Program
Isotope-ratio mass spectrometry
23-25 November, 2011
Haeundae Grand Hotel in Busan, Korea

**Wednesday, November 23**

*Special session: Geochemical research related with activity of the Baegdusan volcano*

9:30-9:40  Registration for the special session

Chair: Jin-Ho AHN (Seoul National University)

9:40-10:00  Sung-Hyo YUN (Busan National University)
            Unrest at the Mt. Baegdusan

10:00-10:50  Takeshi OHBA (Tokai University)
            Geochemical study of the crater lake at Kusatsu-Shirane volcano for the evaluation of volcanic activity

10:50-11:00  Tea Break

11:00-11:50  Takeshi OHBA (Tokai University)
            Geochemical study of fumarolic gases at some active volcanoes for the evaluation of volcanic activity

11:50-12:30  Minoru SAKAMOTO (National Museum of Japanese History)
            Comments on "$^{14}$C Wiggle-Matching of the B-Tm Tephra, Baegdusan Volcano"

12:30-12:40  Discussion

12:40-14:00  Lunch

*Pre-seminar 2011 in Busan: Breakthrough in mass spectrometry*

Chair: Tachoon KIM (KOPRI) and Yuji ORIHASHI (Univ. Tokyo)

14:30-14:35  Opening

14:35-15:20  Tetsuya YOKOYAMA (Tokyo Institute of Technology, Japan)
            Breakthrough in Thermal Ionization Mass Spectrometry

15:20-16:05  Urumu TSUNOGAI (Hokkaido University, Japan)
            Breakthrough in Isotope-Ratio Mass Spectrometry
16:05-16:20

*Tea Break*

16:20-17:05

Takafumi HIRATA (Kyoto University, Japan)
Breakthrough in ICP-Mass Spectrometry

17:05-17:50

Keisuke NAGAO (University of Tokyo, Japan)
Breakthrough in Noble Gas Mass Spectrometry

17:50 Closing

18:00-20:30

*Dinner party at Haeundae Grand Hotel*

20:30-22:00

*Poster session (I)*

**Chair: Seung-Gu Lee (KIGAM) and Masaharu TANIMIZU (JAMSTEC)**

P1: Naoyoshi IWATA
Method and problem in K-Ar dating of young volcanic rocks

P2: Makiko KIKUCHI
Noble gases in radiation-damaged zircon above the Bangombé natural fission reactor

P3: Yuichiro CHO
Development of a laser ablation isochron K-Ar dating method for landing planetary missions

P4: Fumihiko KITAMURA
Noble gases in olivines in Udachnaya kimberlite, Siberia

P5: Daisuke UMEMOTO
Generation of carbon films and comparative noble gas analysis with phase Q

P6: Tomoyuki SHIBATA
Trace and Sr, Nd and Pb isotopic compositions of Sakurajima volcano, southern Kyushu Island, Japan

P7: Kyeong Ja KIM
New investigations of paleoclimate and environmental change using authigenic beryllium isotope records

P8: Urumu TSUNOGAI
Hydrogen isotopes of H₂ in volcanic plumes: Tracers for remote temperature sensing of fumaroles

P9: Atsuuki SUZUKI
Triple oxygen isotopic composition of nitrate in plants

P10: Kouhei SAKATA
Lead isotope in rainwater and aerosol in Hiroshima, Japan

P11: Yuji ORIHASHI
Geochronological fingerprint revealed the evolution of the crust underlying Cerro Pampa, Argentine Patagonia: Constraint from LA-ICPMS U-Pb ages for exotic zircons in the Mid-Miocene adakite
P12: **Kanako SAKAMOTO**
The timing and the heating conditions of compound chondrule formation

P13: **Yuichirou NAGAI**
Development of chemical separations of Mo for the study of precise Mo isotope analysis in chondrites

P14: **Haruka KUSUNO**
Development the new extraction system for extremely low amount of cosmogenic $^{14}$C in HED meteorites

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**Thursday, November 24**

**Oral presentation**

Chair: Junji YAMAMOTO (Kyoto University)

9:00-9:20
- **Hiroshi HIDAKA**
  Ba isotopes of carbonaceous chondrites

9:20-9:40
- **Ryoichi NAKADA**
  Experimental study on stable isotope fractionation of light rare earth elements (LREE) during the adsorption

9:40-10:00
- **Byeon-Gak CHOI**
  High-precision oxygen isotope microanalysis of silicates using NanoSIMS

10:00-10:20
- **Yoshihiro OTA**
  D/H ratios of phosphates in Martian meteorites ~what’s the source? ~

10:20-10:40
- **Seung-Gu LEE**
  Geochemical significance of $^{14}$C, $^3$H, $^{18}$O, $^{2}$H and $^{87}$Sr/$^{86}$Sr isotopic data from Haeundae and Dongrae hot spring waters, Busan, South Korea

10:40-11:00
  Tea break

Chair: Urumu TSUNOGA (Hokkaido University)

11:00-11:20
- **Takafumi HIRATA**
  High-spatial resolution laser ablation-ICP-Mass Spectrometry for elemental and isotopic analysis of solid materials

11:20-11:40
- **Masaharu TANIMIZU**
  High precision $^{11}$B/$^{10}$B analysis with a simplified MC-ICP-MS
11:40-12:00
Satoki OKABAYASHI
Iron isotopic signature for metal grains of ordinary chondrites determined by LAL-MC-ICPMS technique

12:00-12:20
Sho MUKOYAMA
New analytical technique for metal-binding proteins using gel electrophoresis-LA-ICPMS

12:20-12:40
van GINNEKEN
The parent body of the ca. 480 kyr-old Tunguska-like impact over Antarctica

12:40-14:00

Lunch

Chair: Sung Hi CHOI (ChungNam National University)
14:00-15:00
Special talk: Youngsook HUH
In search of isotopic proxies for continental weathering

15:00-15:20
Minoru KUSAKABE
Decoupled behavior of CO$_2$ and He in Lake Nyos, Cameroon

15:20-15:40
Hossein AZIZI
Geochemistry, Sr-Nd isotopes and Ar-Ar age for adakite rocks in the northern Sanandaj-Sirjan Zone, NW Iran

15:40-16:00

Tea break

Chair: Hyeon Cheol KIM (KIGAM)
16:00-16:20
Junji YAMAMOTO
Noble gas isotopic constraint on depth of layered mantle boundary

16:20-16:40
Takahito OSAWA
Separation of noble gas carrier using ultra centrifugation

16:40-17:00
Susumu NOHDA
A large negative Sr isotope excursion from the Ediacaran paleo- mid-oceanic atoll carbonates in the Gorny Altai Mountains, Siberia: chemostratigraphic correlation and relevant environmental change
17:00-18:30

*Poster presentation (II)*

Chair: Seung Ryeol LEE (KIGAM) and Tomoyuki SHIBATA (Kyoto University)

P15: Keisuke NAGAO
Noble gases in the Itokawa samples returned by the Hayabusa spacecraft

P16: Keiko SATO
Power supply renewal for GVI-5400 mass spectrometer

P17: Masahiro KOBAYASHI
Construction of noble gas purification line for highly sensitive halogen determination

P18: Takehiko SAITO
Determination of trace amounts of halogens using noble gas mass spectrometry

P19: Shintaro MATSUDA
Noble gas study of the KOREAMET Antarctic meteorite collections

P20: Tsuyoshi TANAKA
$^{87}\text{Sr}/^{86}\text{Sr}$, $^{18}\text{O}$, and $^{13}\text{C}$ in calcareous sandstones indicate quick reaction of CO$_2$ and silicate minerals

P21: Takaaki FUKUOKA
Strange REE pattern of sediment collected from tributary stream of Arakawa river

P22: Takuya OHYAMA
Regional differences in the photochemical reaction paths of NOX estimated from the $\delta^{17}$O tracer of nitrate

P23: Yuka JOMORI
Spatial distribution of strontium isotope ratios ($^{87}\text{Sr}/^{86}\text{Sr}$) in Hokkaido

P24: Mi Kyung CHOO
Geochemistry of the Cenozoic plateau lavas from the Pali Aike volcanic field and Morro Chico Volcano, southern Patagonia, South America

P25: Teruyuki MARUOKA
Comparison of pretreatment methods for extraction of carbonate-associated sulfate

P26: Akira YAMAGUCHI
In-situ analyses of platinum group elements in CK chondrite

P27: Naoko IKEDA
Sm isotopic compositions of early condensation minerals in carbonaceous chondrites

P28: Daeyeong KIM
Fabric analyses of natural blueschists and its implications for seismic anisotropy of the subducting oceanic crust

P29: Yuyoung LEE
Petrogenesis of 2.51 Ga tonalitic migmatites from Daejjak Island, central Korea: Implications for disequilibrium melting of igneous source

18:30-

*Dinner*
Friday, November 25

Oral presentation

Chair: Mi Jung LEE (KOPRI)

9:00-10:00
Special talk: Jun-ichi MATSUDA
The isotopic evolution model of mantle-atmosphere system: Osaka model

10:00-10:20
Taehoon KIM
Li abundances and isotopic compositions of Oman ophiolites: constraints on hydrothermal alteration of the ancient oceanic crust

10:20-10:40
Yusuke MIYAZAKI
Implantation and diffusion of SW-origin noble gases at the asteroids’ surface

10:40-11:00
Ichiro KANEOKA
How can we constrain the chemical state of the Earth’s interior based on radiogenic and noble gas isotopes? - an example of application of isotopic ratios in Earth sciences

11:00-11:20
Wan HONG
Ultra-rare isotope analysis by accelerator mass spectrometry (AMS)

11:20-11:40
Tsuyoshi IIZUKA
Geochronology, geochemistry and Raman spectroscopy of meteorite zircons

Chair: Takafumi HIRATA (Kyoto Univ.) and Keisuke NAGAO (Univ. Tokyo)

11:40-12:00
Business meeting

12:00 Closing

1) Maximum size for poster presentation is 90 cm (horizontal) x 150 cm (vertical). The poster will be displayed on table during discussion.

2) 20 minutes will be allocated to each oral presentation including discussion. 15 minutes talk may be preferable.

3) LCD projector is available.