

**The Seventh Meeting of Research Consortium on High-pressure Research  
and  
The Kumamoto International Symposium on Recent Advancements of  
Physics and Mineralogy VIII**

**September 8 (Tuesday) Symposium**

The 100th Anniversary Hall and Building C 2F Auditorium C226,  
Department of Science, Kumamoto University

**September 9 (Wednesday) Field Survey, Sampling**

A field trip to Amakusa or Unzen volcano

Organized by: Graduate School of Science and Technology, Kumamoto University

Chairpersons (Kumamoto University): Akira Yoshiasa, Tsutomu Mashimo, Fuyuki Shimojo,  
Masaru Aniya, Tadao Nishiyama and Hidetoshi Shibuya

Chairperson (Okayama University): Akira Yoneda

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**September 8 (Tuesday) Symposium**

**The 100th Anniversary Hall**

**9:00 - 9:10 Opening Remarks by Prof. Takashi Hiyama**

(Priority Organization for Innovation and Excellence, Leading Professor, Head of  
International Collaborative Research Group for Science and Technology)

**Session-1 “High pressure research and Earth interior science” (Chaired by Fuyuki Shimojo)**

9:10 -9:50 (40 minutes)

**Prof. Yanbin Wang** (The University of Chicago CARS)

“High-pressure research using the large volume press with synchrotron radiation at the  
Advanced Photon Source. ”

9:50 - 10:30 (40 minutes)

**Prof. Denis Andrault** (Université Blaise Pascal, Clermont-Ferrand )

“The melting behavior of different deep-mantle silicate phases”

10:30 - 11:00 (30 minutes)

**Prof. Akira Yoneda** (ISEI, Okayama University)

“Development of GHz ultrasonics in DAC”

11:00 - 11:30 (30 minutes)

**Dr. Masahiro Osako** (Honorary Fellow, National Museum of Nature and Science)

“Thermal properties measurement in Kawai multi-anvil apparatus”

11:30 - 12:00 (30 minutes)

**Prof. Tadao Nishiyama (Kumamoto Univ.)**

“New finding of ultrahigh pressure chromitites from the Nishisonogi and Higo Metamorphic Rocks, Kyushu, Japan, and its implication.”

12:00 - 12:30 (30 minutes)

**Prof. Toshiaki Hasenaka (Kumamoto Univ.)**

“Tectonics and volcanism in Kyushu island: Why we had caldera-forming gigantic eruptions in Kyushu?”

12:30 – 13:30 **Lunch time (lunch in room C413, building C 2F)**

## **Building C 2F Auditorium C226**

**Session-2 Detailed analyses of materials and dynamics of the Earth** (Chaired by Hiroshi Isobe)

13:30 - 14:00 (30 minutes)

**Prof. Tsutomu Mashimo** (Institute of Pulsed Power Science Kumamoto University)

“Hugoniot-measurement experiments of the room and high temperature samples for EOS study of metals”

14:00 - 14:30 (30 minutes)

**Dr. Hiroshi Fukui** (University of Hyogo)

“Single crystal elasticity of the lower mantle minerals using inelastic X-ray scattering”

14:30 - 15:00 (30 minutes)

**Prof. Osamu Ohtaka** (Institute of Pulsed Power Science Kumamoto University)

“In-situ X-ray experiments under pressure using Diamond/SiC composite anvils prepared with hot isostatic pressing (HIP)”

15:00 - 15:30 (30 minutes)

**Dr. Maki Okube** (Tokyo Institute of Technology)

“Analysis of site-specific magnetic structure by resonant X-ray magnetic scattering.”

15:30 - 15:50 (20 minutes)

**Prof. Akira Yoshiasa** (Kumamoto University)

“Detail structure analyses of advanced material and melt using XRD and XAFS under high-pressure and high-temperature.”

15:50- 16:00 Coffee break

**Session-3 “Recent studies by young researchers”** (Chaired by Akira Yoshiasa)

16:00 - 16:30 (30 minutes)

**Mr. Wei Sun** (ISEI, Okayama University)

“Hydrogen inter-diffusion in wadsleyite: Implication to the isotopically heterogeneity of hydrogen in the mantle”

16:30 - 16:45 (15 minutes)

**Mr. Rizal Arifin** (Kumamoto University)

"Ab initio simulation of methane dehydrogenation on nickel (111) surface  
in the initial stage of graphene growth via CVD method"

16:45 - 17:00 (15 minutes)

**Mr. Kohei Shimamura** (Kumamoto University)

"Mechanism of photocarrier diffusion in halide organometal perovskite:  
nonadiabatic ab initio molecular dynamics study"

17:00 - 17:15 (15 minutes)

**Mr. Tatsuya Hiratoko** (Kumamoto University)

"Temperature dependence of pre-edge feature in Ti K-edge XANES spectra and absorption  
intensity invariant point."

17:15 - 17:30 (15 minutes)

**Mr. Tsubasa Tobase** (Kumamoto University)

"XAFS study of Zr in Cretaceous-Tertiary boundary clays and natural glasses."

19:00 – 21:00 **Banquet**

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**September 7 (Monday) Laboratory and Kumamoto area geophysical tour (Chair: Prof. Mashimo)**

Institute of Pulsed Power Science, Kumamoto University and Kumamoto area

**September 9 (Wednesday) Field Survey, Sampling (Chair: Prof. Isobe)**

A field trip to Amakusa or Unzen volcano

Proposed plan:

September 6 or 7th, visit to Kumamoto, Japan.

(Kumamoto Airport or Fukuoka Airport is convenient)

September 8th, the Kumamoto International Symposium and meeting with dinner

September 9th, a field trip to Aso and Kujyu volcano

September 10th or 11th, a field trip to Amakusa or Unzen volcano or leave for home

Below is optional.

September 10th, reave to Misasa,

September 11th, a meeting the student's examination (Prof. Wang) at Misasa

September 12th, leave for home

(Tottri Airport or Yonago Airport is convenient)

Mailing list:

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Hotel plan

	着時間	6	7	8	Bq 8	9	Bq+Lu	KS fare
Prof. Yanbin Wang,	JR	KR	KR	KR	Bq8	HPA	4000	
Mrs. Wang	JR				Bq8	HPB	0	
Prof. Denis Andrault	JR		KR	KR	Bq8	HPC	4000	
<del>Dr. Geeth Manthilake</del>	<del>FUK10:35</del>	<del>KR</del>	<del>KR</del>	<del>KR</del>	<del>Bq8</del>	<del>HP</del>		
Prof. Akira Yoneda	JR		KS	KS	Bq8	HPA	4000	5200
Dr. Masahiro Osako	JR		KS	KS	Bq8	HP	4000	5200
Mr. Wei Sun	JR		KS	KS	Bq8	HP	0	5200
Dr. Hiroshi Fukui,	JR		KR	KR	Bq8	HP	4000	
Dr. Maki Okube	JAL	KR	KR	KR	Bq8	HPB	4000	
Prof. Osamu Ohtaka	JR		KR	KR	Bq8	HPC	4000	
Prof. Tadao Nishiyama					Bg8○	X	3000	
Prof. Toshiaki Hasenaka					Bg8○	X	3000	
Prof. Fuyuki Shimojo					Bg8○	X	3000	
Prof. Tsutomu Mashimo					Bg8○	HP?	3000	
Prof. Hiroshi Isobe					Bg8○	HP	3000	
Prof. AkiraYoshiasa					Bg8○	HP	4000	

KR: KKR Hotel Kumamoto    KS: Kusunoki in KU、 HP : Hot Spring