

## 4th International HiPeR symposium (combining with the annual meeting of HiPeR)

**Date: March 4<sup>th</sup> to 6<sup>th</sup> 2019**

**Place: Hiroshima University Library Hall (Higashi Hiroshima campus)**

Caution: The library hall only opens during 8:45-16:45.

Oral presentation: 15 min (invited: 25 min)

**3/4 (Mon)**

Time	Name	Affiliation	Presentation title
9:00-9:30	Registration		
9:30-9:40	Toru Inoue	Hiroshima Univ.	Brief introduction of HiPeR and welcome note
9:40-9:55	Naoki Ishimatsu	Hiroshima Univ.	High pressure XAS measurements on BL39XU of the SPring-8: recent activities
9:55-10:20	Sakura Pascarelli	ESRF, France	Frontiers of High Pressure Research at the European Synchrotron Radiation Facility
10:20-10:30	Break		
10:30-10:55	Max Wilke	Univ. Potsdam, Germany	X-ray spectroscopy on trace elements in silicate and carbonate melts
10:55-11:20	Chrystele Sanloup	Sorbonne Univ., France	Reactivity of heavy noble gases under high pressures
11:20-13:10	Lunch break (HAKUWA hotel: Lunch Buffet)		
13:10-13:35	Angelika Rosa	ESRF, France	Structure and geochemistry of noble gases from in-situ XAS up to 110 GPa and 3000 K and the origin of Earth's atmosphere
13:35-14:00	Guillaume Morard	CNRS, France	Composition of the Earth's core from a mineral physics point of view
14:00-14:10	Break		
14:10-14:35	Robert C.Liebermann and Baosheng Li	Stony Brook Univ., USA	Recent Ultrasonic Experiments at High P and T at Stony Brook
14:35-15:00	Akira Yoneda	Okayama Univ.	DAC-GHz ultrasonic P wave velocity measurement on KCl and natural olivine
15:00-15:25	Yuji Higo	SPring-8, JASRI	Development of ultrasonic measurement technique toward whole lower mantle conditions
15:25-15:35	Break		
15:35-16:00	Tetsuo Irifune and Steeve Gréaux	GRC, Ehime Univ.	Sound velocities of "breyite" and some implications for seismological signatures around the 660 km
16:00-16:25	Masaki Akaogi	Gakushuin Univ.	High-pressure phase transitions of AB <sub>2</sub> O <sub>4</sub> spinels and related minerals
16:25-16:40	Hiroshi Fukuoka	Hiroshima Univ.	High-Pressure Synthesis and Structures of Chromium Sulfides

17:00-18:00	Poster session (in "Faculty of Science" Building A, 7th floor)
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18:30-20:30	Banquet ( "cafe bar The Earth")
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**3/5 (Tue)**

Time	Name	Affiliation	Presentation title
9:00-9:25	Tomoo Katsura	BGI, Univ. Bayreuth, Germany	Water enhancement of ionic conductivity of olivine
9:25-9:40	Toru Inoue	Hiroshima Univ.	Hydrous bridgmanite
9:40-9:55	Tomoko Sato	Hiroshima Univ.	Shock-compressed behavior of quartz by XFEL
9:55-10:05	Break		
10:05-10:30	Yanbin Wang	APS, Univ. Chicago, USA	Eclogitization-induced mechanical instability in granulite and intermediate-depth earthquakes in southern Tibet
10:30-10:55	Jennifer Kung	National Cheng Kung Univ., Taiwan	Orientation-dependence of thermal conductivity of pyroxene

10:55-11:05	Break		
11:05-11:30	Mitsuhiro Toriumi	JAMSTEC	Global Seismicity Dynamics by Data-driven Science - Japanese Islands Region
11:30-11:55	Saeko Kita	Building Research Institute	Variations in seismicity, b-values and stress orientations in the subducting slab under Kii peninsula
11:55-12:10	Naoki Suda	Hiroshima Univ.	Real-time monitoring of seismic slow earthquakes in the Nankai subduction zone
12:10-13:30	Lunch break (Gakushi-kaikan)		
13:30-13:55	Takashi Nakagawa	Univ. Hong Kong, China	On the large-scale geochemical heterogeneity in deep mantle in hydrous mantle convection modeling
13:55-14:10	Ikuo Katayama	Hiroshima Univ.	Crack-dependent seismic discontinuity at oceanic Moho
14:10-14:25	Masako Yoshikawa	Hiroshima Univ.	Hydrous metasomatism recorded in the mantle wedge xenoliths from Mt. Pinatubo, Philippines
14:25-14:35	Break		
14:35-14:50	Fumito Shiraishi	Hiroshima Univ.	Life-water-mineral interactions—outcomes since 2017—
14:50-15:05	Tadashi Yokoyama	Hiroshima Univ.	Chemical property of dissolved Si and its relevance to the diffusion of Si in pore water
15:05-15:20	Hikaru Yabuta	Hiroshima Univ.	First half summary and current status of Hayabusa2 asteroid sample return mission
15:20-15:30	Break		
15:30-15:45	Masaaki Miyahara	Hiroshima Univ.	High-pressure minerals in shocked ordinary chondrites
15:45-16:00	Naotaka Tomioka	JAMSTEC	Lattice-shear-induced formation of a new Mg <sub>2</sub> SiO <sub>4</sub> spinelloid in shocked meteorites
16:00-16:15	Tomoyuki Shibata	Hiroshima Univ.	Partial melting of subducting oceanic crust
17:00-18:00	Labo tour (The Hiroshima Synchrotron Radiation Center (HiSOR) )		
18:00~	Free time (Dinner in each group)		
<b>3/6 (Wed)</b>			
10:00-12:00	(optional) Saijo Sakagura (Sake Wine Celler) Town Tour		
12:00~	Free time		

**3/4 (Mon) 17:00-18:00 Poster presentation (in "Faculty of Science" Building A, 7th floor)**

Poster No.	Name	Affiliation	Presentation title
1	Takahiro Kuribayashi	Tohoku Univ.	Structural properties of (Al, H)-bearing Bridgmanite: Site preference of Al and possible positions of H
2	Tomoeki Nakakuki	Hiroshima Univ.	Water transport to deep mantle coupled dynamically with a plate-mantle convection system
3	Takaaki Kawazoe	Hiroshima Univ.	Starting Multi-Anvil Experiments at Hiroshima
4	Kosuke Kimura	Hiroshima Univ.	Petrology and zircon geochronology of Paleoproterozoic and Paleozoic granitoid bodies from Tsuwano area, Shimane Prefecture, SW Japan
5	Takeo Kaneko	Hiroshima Univ.	Water circulation linking with the mantle convection and hydrous mineral phase changes
6	Yuta Tsukiji	Hiroshima Univ.	Two ichnogenera of iguanodontid footprints from the Lower Cretaceous Kitadani Formation, Fukui, Japan: Ichnotaxonomical implications
7	Sho Kakizawa	Ehime Univ.	Effect of pressure and Fe on water solubility of Al-bearing hydrous bridgmanite
8	Dyuti Prakash Sarkar	Hiroshima Univ.	Microstructures and deformation mechanisms of antigorite: Observations from serpentinite rocks of Rishabhdev and Gogunda area, Rajasthan, India
9	Kenta Kawaguchi	Hiroshima Univ.	Discovery of 480 Ma mylonitized diorite - quartz diorite body at the northern margin of Sambagawa terrane in the Saganoseki Peninsula, Southwest Japan and its geological significance
10	Kohei Hatakeyama	Hiroshima Univ.	Compressional and shear wave velocities of mafic rocks collected from Oman Drilling Project
11	Bidisha Dey	Hiroshima Univ.	The Geochemical Characteristics of Kyushu Basalts from the HFSE and Isotopic perspective
12	Yozora Sakota	Hiroshima Univ.	Deformation condition beneath the Pinatubo volcano inferred from the microstructure of peridotite xenoliths
13	Takayoshi Nagaoka	Hiroshima Univ.	Microstructural properties and formation process of slickenside
14	Takehiro Hirayama	Hiroshima Univ.	Geochemical features of Quaternary volcanic rocks and xenolith from Futagoyama and Hime-Shima volcanic groups, Kyusyu, Japan
15	Takeru Omori	Hiroshima Univ.	Role of extracellular polymeric substance on cyanobacterial calcification
16	Hiroshi Fujiwara	Hiroshima Univ.	Regional correlation of Cretaceous ignimbrite of Sanyo Province, SW Japan using zircon U-Pb chronology and minor element composition of apatite
17	Kazunari Kozuma	Hiroshima Univ.	Shock metamorphism recorded in lunar meteorite
18	Ikuo Okada	Hiroshima Univ.	Investigation for the magma genesis and generation process of Yufu-dake, Kyushu, Japan, inferred from major and trace element composition of the amphiboles in Yufu-dake lavas
19	Kazumasa Sueyoshi	Hiroshima Univ.	Experimental study on relationship between permeability and transport pore radius of rocks
20	Kensuke Kuroshima	Hiroshima Univ.	Features of paleosols and pedogenic nodules in Tetori Group, Kamiichi and Tateyama regions, Toyama, Japan
21	Yuya Akamatsu	Hiroshima Univ.	Contrasting dilatant behaviors of mafic and ultramafic rocks based on triaxial deformation experiments
22	Ryohei Ikeda	Hiroshima Univ.	Triggered tremors and stress perturbation due to surface waves at Nankai subduction zone

23	Yuki Iwasaki	Hiroshima Univ.	Deformation characteristics of antigorite serpentinite exposed at Sasaguri area, Fukuoka Prefecture
24	Junya Okazaki	Hiroshima Univ.	Microstructural observation of pseudotachylyte exposed in Aravalli-Delhi orogenic belt, India
25	Hiroki Kato	Hiroshima Univ.	Polycyclic aromatic hydrocarbons and aliphatic hydrocarbons in Jbilet Winselwan carbonaceous CM chondrite : Attempt to evaluate the thermal metamorphism degree on the parent body
26	Minami Kawaguchi	Hiroshima Univ.	Study of Paleoproterozoic banded iron formation, Gwalior Group, India
27	Naoki Shiraishi	Hiroshima Univ.	Elucidation of aqueous alteration of Martian meteorite, Yamato 000749, using multi-probe microscopic observation
28	Keisuke Nakano	Hiroshima Univ.	Reexamination for the magma genesis of Quaternary Tufu-Tsurumi volcanoes, northeast Kyushu, Japan, inferred from Pb isotopic composition analyzed with double spike method
29	Takuma Yoshida	Hiroshima Univ.	Magma genesis of Pre-Unzen and Unzen volcano, northwestern Kyushu island, Japan
30	Chaowen Xu	Ehime Univ.	Solubility behavior of $\delta\text{AlOOH}$ - $\epsilon\text{FeOOH}$ at high pressures: Implication for water transports into the deep lower mantle and early Mars' interior
31	Masamichi Noda	Ehime Univ.	Possible compositional area of Al bearing anhydrous bridgmanite
32	Daiki Miyashita	Hiroshima Univ.	Texture of $\epsilon$ -Fe variants observed by X-ray diffraction and differential interference contrast microscopy
33	Keitaro Kuramochi	Hiroshima Univ.	XAFS spectra of rhenium metal under $P > 300$ GPa measured by a double stage diamond anvil cell