

## Commemorative Ceremony of the 20th Anniversary of RITE “Gift for Future Generation - Low Carbon Society for the Beautiful Earth”



Marking the 20th year since RITE was founded here in Kyoto in July 1990 receiving support and cooperation from the government, industrial community, and universities to play a role to realize New Earth 21 program proposed by the Japanese government to the world, we held commemorative events on November 2nd, 2010.

Facility tour of our headquarters held in the morning was attended by around 40 guests. At the start of the tour, Senior Managing Director Takashi Honjo made an address saying “Our technologies accumulated over 20 years are now going to blossom” and introduced R&D activities of each group. After that, participants visited the laboratories in J&S memorial building etc.

In the afternoon, memorial lecture, commemorative ceremony, and reception were held at Hotel Granvia Kyoto. Attendance of some 250 people from industry, government, and academia made the events successful.

[Memorial lecture]

Kyoto University President Dr. Hiroshi Matsumoto delivered a lecture titled “Ars Vivendi and Use of Space Energy.”

[Commemorative ceremony]

Chairman Takashi Imai made a speech on behalf of RITE saying “We will continue to work actively on developing innovative technologies to find a breakthrough in the global environmental issues and promote their practical application” and introduced the slogan to commemorate our 20th anniversary, “Gift for Future Generation - Low Carbon Society for the Beautiful Earth.” Following that, remarks by guests of honor were given, namely, by Economy, Trade and Industry Minister Akihiro Ohata (read by Deputy Director-General for Industrial Science and Technology Policy Junya Nishimoto), Kansai Economic Federation Chairman Hiroshi Shimozuma, and Kyoto Prefecture Governor Keiji Yamada. Then, a brief overview of activities of RITE was provided.

[Reception]

President Yoshihisa Akiyama made an opening address on behalf of RITE, and Kyoto Culture Foundation President Teiichi Aramaki, who had given support in establishing RITE as then-governor of Kyoto prefecture, made a congratulatory speech. Following the speeches, kagami-biraki (breaking the circular lid of a sake barrel with a wooden mallet to celebrate the beginning of an event) was performed and former President of RITE Shoichiro Kobayashi, Adviser of the Kansai Electric Power Co., Inc., proposed a toast. After that, the participants enjoyed the reception in a relaxed atmosphere. To conclude the party, Senior Vice President Yoichi Kaya thanked the guests for their attendance, and asked their kind support to RITE in future.



Facility tour of our headquarters



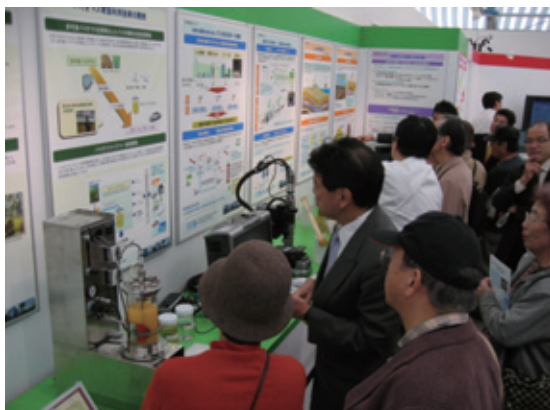
Commemorative ceremony

## The 1300<sup>th</sup> Anniversary of Nara Heijo-kyo Capital Technologies developed in Kansai Science City -See the future from Heijo Palace Site-

Planning, Survey, and Public Relations Group

The technologies developed in Kansai Science City-See the future from Heijo Palace Site- was held at the Heijo Palace Site on November 5 to 7, 2010.

Nine research institutes including RITE participated in this event to promote an understanding of the activities on going at Kansai Science City. The popularity of the celebration of the 1300th Anniversary of Nara Heijo-kyo Capital boosted the attendance to reach 11,000 visitors in three days.



RITE exhibited poster and showpieces about global warming countermeasure technologies such as CCS and biorefinery, scenario-making for global warming mitigation, industry-institute cooperation/public relations.

The RITE promotion video was shown and RITE staff gave a quiz show about environmental problems to introduce RITE's activities and social impact.

## Symposium on Innovative Environmental Technologies -The Realization of Low Carbon and Sustainable Society-

Planning, Survey, and Public Relations Group

The symposium entitled “Symposium on Innovative Environmental Technologies ~The Realization of Low Carbon and Sustainable Society~” was held on December 2, 2010 at Nadao Hall in Tokyo.

The symposium was organized by RITE, and supported by the Ministry of Economy, Trade and Industry(METI)/the Chemical Society of Japan/the Society of Chemical Engineers, Japan/the Japan Society for Bioscience, Biotechnology, and Agrochemistry/the Japan Society of Energy and Resources/the Japan Institute of Energy. A total of 406 attendees from METI, the Ministry of the Environment as well as industry and academia from various fields gathered to hear the latest advances in environmental technologies.

The symposium was opened by Dr. Yoichi Kaya who delivered the keynote address. Rite experts from each research groups reported the outcomes and outlooks of their researches such as CCS technology, biorefinery technology and scenarios for mitigating global warming, with the current trends of the world.



## IIASA-RITE International Symposium 2010

### Systems Analysis Group

The IIASA-RITE International Symposium 2010 was held at Nadao Hall in Tokyo on February 8th, 2010. This symposium was co-hosted by the International Institute for Applied Systems Analysis (IIASA), the Japan Committee for IIASA, and the Research Institute of Innovative Technology for the Earth (RITE) with support from the Ministry of Economy, Trade and Industry, Japan (METI).

We are honored to have a variety of leading experts including Prof. Detlof von Winterfeldt, a director of the IIASA, Prof. Nabojša Nakicenovic from the IIASA, Dr. Seita Emori from the National Institute for Environmental Studies, Prof. Nobuo Mimura from Ibaraki University, Ms. Junko Edahiro from e's Inc., Yoichi Kaya, a director general of RITE, and Keigo Akimoto from RITE. They introduced the latest research outcomes, focusing on the necessity of system analysis to solve climate change, the importance of scientific views and decision making under uncertainty, the necessity of not only mitigation measures but also its best mix with adaptation measures, and the necessity of a long-term view/a view of international fairness for sustainable development.

We had an attendance of 230 people from industries, ministries and universities. Their active discussion motivated us to dedicate further efforts to our research and development.



## Many visitors attended our seminar and exhibition booth at BioJapan2010 (World Business Forum)

### Molecular Microbiology and Biotechnology Group

The World Business Forum organized by the BioJapan Organizing Committee and Nikkei Business Publications Inc. was held at Pacifico Yokohama from 29th September to 1st October 2010. Director, Dr. Hideaki Yukawa, moderated the seminar on “Green Innovation” and our group displayed the highly efficient bio-conversion technology ‘RITE-Bioprocess’, along with posters and a video presentation, which allowed to introduce in our activities in detail. In addition, our corporate strategic alliance partners joined the exhibition and their panels were displayed also in the RITE booth. We are planning to present and participate in the exhibition at BioJapan 2011 too where we will show our latest progress and achievements.



RITE exhibition booth at BioJapan 2010

## The Second Japan-China CCS-EOR Workshop

### CO<sub>2</sub> Storage Research Group

The second Japan-China CCS-EOR workshop was held on April 5 and 6, 2010 at Grand Palace, in Tokyo, which was co-hosted by RITE and China National Petroleum Corporation (CNPC) and aimed at exchanging information on CCS-EOR technologies between Japan and China. About 70 stakeholders from Japan and China attended the workshop.

Following opening statements from the governments (Coal Division of the Ministry of Economy, Trade and Industry and Department of Climate Change of the National Development and Reform Commission), experts from Japan and China reported on CO<sub>2</sub> Storage Basic Research; CO<sub>2</sub> Monitoring; CO<sub>2</sub> Simulation; CO<sub>2</sub> Capture Technology; Progress on EOR development; Case study of demonstration projects; and CCUS/System integration over two days. Active discussions were taken place on each issue.

Based on the results of the first and second workshops, Japan and China have agreed to collaborate on the following three themes on CCS-EOR:

- Research on CCS-EOR (CCUS) whole system
- Research on reservoir characterization technique
- Research on Microbial Restoration of Methane Deposits with Subsurface CO<sub>2</sub> Sequestration into the Depleted Oil Fields



Opening statement of Organizer

## CCS Technical Workshop 2010, CO<sub>2</sub> Monitoring Technology

### CO<sub>2</sub> Storage Research Group

On December 9th 2010, CCS Technical Workshop 2010 was held at Hotel Granvia Kyoto organized by RITE and supported by the Ministry of Economy, Trade and Industry (METI) National Institute of Advanced Industrial Science and Technology (AIST), Central Research Institute of Electric Power Industry (CRIEPI), Japan Society of Energy and Resources (JSER) and Japan CCS Co., Ltd. (JCCS). 169 related persons attended from companies, universities, research institutes and government agencies.

The speakers were Tip Meckel, The University of Texas on “Summary of current regional carbon sequestration partnerships activities, USA”; Wawan Gunawan A. Kadir, Institute Technology Bandung on “Energy policies, geophysical challenges and 4D microgravity development for reservoir monitoring during EOR (water and CO<sub>2</sub> injection) in Indonesia”; Masanori Abe, JCCS on “Japan is moving forward to large-scale CCS demonstrations”; Milovan Urosevic, Curtin University on “Otway basin project stage I: results of seismic monitoring”; Rob Arts, TNO on “Fourteen years’ experience of monitoring CO<sub>2</sub> injection in the Utsira Sand at Sleipner, offshore Norway”; Takahashi Akihisa, Geo-Science Laboratory on “Toward offshore CCS seismic monitoring -Development of permanent OBC system-”; and Ziqiu Xue, RITE on “Development of the technology to evaluate CO<sub>2</sub> storage based on seismic survey data”.

Researchers in RITE also delivered poster presentation. Fruitful discussion was made about CO<sub>2</sub> monitoring technology in CCS field among the participants.



Opening statement of Organizer

## GHGT-11 to be held in Kyoto in 2012

### Office for GHGT-11

The 11th International Conference on Greenhouse Gas Control Technologies (GHGT-11) will be held in Kyoto in November 2012. The GHGT conferences are international conferences guarded by IEA Greenhouse Gas R&D Programme (IEAGHG), which was established as an Implementing Agreement under the International Energy Agency, and in which RITE participates to represent Japan.

When GHGT-6 was held in Kyoto in October 2002, RITE took the lead in hosting the conference. The GHGT conferences are held every two years rotating between North America, Europe and Asia. The series will return to Asia after ten years, GHGT-11 again being held in Japan and co-organized by RITE and IEAGHG.

The GHGT conference series has established itself as the principal international conference on greenhouse gas mitigation technologies especially on CCS (CO<sub>2</sub> Capture and Storage), drawing experts from across the world. GHGT-11 will be a four-day conference that includes keynote speeches, plenary sessions, around six parallel technical sessions and poster sessions. The sessions will allow about 250 oral presentation to be made, and 700 posters to be presented.

Call for paper will open in the autumn of 2011. Further schedule and detailed information on GHGT-11 will be put on the websites of RITE and IEAGHG. GHGT-10 held in Amsterdam in September 2010 was attended by some 1,600 delegates, but only 200 of them were from Asia. In order to increase Asia's presence at GHGT-11 to be held in Japan, we would like to invite all of you who are working on global warming to submit papers and attend the conference, to enhance global cooperation on research and development for greenhouse gas control technologies.

#### 1. Overview of GHGT-11

- (1) Dates: Sun. November 18 - Thur. November 22, 2012  
(Venue: Kyoto International Conference Center)
- (2) Estimated number of attendees: 1,600
- (3) Organized by: RITE & IEAGHG
- (4) To be supported by METI etc.
- (5) Programme
  - November 19: Keynote addresses (Plenary session)
  - November 19-22: around 6 parallel Technical sessions, Poster sessions
  - November 22 PM: Conclusions, Closing session
- (6) Social events
  - Welcome Reception (November 18)
  - Networking Reception (November 20)
  - Conference Dinner (November 21)

## Themes of Technical Sessions at GHGT-10 (September 2010, Amsterdam)

Capture	Pre-Combustion, Post-Combustion, Membranes, Techno-Economic Comparisons, Oxy-Combustion, Novel Systems, etc.
Utilisation	ECBM and other Uses, EOR
Storage	Modelling Tools, Coal Bed Storage, Risk Assessment, Seals, Saline Aquifer, Field Studies, Capillary and Solubility Trapping, etc.
Integrated	Integrated CCS Systems, System Flexibility: Need for Flexibility, CO <sub>2</sub> Transportation, Health and Safety Issues, etc.
Demonstrations	Demonstration Projects, New Developments, Experience with Storage, Lessons Learnt
Policy	Scenarios, Policy Instruments
Negative Emissions	Capture from Air - Biomass and CCS, Capture from Air - Mineralisation Routes
Legal	Legal Issues and Regulatory Frameworks
Public Perception	Public Perception and CCS, Learning from Projects, Communication and CCS

## 2. Schedule Outline (subject to change)

### (1) Call for Papers / Development of Technical Programme

- Autumn of 2011: Call for Paper open (abstracts submittable)
- Summer of 2012: Notification of paper acceptance or rejection
- October 2012: Full paper due / Final programme established and listed on web site

### (2) Registration

- Spring and summer of 2012: Early bird registration open
- From the next day that Early bird registration closes: Late registration open

## Web pages on GHGT-11

\* For information in Japanese, please visit our web site

<http://www.rite.or.jp/Japanese/ghgt11/ghgt11.html>

\* For information in English, please visit <http://www.ghgt.info/>



GHGT-11 invitation video