2018/index.jsp].

Sungkyun Park
(Pusan National University)

Report from Neutron Scattering Society of India (NSSI)

Currently NSSI has 230 members.

The main activities of NSSI is to promote neutron scattering science among young researchers (Ph.D. students, postdocs and young faculty members). Recently, NSSI organised XVIII School on "Neutrons as Probes of Condensed Matter" (NPCM) along with Bhabha Atomic Research Centre (BARC) and UGC-DAE-Consortium for Scientific Research (UGC-DAE CSR), Mumbai Centre during October 28 to November 1, 2018. Nearly 90 participants, mostly students and few faculty members from various Indian universities and institutes attended the school. Lectures on basic principles and applications of neutron scattering techniques, hands on experiments using the neutron scattering facilities at BARC, Mumbai and tutorials on data analysis were conducted by instrument scientists, mostly from Solid State Physics Division, BARC. Topics include neutron powder diffraction, single crystal diffraction, inelastic scattering, quasi-elastic scattering, small angle scattering and reflectivity as well as a few complimentary techniques like Raman and x-ray scattering. Overall, the participants were delighted to learn the wide applications of neutron scattering techniques in condensed matter physics research.

Participants of the NPCM 2018 School

S. M. Yusuf
(BARC)

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News from Taiwan Neutron Science Society (TWNSS)

TWNSS Annual Meeting (October 19-21, 2018)

Prof. Ya-Sen Sun, President of TWNSS, opened the meeting in Jiaoban Mountain. There were about a hundred participants, including international scholars, attending in October 19th ~21st. There were invited talks as well as poster competitions. During the meeting, the preparations for the 3rd Asia-Oceania Conference on Neutron Scattering (AOCNS) were discussed!

Fig. 1. Prof. Keiji Tanaka of Kyushu University.

Fig. 2. Dr. Andrew Nelson of ANSTO.

Fig. 3. Group Picture .

New Committee Members

The new members of TWNSS Board of Supervisors and Directors (2-year term starting Feb. 2019) were elected during the TWNSS Annual Meeting (Oct. 19-21, 2018).

The new TWNSS Board of Directors:

President: Prof. Ko-Wei Lin, National Chung Hsing University (MSE Dept. Chair).

Vice President: Associate Prof. Chun-Chuen Yang, Chung Yuan Christian University.

Prof. Ya-Sen Sun, National Central University.

Mr. Shih-Chun Chung, National Synchrotron Radiation Research Center (Neutron group leader).

Dr. Chun-Ming Wu, National Synchrotron Radiation Research Center/ASNTO.

Prof. Chao-Hung Du, Tamkung University (Past Physics Dept. Chair).

Prof. Hsin-Lung Chen, National Tsing Hua University (Associate Dean, COE).

Dr. Siao-Hui Chen, Institute of Nuclear Energy Research of Atomic Energy Council.

Prof. Chia-Chin Chang, National Tainan University (Dean, Environment Sciences and Ecology).

Prof. Jyh-Shen Tsay, National Taiwan Normal University (Physics Dept. Chair).

Dr. Wei-Tin Chen, National Taiwan University

Assistant Prof. Yi-Fan Chen, National Central University.

Prof. Kuen-Song Lin, Yuan Ze University (Dean, R&D).

Associate Prof. Hsiao-Ching Yang, Fu Jen Catholic University.

Associate Prof. E-Wen Huang, National Chiao Tung University

The new team will prepare the 3rd AOCNS together with AONSA members.

The new TWNSS Board of Supervisors:

Prof. Hsiung Chou, National Sun Yat-sen University.

Dr. Jin-Ming Chen, National Synchrotron Radiation Research Center.
Prof. An-Chung Su, National Tsing Hua University.

Ya-Sen Sun (TWNSS)

Report from Thailand community

Thailand Institute of Nuclear Technology (TINT) has just successfully completed the removal of the old neutron diffraction collimator from inside the TRR-1/M1 reactor wall. This work cleared the way for future upgrades of the neutron diffraction facility.

The neutron imaging facility is currently undergoing software tests in order to provide 3D tomography capability for researchers in Thailand and ASEAN region in the future.

TINT is also planning to conduct research using SANS and SAXS techniques at ISIS (UK) under STFC-TINT collaboration as a kick-start project for neutron scattering beam development in Thailand. Dr. Thitirat Rattanawongwiboon, who is the lead researcher, has recently attended the 10th AONSA Neutron School at ANSTO and is highly appreciative of the opportunity to be part of AONSA community.

In 4-6 Feb 2019, TINT will organize the International Nuclear Science and Technology Conference (INST2019) in Bangkok. One special session will be on neutron techniques and applications.

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Reports from neutron facilities

Report from J-PARC

J-PARC MLF succeeded in 1MW test operation on July 3rd just before the summer shut down for the facility maintenance, 2018 (Figure 1). In each beam line, test experiments were performed to confirm the 1MW power. For example, in the reflectometer on BL16 they succeeded in second-order time resolved measurements on structure evolution of a polymer thin film (Figure 2). During the 2018 maintenance summer shutdown, the target (#8) which was stably running at 500 kW by the end of June was replaced to a new one (#9). About neutron instruments, maintenance and upgrade works were carried out during the shutdown. After the summer shutdown the target operation started at 300 kW on October 24th for the user's program, and increased the power to 500 kW on November 6th.

Call for general proposals and new user promotion proposals for the 2019A period was closed on June 7th and we received 319 proposals, including 54 muon proposals, and 44% of them is from university, 9 % from companies, and 27 % from foreign countries. The proposals were sent to the Neutron Science Proposal Review Committee for reviewing process. Final results will be sent to users in February, 2019.

Annual meeting of industrial application at J-PARC MLF was held on July 23 and 24 at Akihabara Convention Hall (Figure 3). Total number of attendances was more than 300. The 10th anniversary celebration after the foundation of Industrial Users Society for Neutron Application and Report Session of Ibaraki prefecture beamlines were held on the first day. On the second day, according to the theme -Collaborative Creation of Innovation-, several examples of collaborative research between industry and the instrument group were reported as well as poster session and consultation of neutron beam usage for industrial purpose. User's meetings of inelastic scattering machines at MLF, DIRECTION 2018, was held on October 11th, high pressure machine at MLF （BL11 PLANET） on Oct. 11, and backscattering machine at MLF (BL02 DNA） on Oct. 12th to promote the scientific activities on each instrument.

Figure 1. J-PARC staff, celebrating the 1MW test operation on July 3rd, 2018.

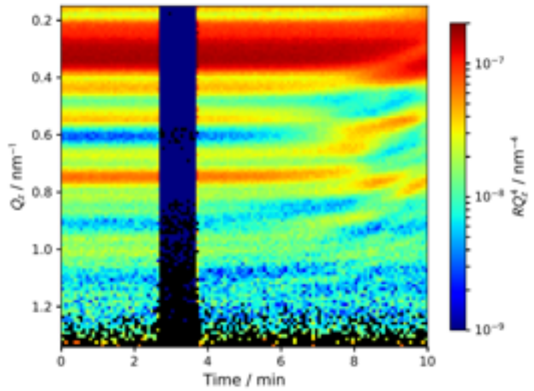

Figure 2. Second-order time resolved measurement on structure evolution of a polymer thin film measured on BL16 at 1MW.

Figure 3. Annual meeting of industrial application at J-PARC MLF on July 23 and 24 at Akihabara Convention Hall.

Toshiji Kanaya
(J-PARC)

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Report from JRR-3

JAEA (Department of Research Reactor and Tandem Accelerator): JRR-3 operation has been substantially suspended for more than eight years by the reviewing process for checking conformity to new regulatory requirement established for research reactors after the accident of Fukushima Dai-ichi Nuclear Power Station. Finally, the reviewing process was completed and the operational license of JRR-3 was granted on 7th November 2018. We sincerely appreciate the understanding and continuous encouragement of users during the review.
However, it will take almost two years for seismic reinforcement work before restarting the reactor. Under the reviewing process, the seismic motion under new condition given by nuclear regulation authority made the maximum earthquake acceleration three times larger than that in planning of JRR-3. The reactor building itself is still within the safety level with such incredible increase of seismic motion. On the other hand, a roof of the reactor building and peripheral structures and buildings around the reactor cannot resist. We have already started working out the design for the reinforcement.

JAEA (Materials Sciences Research Center): 36th Joint Meeting of the DOE-ISSP and DOE-JAEA Steering Committees for US-Japan Cooperative Program on Neutron Scattering was held in Tokyo on 7th and 8th June 2018 hosted by JAEA. In the discussion on future of this collaboration, it was stressed that WAND^2 would open to general users. The last phase of the planned instrument upgrade of the Wide-Angle Neutron Diffractometer (WAND) started in October 2017 under the DOE-JAEA collaboration. The updated instrument has been named WAND^2 and it has been commissioned over the past year. WAND^2 is positioned as a thermal, multi-purpose high throughput powder/single crystal diffractometer. The large area coverage of the new two-dimensional detector allows an efficient collection of powder data with short five measuring time. Compared to the old WAND the efficiency for data collection has been increased by a factor of 16. Detailed information on WAND^2 is found at the following URL. https://neutrons.ornl.gov/wand

ISSP: Neutron Science Laboratory (NSL) of ISSP has been running Overseas-Experiment Program since 2012. Travel expenses for two scientists per proposal were supported under the program. 64 persons were sent abroad in JFY2017, and 37 persons in JFY 2018 (as of Oct. 31, 2018), namely, OPAL, NIST, ILL, ORNL, etc. Table 1 shows the statistics of the program. 94 papers have been published in refereed journals since JFY 2011. See,
http://www.issp.utokyo.ac.jp/labs/neutron/download/OverseasPubList.htm

NSL continues call-for-proposals every year to keep neutron users in Japan. For JFY 2018, 122 general user proposals and 17 Instrument and Research Team (IRT) proposals were approved. Some proposals will be supported by the Overseas-Experiment Program.

Table 1. Numbers of scientists sent to overseas facilities since 2011 under Overseas-Experiment program of NSL-ISSP.

Facility			Number of users							
			FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018
HFR	ILL	France	3	9	0	4	3	1	0	3
OPAL	ANSTO	Australia	7	7	4	18	22	35	25	14
HANARO	KAERI	Korea	2	7	7	0	0	0	0	0
FRM-Ⅱ	MLZ (Munich)	Germany		4	1	0	8	1	7	0
ISIS	*Rutherford Appleton* Laboratory	UK		4	2	4	4	0	4	1
SINQ	PSI	Switzerland		1	4	5	6	1	3	4
NBSR	NIST	USA			3	13	5	2	11	4
BER II	HZB (Berlin)	Germany			2	0	7	3	2	2
HFIR	ORNL	USA	13		1	1	1	6	4	8
SNS	ORNL	USA			4	2	1	5	6	0
ORPHEE	LLB	France			1	1	1	1	2	1
Total			25	32	29	48	58	55	64	(37)

In order to re-activate User Program effectively, NSL has started to examine university-owned instruments for upgrading/abolishment.

Mitsuhiro Shibayama (ISSP, U. Tokyo)
and Masayasu Takeda (JAEA)

Report from ANSTO

Australia's Open Pool Australian Light-water (OPAL) reactor is a state-of-the-art 20 Megawatt reactor that uses low enriched uranium (LEU) fuel to achieve a range of nuclear medicine, research, scientific, industrial and production goals.

The Australian Centre for Neutron Scattering operates the suite of neutron beam instruments at the OPAL reactor and leads Australia in the use of neutron scattering techniques to solve complex research and industrial problems in many important fields. There are currently 13 operating neutron beam instruments available for users and 1 neutron beam instrument under construction.

Open competitive access to the neutron beam instruments is available through the Australian Centre for Neutron Scattering Customer Portal (http://neutron.ansto.gov.au). Calls occur biannually and close in 15th September and 15th March.

Projects to replace the existing Cold Neutron Source and install an additional split neutron guide in the TG123 neutron beam assembly are progressing well with planned installation of the TG123 neutron beam assembly in late 2019. The replacement cold source installation date has been delayed until 2024.

In the second half of 2018 we have made significant progress on the installation of a 2nd neutron reflectometer on the CG2B neutron guide. BioRef was transferred to ANSTO under a donation agreement with the Helmholtz-Zentrum Berlin in Germany. When installed at the OPAL reactor the instrument will be named SPATZ, the German word for sparrow, which follows the tradition of the naming convention of other instruments at the Australian Centre for Neutron Scattering, which are named after Australian and other fauna. Spatz commenced hot commissioning with neutrons in November 2018 and is expected to transition to normal operations in early 2019 and will be the 14th neutron beam instrument at OPAL.

On 29th October 2018 the Australian Centre for Neutron Scattering held a family open day to celebrate two significant milestones of 10 years of neutron beam operations and 1000 Scientific Research Papers containing data obtained using the neutron scattering instruments at the OPAL reactor. These milestones also coincided with the 100th reactor cycle of the OPAL reactor.

A total of 281 proposals for cold- and thermal-neutron beam experiments were received for the 2019-1 proposal round with 159 proposals approved by the Australian Centre for Neutron Scattering & National Deuteration Facility Program Advisory Committee.

Jamie Schulz（ANSTO）

Australian Centre for Neutron Scattering Family Open Day

Report from KAERI

AONSA Meetings seem to bring good luck to Korea's only research reactor, HANARO. Once again, the Nuclear Safety and Security Commission of Korea approved the restart of the reactor on 14 November, just before the AONSA meeting commenced in Sydney, Australia. HANARO reached full power on 20 November.

The flight of HANARO in recent years is unprecedented for a research reactor. This time the reactor tripped on 30 July 2018 owing to a regulator malfunction. It was one of the so-called Reactor Regulating System (RRS) trips. However, the Commission now requires research reactor operators to suspend operation after such RRS trips. It usually takes several months before the Commission approves a restart. In the past, it took only a few days before restarting the reactor from RRS trips.

While the reactor remained dormant, all previously working neutron instruments have recovered and are now back in operation. They are three diffractometers (HRPD - High-Resolution Powder Diffractometer, and FCD - Four-Circle Diffractometer, RSI - Residual Stress Instrument), three small angle scattering instruments (40M-SANS, 18M-SANS, and KIST-USANS - Korea Institute of Science and Technology Ultra-Small Angle Scattering instrument), one reflectometer (REF-V - Vertical-type Reflectometer), and two radiography facilities (NRF - Neutron Radiography Facility and ENF - Ex-core Neutron Irradiation Facility). Two scattering instruments are pending approval from the regulator: Bio-D - Bio-Diffractometer and Bio-C - Bio-Camera. Meanwhile, on-going efforts on new instruments are expected to bring five instruments online in the coming years. They are three spectrometers (Cold-TAS - Cold neutron Triple-Axis Spectrometer, Thermal-TAS - Thermal neutron Triple-Axis Spectrometer, and DC-ToF - Disk-Chopper Time-of-Flight spectrometer) and two reflectometers (Bio-REF - Bio-Reflectometer and G-TS - Guide Test Station).

At the moment, the aging of instruments and insufficient funding for maintenance is becoming increasingly challenging. Considering that some of the instruments that include HRPD - the most widely used instrument in the facility - has operated for more than twenty years without modification, many instruments are now due for significant upgrades.

As for the access to the facility, two instruments - HRPD and 40M-SANS - are accepting proposals with more instruments to follow suit shortly, but lack of funding for general user service is another challenge to overcome. Users still can contact instrument scientists for collaborative use of the instruments.

In 2019, many activities will take place. In January, KNBUA, the Korea Neutron Beam Users Association, hosts the Japan-Korea Meeting on Neutron Science in Daejeon. In April, KAERI hosts the 2019 International HANARO Symposium in commemoration of the 60th anniversary of KAERI. In late August, KAERI hosts the AONSA Neutron School, which replaces the annual Neutron Diffraction School and the Cold Neutron Scattering School. Immediately following or a few weeks later, IAEA organizes the IAEA Training Workshop on Neutron Imaging at HANARO.

Sungil PARK (KAERI)

China Advanced Research Reactor – Facility report

China Advanced Research Reactor (CARR) is a light water cooling, with a sub-moderated compact core surrounded by heavy water reflector, pool type inverse neutron trap research reactor. Now it is waiting for the operation license. However it has already owned the ability of safety operation, and in 2018, CARR has run for dozens of days. We are trying our best to push the operation license application.

Compare with the first half of this year, two neutron facilities have finished their commissioning, one is Cold Triple Axis Spectrometer (CTAS), and the other is Neutron depth profiling (NDP). So together there are 11 neutron facilities now ready for opening to users. Furthermore, 7 neutron facilities are being constructed and going on as scheduled. It is expected that the commissioning will be started next year one by one.

In 2018, CARR will be run 60 days, and beam time for neutron experiments will be over 50 days. In 2018, we cooperate with more than 30 institutes and universities. Experiments of materials science and engineering were carried out when the reactor ran, including effect of rolling process on the texture of M3 Magnesium alloy, texture evolution in Al-Li alloy after aging treatment, microstructure evolution of single crystal superalloy after different heat treatments, and fundamental study of thermoelectric materials, etc. Besides, many first time research works have been carried out at CARR, such as first time prompt-gamma activation analysis (PGAA) in China, PGAA database construction for series of elements, analysis of atmospheric aerosol using neutron beam and so on.

The 6th National Conference on Neutron Scattering & Workshop on Applications of National Neutron Facilities was held by Fudan University in Shanghai, China on Oct.14-16, 2018. More than 30 universities and institutes attended the conference. Prof. Dongfeng Chen was invited to give a presentation on the progress of CARR platform. Instrumental scientists from Neutron Scattering Laboratory of China Institute of Atomic Energy also gave several oral presentations on the progress of instruments and applications.

Figure 1. Some presentations at 6th National Conference on Neutron Scattering

A new users building has been built beside CARR, which will provide more conveniences for neutron scattering application. Cooperation between neutron source and users becomes more and more closely.

Kai Sun (CARR)

Figure 2. New users building built beside CARR

China Spallation Neutron Source – Facility report

The most important event happened recently to China Spallation Neutron Source (CSNS) is passed its national acceptance on August 23, 2018, nearly one year after the first neutron pulse produced. The review committee agreed that the performance of the CSNS has reached or is even better than the planned acceptance goal. The highest neutron efficiency of the target station and the three initial instruments reached the international level.

Figure 1. The review meeting on the national acceptance of CSNS.

First summer shutdown and maintenance had been done during July 20 – September 25. Now, we keep the beam power of around 20 kW in the repetition frequency of 25 Hz. With accumulation of the operation experience, the availability of accelerator was quickly increased to above 94%. By the end of October 31, 2018, there has had beam on target of more than 2600 hours, accumulated beam power of more than 40 MWhrs. We will try to increase beam power to 30 kW in the coming December.

The dayone three instruments have conducted 21 user sample experiments from 16 research groups. The user proposal system was launched in both Chinese and English through the web of https://user.csns.ihep.ac.cn. The first round proposal call collected 62 proposals (GPPD: 27, MR: 7, SANS: 28, respectively), and 32 proposals were allocated including 5 oversea proposals.

The 1st annual CSNS operation meeting was held in September 11-13th to summarize the achievements, lessons and future plans. More than 160 scientists and engineers attended the meeting, including the representatives from other relative national large facilities. Prof. Chen Hesheng, the CSNS project manager, delivered an opening speech. He stressed that CSNS is currently in a critical period to fully open to users so that it is necessary to improve the operation management, like establishing operational procedures and making emergency plans. Prof. Wang Sheng, head of accelerator division, and Prof. Liang Tianjiao, head of neutron science division, made a summary report on the commissioning operation of the CSNS accelerator and target station. At the closing ceremony, Prof. Fu Shinian and Wang Fangwei made a report on the CSNS accelerator beam power upgrade scheme and the future development plan of the CSNS neutron instruments. Prof. Chen Yanwei, deputy director of IHEP and director of CSNS, made his closing remarks to congratulate the CSNS project on passing the national acceptance, and to outlook a bright future.

Figure 2. Prof. CHEN Hesheng delivers an opening speech at the 1st annual CSNS operation meeting

The CSNS International Advisory Committee held its 10th review meeting in November 12-14, 2018.Nine senior scientists from Rutherford Appleton Laboratory (RAL), European Spallation Source (ESS) and Japan Atomic Energy Agency (JAEA), attended the meeting to review on the progress and the future plan of CSNS.

The review experts listened to 22 detailed reports, and had thorough discussions and exchanges with the CSNS staff. Valuable suggestions and opinions were put forward on such key issues as facility operation, user development and radiation safety, especially in development of the next suite of neutron instruments and beam power upgrade.

Fangwei Wang (CSNS)

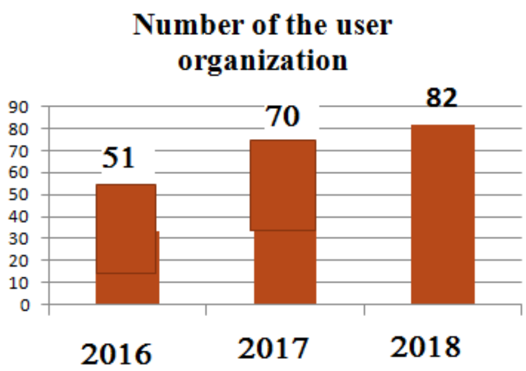
Figure 3. Group photo of the 10th international advisory committee Review meeting.

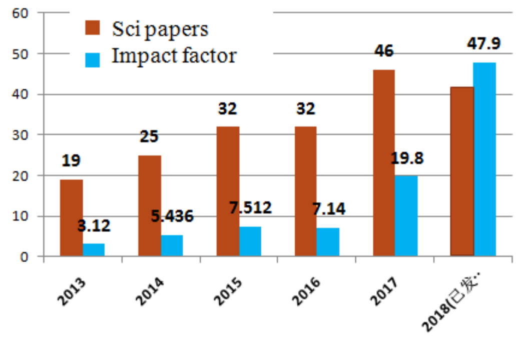
Recent Progress of the Neutron Scattering Platform at CMRR

The CMRR reactor has run 160 days in 2018 and the users are increasing and reach to more than 80 this year. More than 40 papers have been published on JACS, Nano Energy, Chemical Reviews, and so on. Eight neuron scattering instruments are normally operational and six are under constructed.

The homemade high pressure device has been developed for high pressure neutron diffractometer, which can integrate pressure and temperature due to its large inner space. Based on the PE Cell (Paris- Edinburgh TYPE VX4), the Max. Pressure has been reached to more than 25GP with new inner design, diamond anvil and gaskets. We are also self-developing ^{3}He filter polarized technique and the first relative polarized ^{3}He signal has been observed by FID NMR in May 4 2018.

The second phase progresses of neutron scattering instruments development are going well. The design of three spectrometers has been finished last year, which are polarized thermal neutron triple-axis spectrometer (TTAS), ultra small-angle neutron spectrometer (USANS), and neutron standard-test beam line (NSTB) for single crystal and texture experiments. This year, the application for other three instruments has been approved and the design is started. They are spin echo spectrometers including inelastic mode (LNRSE) and small angle mode (SESANS) and cold neutron multi-energy analyzed inelastic scattering spectrometer. More sample environment devices are also being equipped for the present spectrometers, such as high/low temperature, superconducting magnetic field, chemical loading (hydrogen/deuterium gas environment), and so on.





Guang-Ai Sun
(CMRR)

National Facility for Neutron Beam Research – Facility Report

Commissioning of a neutron powder diffractometer (PD-I) with a multi-detector system at Dhruva reactor, Trombay, Mumbai, India for investigation of advanced magnetic materials

A neutron powder diffractometer (PD-I) with a multi-detector system has been designed, built, installed, and commissioned at the Through-Tube beam hole No. TT-1015, Dhruva reactor, Trombay, Mumbai, India under the National Facility for Neutron Beam Research. This is a medium spatial resolution power diffractometer ($\Delta d/d \sim 1.6\%$, *d:* lattice spacing) designed for investigation of advanced magnetic materials covering a scattering angular range of 5-70 degrees. The diffractometer is capable for measuring the magnetic moment of as low as 0.5 μ_B with sample volume as small as 0.5 cm^3. This instrument consists of a silicon monochromator ($\lambda = 1.094$ Å). The detector assembly, composed of three position sensitive detectors, is enclosed in a radiation shielding of non-magnetic stainless-steel housing filled with borated wax to obtain a high signal to noise ratio. The development of this instrument involved (i) optimization of the instrumental design by carrying out a Monte Carlo simulations and neutron shielding calculations using analytical techniques, (ii) designing, building, and commissioning of the detector shielding, neutron beam collimators, slits, and sample table, (iii) integration of commercial cryo-cooler and nuclear electronic modules to record data over the temperature range of 2.7-320 K, (iv) development of a data acquisition system and GUI based experiment control and data reduction software, and (v) calibration of instrument. The diffractometer has been made available to neutron scattering community. Various physics problems involving determination of magnetic ground state and temperature dependent magnetic correlations in layered multiferroic compound $LuFeO_3$ [1], magnetic correlations in the high magnetoresistive perovskites $La_{0.6}Sr_{0.4}Co_{1-x}Mn_xO_3$, and magnetic correlations in spinel ferrite $CoCr_{1.8}Fe_{0.2}O_4$, have been addressed using the instrument.

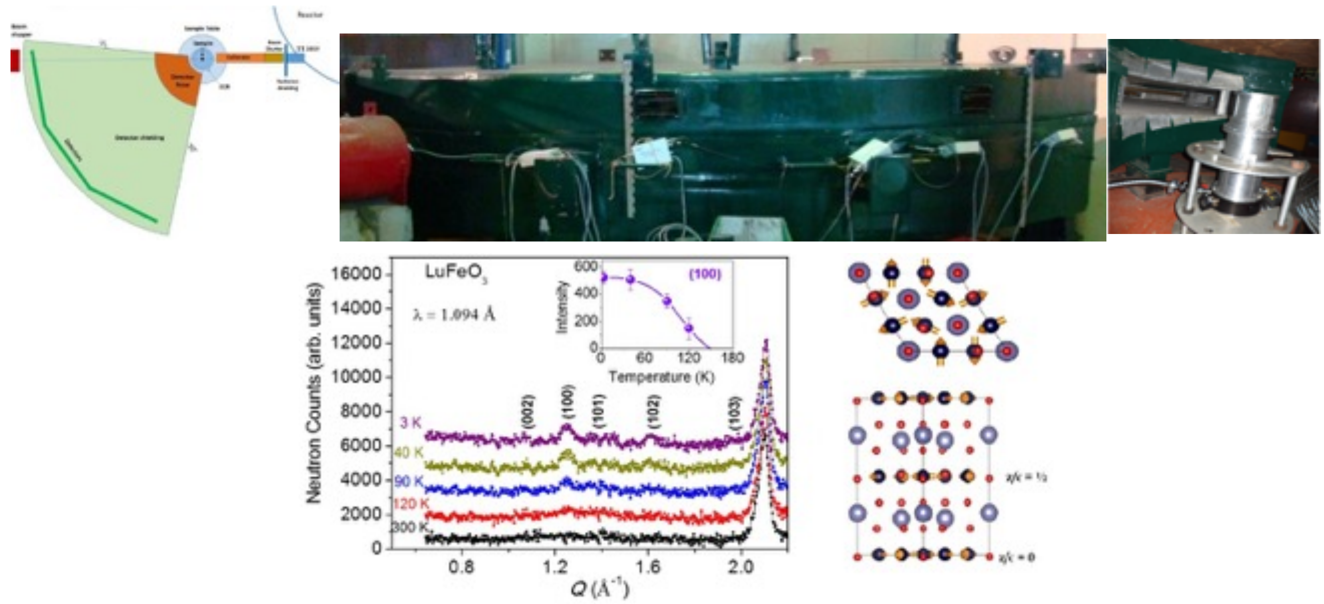


Fig 1. (Top panel) Schematic of neutron powder diffractometer (PD-I) with a multi-detector system at Dhruva reactor, Trombay, Mumbai, India. (bottom panel) Neutron diffraction data at various temperatures measured using the PD-I and the determined magnetic structure at 3 K.

[1]. P. Suresh, K. Vijaya Laxmi, A. K. Bera, S. M. Yusuf, B. Lingam Chittari, J. Jung and P. S. Anil Kumar, Phys. Rev. B 97, 184419 (2018).

Phonons and Thermal Expansion Behaviour of NiSi and NiGe

Transition metal silicides are considered important in microelectronics industry. We have done neutron inelastic scattering measurements [1] of phonon spectra (Fig. 1) on a polycrystalline sample of NiSi using the Triple Axis Spectrometer at Dhruva reactor. Further, density functional theory based ab-initio phonon calculations were done on NiSi and NiGe in the orthorhombic structure. Our calculations showed significant difference in the negative thermal expansion (NTE) along b-axis in both the compounds (Fig. 1), which is in agreement with published experimental data. The calculations enable to identify the phonon modes which lend major contribution to the NTE behaviour in NiSi, and reasons for negligible NTE in NiGe. Figure 2 shows a typical transverse optic phonon mode at the zone-boundary along b-axis, which is associated with NTE along b-axis.

P. U. Sastry and S. M. Yusuf (BARC)

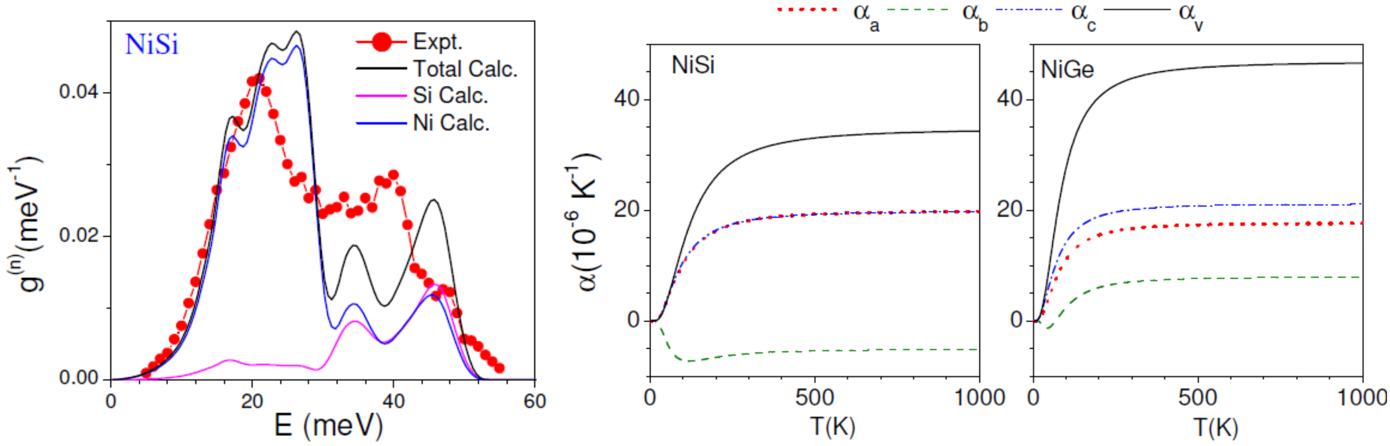


***Fig. 1 (Left)** Experimental and computed neutron-weighted phonon density of states of NiSi. The calculated neutron-weighted partial phonon density of states of Si/Ni atoms are also shown. The calculated spectra have been broadened by the energy resolution in the experiment. **(Right)** Calculated anisotropic behaviour of the linear thermal expansion coefficients along a, b and c directions as a function of temperature in NiSi and NiGe.*

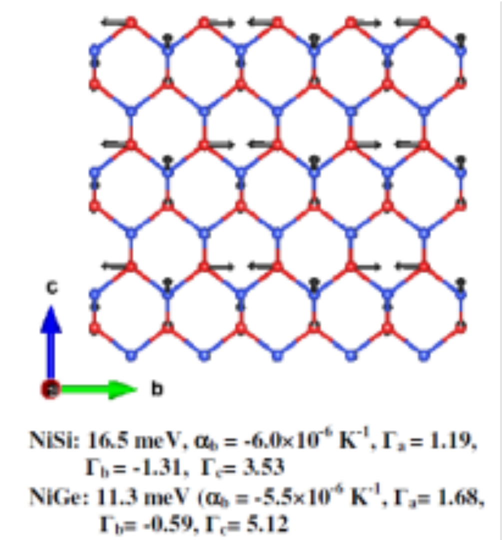


***Fig. 2** The displacement pattern of the representative mode at the Brillouin zone boundary (0 1/2 0) responsible for negative thermal expansion in NiSi and NiGe. The numbers below the figures give the phonon energy, α_b at 300 K, Γ_a, Γ_b and Γ_c respectively. Key: Ni – Red and Si/Ge – Blue.*

[1] Prabhatasree Goel, Mayanak K. Gupta, Sanjay K. Mishra, Baltej Singh, Ranjan Mittal and Samrath L. Chaplot, Frontiers in Chemistry **6**, 2296 (2018).

BATAN's Neutron Scattering Laboratory - Facility Report

To get better quality of data, alignment of collimating system and adjustment of detectors of HRPD were performed as shown in Figure 1. A new automatic sample changer for Neutron Activation Analysis facility had been installed as shown in Figure 2. Figure 3 shows the commissioning and testing processes and followed by training for the NAA staffs member. The new sample changer is able to handle 100 to 200 sample simultaneously without any interruption.

Fig. 1. Alignment of collimators and adjusting positions of HRPD detectors.

Fig. 2. Installing automatic sample changer for NAA.

Students, Lecturers, and Professors from local and foreign Universities visited Batan's neutron scattering facility to learn both the technique and each of the instrument. During the visit, possibilities for research collaboration were also discussed with each of instrument scientist. Several pictures of the visits are shown in Figure 4 to 6.

Fig. 3. Commissioning and testing of new automatic sample changer for NAA.

Fig. 4. Visit of foreign universities Professor.

Fig. 5. Visit of foreign universities Professors.

Fig. 6. Visit of lecturers and students from local universities.

Iwan Sumirat（BATAN）

The AONSA Prize 2019

The Selection Committee (SC) for the AONSA Prize 2019 received multiple nominees by the nomination deadline (September 27, 2018) and intensively reviewed them for a few months. All of the nominees made significant contributions to the field of neutron scattering in the Asia-Oceania region and are highly qualified, reflecting the quality of neutron science in the Asia-Oceania Region. Finally the SC unanimously nominated Professor Mahn Won Kim as a recipient to the 21st Executive Committee Meeting held in Sydney, Australia on November 17, 2018 and the SC's nomination was officially approved. The recipient will be awarded a certificate, a medal and monetary prize (US$5,000) at the Prize Ceremony to be held during the AOCNS-2019 (Nov. 18-22, 2019), Kaohsiung, Taiwan.

Mahn Won Kim
Department of Physics
Korea Advanced Institute of Science and Technology

Citation: *"For his seminal contributions in building Asia-Oceania Neutron Scattering Association and the establishing of the neutron scattering community and facility in Korea, for his successful application of second harmonic generation (SHG) to investigate the air/liquid interface, and for his devoted mentoring of young scientists in the community of neutron science."*

Mahn Won Kim received Ph. D from University of California, Santa Barbara in 1975 and became a Research Associate of University of Pittsburgh. Then, he joined Exxon Research and Engineering Co. as Senior Staff Physicist. At Exxon, he started his neutron scattering science focused on soft matter and was best known for using SANS to determine the phase transition and critical phenomena in microemulsions. In 1995, Prof. Kim returned to Korea as Professor at KAIST. Upon his return, Prof. Kim became closely engaged with HANARO reactor facility (which began operation in 1995) providing scientific advice for its long term direction. Then, Prof. Kim served as the first President of Korean Neutron Beam Users Association (2003-2010) which was formally formed at the beginning of the HANARO Cold Neutron Facility Project (2003-2010). During this period, Prof. Kim played an exceptional leading role in formulating and supporting the project as the most influential and effective advocate for neutron scattering science to Korean government through his roles as President of Korea Institute for Advanced Study (KIAS) and President of KNBUA. Moreover, KNBUA became well established as a focal organization of neutron users in Korea promoting numerous domestic and international neutron scattering activities including neutron workshops, schools, and annual Japan-Korea neutron science meeting. At the same time, as a Physics Professor at KAIST, he educated many students and postdocs over the last 20 years, and many of his former students and postdocs are currently active members of domestic and international neutron community.

In addition, Kim has been one of major leaders in building the Asia-Oceania neutron scattering community. He chaired the Asia-Pacific Round Table Meeting on Neutron Science which was the first formal preparatory meeting for establishing AONSA. And, he served as the first President of AONSA (2008-2010) during which the foundation of AONSA and friendship among AONSA colleagues were well established. Most recently, he served as an honorary chair of the ICNS 2017, which was the first ICNS held in Asia-Oceania region since AONSA was formed, and his honorary chairmanship contributed significantly to the success of the conference.

Kim's important and direct contribution to neutron science is his pioneering experimental works on soft matter. These works developed an idea of the underlying curvature elasticity that describes the state of microemulsions, which stimulated the subsequent theoretical developments. Another major breakthrough done by Kim is the first successful application of second harmonic generation (SHG) to investigate the air/liquid interface. This technique has been widely applied since their pioneering work by several groups around the world and extended to other important issues such as the functional dynamics of ion channels in membranes.

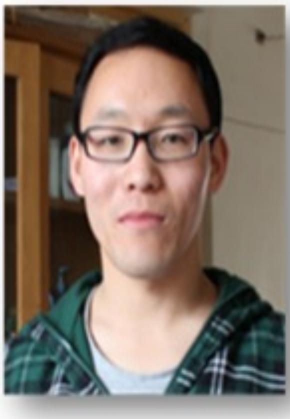
For his seminal achievement in neutron science he received the following awards:
Fellow of The American Physical Society (1994), PARAMINS best patent - Lubes, (Exxon Chemical, 1996), Research Award of KAIST (2004), Best Teacher Award (College of Natural Science of KAIST, 2012)

Dongfeng Chen
Vice president of AONSA

AONSA

Announcement of AONSA Young Research Fellows 2019

Dr. Shaofei, Wang



Dr. Chi-Hung Lee

Dr. Minyoung Yoon

The AONSA Young Research Fellowship program, which was established in early 2014, is to support highly talented young scientists with leadership potential in the Asia-Oceania region, helping them to develop their career and expertise in neutron science and technology.

All applications were received by the submission deadline (Sep. 27, 2018) and intensively reviewed by the Selection Committee (SC) for the AONSA Young Research Fellows (YRFs) 2019.

The final selections were made by the SC in consultation with Directors of three hosting neutron Facilities and officially approved at the 21th AONSA Executive Committee Meeting on November 17, 2018 in Sydney, Australia.

It is AONSA's great pleasure to announce that three very talented young scientists have been selected as the first group of AONSA YRFs who will visit major neutron Facilities in the Asia-Oceania region for collaborative research using neutrons in 2019. The AONSA YRFs' round-trip airfare will be supported by AONSA, and their local living expense during their Fellowship visits will be supported by their hosting Facilities.

Hosting Facility: ANSTO (Powder Diffractometer)
Dr. Shaofei Wang
Ph.D. in Condensed Matter Physics Institute of Physics, Chinese Academy of Sciences (2014)
Current Affiliation: Donghua University

Title of Research Proposal:
Identify the ionic transport mechanism in NASICON-type solid electrolyte materials

Hosting Facility: J-PARC (AMATERAS/4SEASON)
Dr. Chi-Hung Lee
PhD in Physics, National Central University (2015)
Current Affiliation: National Central University
Title of Research Proposal:
Search for spin excitations in multiferroics cobalt tellurate Co_3TeO_6

Hosting Facility: ANSTO (Powder Diffractometer/Backscattering)
Dr. Minyoung Yoon
PhD in Chemistry, Pohang University of Science and Technology (2011)
Current Affiliation: Gachon University
Title of Research Proposal:
Ion conduction motion and dynamics study in a confined space using neutron diffraction and backscattering techniques

Dongfeng Chen
Vice president of AONSA

Gordon Research Conference on Neutron Scattering

Dear Neutron Scattering Researchers,

The Gordon Research Conference (GRC) on Neutron Scattering will be held on May 5 -10, 2019 at the Courtyard by Marriott in Hong Kong Sha Tin. It is our great pleasure as organizers to inform of this event to the neutron community. We have confirmed participation from world renowned speakers and discussion leaders in a wide range of the neutron science fields.

The GRC meeting of 2019 will focus on "Emerging Neutronic Approaches for Advanced Materials Study and Innovation in Energy, the Environment, Health and Infrastructure". For more information, please visit: https://www.grc.org/neutron-scattering-conference/2019/

Together with the GRC, we will also hold the Gordon Research Seminar (GRS) on Neutron Scattering entitled "Synergy of Neutron Scattering and Complementary Tools to Reveal New States of Matter", which is being organized for and by graduate students and postdocs in the area of neutron scattering. This will be held on May 4 - 5, 2019, just before the GRC. For more information please visit: https://www.grc.org/neutron-scattering-grs-conference/2019/

As you may know, the guiding principle of a Gordon Research Conference is the presentation of new, unpublished work, and the free, unhampered discussion that follows. Also in keeping with the GRC tradition, we ask speakers and discussion leaders to stay at the conference for ample duration after their session, so that the participants fully interact and have further discussion.

The GRC on Neutron Scattering in 2019 is shaping up to be one of the most exciting and important meetings in neutron scattering area. We expect to bring together an outstanding and diverse group of scientists at the forefront of research and will make every attempt to include younger scientists and students as well. We hope that you will share our enthusiasm for this conference and encourage you to attend and contribute with a talk or poster to the scientific success of the conference. A few talks will be selected for contributions.

With Best Regards,

Masatoshi Arai (Chair), Victoria Garcia Sakai and Collin Broholm (Vice-Chairs)
2019 Gordon Research Conference on Neutron Scattering