GHGT-11 to be held in Kyoto in November 2012

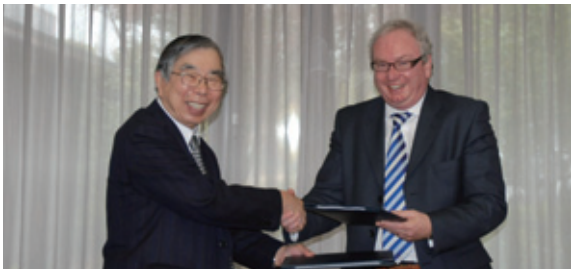
Office for GHGT-11

Research Institute of Innovative Technology for the Earth

GHGT-11

■ Dates: Sunday 18th – Thursday 22nd November, 2012
(Venue: Kyoto International Conference Center and hotels in Kyoto city)

■ Hosted by: RITE & IEAGHG



Signing of the Memorandum of Understanding for GHGT-11
Left: Yoichi Kaya (President, RITE), Right: John Gale (General Manager, IEAGHG)

RITE will host the 11th International Conference on Greenhouse Gas Control Technologies (GHGT-11) which 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 of which RITE is a member to represent Japan. The GHGT conferences are held every two years rotating between North America, Europe and Asia. GHGT-11 will mark the 20th year since the first conference of the series (then called ICCDR-1) was held, and the first event of the series held in Japan in the ten years.

<<Programme Overview (Preliminary)>>

	Sun.Nov. 18th	Mon. Nov. 19th	Tues. Nov.20th	Wed. Nov.21st	Thurs. Nov.22nd
AM		Welcome and Keynote Address	Plenary Session	Plenary Session	Plenary Session
			Technical Session 4	Technical Session 7	Technical Session 10
		Technical Session 1	Technical Session 5	Technical Session 8	Technical Session 11
PM		Technical Session 2	Poster Session A	Poster Session B	Final Panel Session
		Technical Session 3	Technical Session 6	Technical Session 9	Closing Session
Night	Registration and Welcome Reception (in Kyoto city)		Networking Reception (TBD)	Conference Dinner (in Kyoto city)	

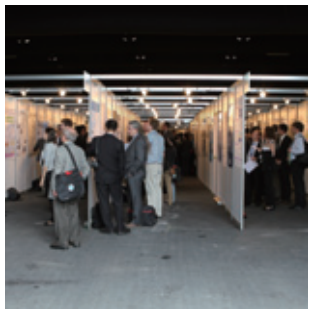
The GHGT conference series has established itself as the principal international conference on greenhouse gas mitigation technologies especially on CCS (CO_2 Capture and Storage). Abstracts for GHGT-11 submitted during the period from the 26th September 2011 to the 15th February 2012 in response to the Call for Papers are reviewed by the Programme Committee of the conference, and presentations will be made at the technical sessions of the conference, which consist of oral sessions (around 6 parallel sessions) and poster sessions.

<<GHGT-11: Technical Themes>>

	Main themes	Sub themes
1	Capture	pre-combustion; post-combustion; oxyfuel technologies; advanced solvents; membranes; etc.
2	Geo Storage	CO_2 injectivity; storage capacities; monitoring technologies and techniques; wellbore integrity; costs (storage specific); etc.
3	Other Storage	coal beds, mineralisation; basalts and other low permeability reservoirs, ocean storage.
4	CCS for industrial sources (non-power)	iron and steel; cement; refineries; high concentration CO_2 sources; distributed CCS.
5	Transport	pipelines; shipping; hubs and transport networks; CO_2 quality issues; source-sink matching.
6	Negative CO_2	biomass energy use combined with CCS; capturing CO_2 from the air; ocean fertilisation; etc.
7	CO_2 Utilization options	EOR; EGR; ECBM; CO_2 use for production of algae or chemicals; CO_2 for enhanced geothermal; etc.
8	Demonstration	pilot projects; lessons learnt; costs; developments of best practice guidelines; program overviews; etc.
9	Tech Assess & Integration	health and safety issues; whole system LCA studies; CCS and water use; risk assessments; etc.
10	Commercial issues	commercial relationships; value chains; public-private relationships; finance.
11	Public perception	social science research; communication activities and experiences, knowledge sharing.
12	Policies	the role of CCS in furture energy systems, beyond Kyoto:non-CO_2 GHG emission reduction, carbon tax and CCS obligations; etc.
13	Legal & Regulatory	regulatory and legal developments; Requirements; liability transfer and long term liability; emissions accounting, health and safety issues.
14	Education, training and capacity building	needs; experiences; etc.

Technical sessions (oral and poster sessions) of GHGT-11 will serve as platforms to discuss the technical themes related to CCS as show n above. On the other hand keynote speeches and panel discussions at GHGT-11 will take up wider variety of topics like energy policies, solutions for commercializing advanced technologies and international cooperation, and promote Japan's leading edge environmental technologies to the world.

Keynote Speech (GHGT-10)



Poster session (GHGT-10)

Online conference registration will open on the 23rd April and early bird discount will be available until the 23rd July (JST). GHGT-10 held in Netherlands in 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 working on CCS and other global warming prevention measures to attend the conference to enhance global development of greenhouse gas control technologies.

Online registration, conference programme will be available at **www.ghgt.info**

Early Bird Registration	23rd April – 23rd July 2012 (JST)
Late Registration	24th July 2012 – 15th November 2012 (JST)

Symposium on Innovative Environmental Technologies
–The Realization of Low Carbon and Green Innovation–

Planning, Survey, and Public Relations Group

The symposium entitled "Symposium on Innovative Environmental Technologies –The Realization of Low Carbon and Green Innovation–" was held on December 1, 2011 at Nadao Hall in Tokyo.

The symposium was organized by RITE, and supported by Minister of Economy, Trade and Industry(METI), The Chemical Society of Japan, The Society of Chemical Engineers, Japan, Japan Society for Bioscience, Biotechnology, and Agrochemistry, Japan Society of Energy and Resources, The Japan Institute of Energy, IEAGHG.

We had 348 attendances which emphasizes the great interest in our activities, including participants from METI, Ministry of the Environment and various fields of industry and academia.

The symposium started with Dr. Kenji Yamaji's lecture and then the experts from each research group reported the outcome and outlook of their researches such as scenarios for mitigation global warming, biorefinery technology and CCS technology, with the current trends of the world and Japanese situation. Vigorous questioning and opinions were expressed by the audience.

We received questionnaires from 194 attendances. According to the results, 171 people said that they had been satisfied with the lectures.

ALPS International Symposium 2011

Systems Analysis Group

The ALPS International Symposium 2011 was held at Nadao Hall in Tokyo on February 9th, 2011. This symposium was hosted by 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. Nabojsa Nakicenovic and Dr. Markas Amann from the International Institute Applied Systems Analysis, Dr. Mark Levine from the Lawrence Berkeley National Laboratory, Dr. Leon E. Clarke from the Pacific Northwest National Laboratory, Kejun Jiang from Energy Research Institute National Development and Reform Commission, Kenji Yamaji, a director general of RITE, and Keigo Akimoto from RITE. The symposium was titled "the Frontiers of Scenarios for Climate Change Research and Assessment." We discussed scenario analyses based on a long-term and multiple perspectives.

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.

Establishment of Green Earth Institute Co., Ltd. toward the industrialization of biorefinery

Molecular Microbiology and Biotechnology Group

The biorefinery is greatly expected to enable novel technologies or industries that can produce chemicals and liquid fuels from renewable non-food biomass that eschew competition with food resources. Green Earth Institute Co., Ltd. was established to provide biofuels and green chemicals by using a highly efficient process called the RITE Bioprocess which was developed by RITE.

The concept of the establishment is the industrialization of our RITE-Bioprocess to contribute to the conservation of global environment through efforts against global warming and hence the realization of sustainable post-fossil resources society. G.E.I. Co., Ltd. hopes to engage in global business as a leading company in the biorefinery sector.

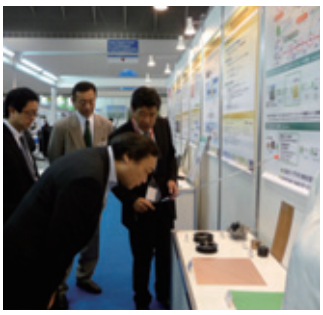
Corporate name: Green Earth Institute Co., Ltd.
Founded: 1st. September 2011
Address: University of Tokyo UCR Plaza 6F,
7-3-1 Hongo, Bunkyo-ku, Tokyo 113-0033, JAPAN

Many visitors attended our seminar and exhibition booth at BioJapan2011 (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 5th to 7th October 2011. This time RITE hosted the forum as a sponsor organization. RITE Director, Dr. Hideaki Yukawa, moderated the seminar on "Green Innovation" following last year.

Our group exhibited the highly efficient bio-conversion technology "RITE-Bioprocess" along with posters and video presentations, which allowed detailed introduction of our activities, and our corporate strategic alliance partners joined the exhibition, with their panels displaying products which were produced using our RITE-Bioprocess. We also introduced our new business arm, the Green Earth Institute Co., Ltd. established this September. We thank very much all those who visited of our booth.



Mr. Takayuki Ueda, front, Director-General, Manufacturing Industries Bureau of Minister of Economy, Trade and Industry, stopped by our booth.

RITE Booth

2011 fellowship award from The Society for Industrial Microbiology

Molecular Microbiology and Biotechnology Group

RITE Director H. Yukawa was awarded the 2011 fellowship award from The Society for Industrial Microbiology (SIM). Founded in 1949 in NY, SIM is an international association dedicated to the advancement of applied microbiology essential for industrial biotechnology. In SIM Meetings, advancement of microbiological sciences which apply to industrial products, biotechnology, materials and processes, are presented and discussed. Global chemical corporations and prominent universities are also on the member list of the association.

This prize was started in 1985 and is given to individuals for their contributions to industrial microbiology. Dr. H. Yukawa is the first Japanese recipient of this prestigious award.

Society for Industrial Microbiology

SIM President Badal Saha and Dr. H. Yukawa

Symposium for Innovative CO_2 Membrane Separation Technology

"Recent trend of membrane separation technology contributing to the prevention of global warming"

Chemical Research Group

On November 4th 2011, Symposium for Innovative CO_2 Membrane Separation Technology "Recent trend of membrane separation technology contributing to the prevention of global warming" was held at Dai-ichi Hotel Tokyo, sponsored by Molecular Gate Membrane Module Technology Research Association, co-sponsored by Ministry of Economy, Trade and Industry (METI) (supported by Japan CCS Co., Ltd.(JCCS), Global CCS Institute, Japan Association for Chemical Innovation (JACI), The Membrane Society of Japan, and The Society of Chemical Engineers, Japan(SCEJ)). 170 related persons attended from companies, universities, research institutes and government agencies.

Molecular Gate Membrane Module Technology Research Association was established by Kuraray Co., Ltd., Nitto Denko Corporation, Nippon Steel Engineering Co., Ltd., and RITE in order to commercialize a molecular gate membrane module, which was pioneered by chemical research group of the RITE.

The purpose of this symposium was to report the recent research trend of CO_2 separation membrane technologies, which the Association have been developing, and the overview of its research and development in overseas, and then widely provide people interested in CO_2 separation with the latest information to help them understand R&D activities for CO_2 reduction required for both public and private sectors.

The speakers ware Yoichi Kaya, Senior Vice President of RITE at that time "Response to Global Warming"; Shin-ichi Nakao, Professor of Kogakuin University "Membrane Separation Technology Status and Future Outlook"; Benny D. Freeman, Professor of University of Texas "Latest trend of membrane technologies in North America"; Tomokazu Ise, Supervisor of Kurashiki lab of the Technology Research Association, "Report of Investigation into Membrane Technologies in Overseas"; Shingo Kazama, Senior Managing Director of the Technology Research Association, "Next-Generation Membrane Module"; Hiroshi Iwahori, Senior Consultant of Ibaraki lab of the Technology Research Association, "Deployment of the Membranes to the World Market".

Membrane modules and posters, etc. were displayed by the Association.

We conducted a survey of visitors. As a result, from 69% of respondents, we received a good response.

CCS Workshop
-Ensuring safety toward public acceptance-

CO_2 Storage research Group

CCS Workshop -Ensuring safety toward public acceptance- was successfully held at Bellesalle Shiodome, Chuo-ku, Tokyo on January 18th, 2012. The workshop was co-organized by the Ministry of Economy, Trade and Industry (METI) and RITE and supported by the National Institute of Advanced Industrial Science and Technology (AIST), the Central Research Institute of Electric Power Industry (CRIEPI), the Global CCS Institute (GCCSI), the IEA Greenhouse Gas R&D Programme (IEAGHG), the Japan Society of Energy and Resources (JSER) and Japan CCS Co., Ltd. (JCCS). We had 386 attendees from governmental organizations, various industries, universities, and research institutes at home and abroad.

Kenji Yamaji, Director General, RITE and John Gale, General Manager, IEAGHG, UK gave keynote speeches on "Role of CCS in Sustainable Energy Future" and "Challenges for practical use and commercialization of CCS", respectively. Other talks were given by John Bradshaw, CEO, CO_2 Geological Storage Solutions (CGSS),Australia on "Geological storage of CO_2: "Practicalities" - issues, risks and uncertainties associated with site selection"; Sally Benson, GCEP Director, Stanford University, USA on "Monitoring Performance of Geological Storage Projects"; Ziqiu Xue, Associate Chief Researcher, CO_2 Storage Research Group, RITE on "Microseismic Monitoring at the CCS fields"; and Peta Ashworth, Leader of Science into Society Group (SISG), CSIRO, Australia, on "Stakeholder engagement for successful CCS development: Considerations and lessons learned". Moderator was Kozo Sato, Professor, the Frontier Research Center for Energy and Resources Graduate School of Engineering, the University of Tokyo.

Alongside the workshop, RITE held poster sessions by RITE researchers. The attendees had fruitful discussions on various issues such as stakeholder engagement or public acceptance.