



The 21st Century COE Program "Innovative Nuclear Energy Systems for Sustainable Development of the World" (COE-INES)

COE-INES, Research Laboratory for Nuclear Reactors, Tokyo Institute of Technology  
N1-12, 2-12-1 O-okayama, Meguro-ku, Tokyo 152-8550, JAPAN  
Tel/Fax: +81-3-5734-3992, E-mail: [coe-ines@nr.titech.ac.jp](mailto:coe-ines@nr.titech.ac.jp)  
URL: <http://www.nr.titech.ac.jp/coe21/eng/index.html>

*Invitation to*  
**COE-INES International Workshop on**  
**"Toward Hydrogen Economy; What Nuclear can contribute and how"**  
**(THEN)**

5 - 6 November, 2004

Room 913, Campus Innovation Centre, Tamachi Campus, Tokyo Institute of Technology  
(1 min. walk from East Exit of JR Tamachi Station, Tokyo)

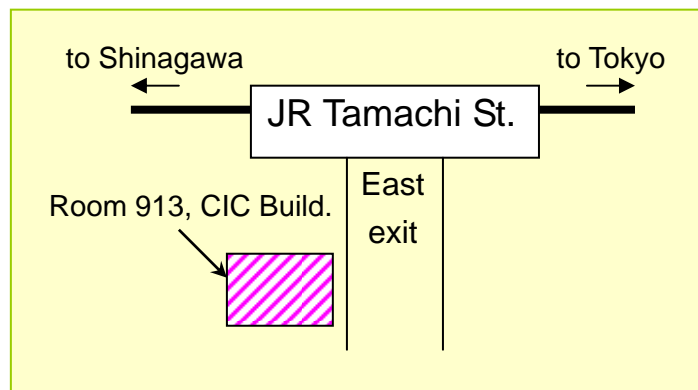
The COE-INES\* workshop, THEN, aims to discuss hydrogen technologies for hydrogen economy development joining with experts of all fields related on hydrogen system. Hydrogen energy technologies are required to optimize the combination between hydrogen production, hydrogen utilization, and hydrogen market now. The key targets of technology research and development will be talked to establish new and practical hydrogen economy. The meeting topics include hydrogen system, nuclear and non-nuclear hydrogen production, hydrogen storage and transportation, fuel-cells, hydrogen energy management, hydrogen economy and all subjects related on hydrogen system. Your attendances are heartily welcome. Please send e-mail including attendances names, affiliation, correspondence postal address, phone/fax number, mail subject of "COE Workshop THEN", to address of [coe-ines@nr.titech.ac.jp](mailto:coe-ines@nr.titech.ac.jp), please. The attendance number is limited in 50 people.

Visit the web site at <http://www.nr.titech.ac.jp/coe21/eng/> to access the latest information, please.

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\* COE-INES stands for "Tokyo Institute of Technology - The 21st Century COE Program "Innovative Nuclear Energy Systems for Sustainable Development of the World", <http://www.nr.titech.ac.jp/coe21/eng/>

Coordinators: Kazuaki Matsui, COE-INES Professor, IAE, [mac@iae.or.jp](mailto:mac@iae.or.jp)  
Yukitaka Kato, COE-INES sub-leader, [yukitaka@nr.titech.ac.jp](mailto:yukitaka@nr.titech.ac.jp)  
Inquiry: Y. Kato, Research Laboratory for Nuclear Reactors, Tokyo Institute of Technology,  
2-12-1-N1-22 O-okayama, Meguro-ku, Tokyo 152-8550, Japan  
Phone/Fax +81-3-5734-2967, E-mail: [yukitaka@nr.titech.ac.jp](mailto:yukitaka@nr.titech.ac.jp)



Map to the meeting room in the Campus Innovation Centre, CIC.



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COE-INES International Workshop on  
"Toward Hydrogen Economy; What Nuclear can contribute and how"

**Friday 5<sup>th</sup> November, 2004**

9:00-9:30 Registration

9:30-9:40 Greetings, Hiroshi Sekimoto, Tokyo tech

9:40-9:50 Guidance of the workshop, Yukitaka Kato, Tokyo Tech

10:00-12:00 Panel 1 "Hydrogen Energy System"

Chair: Masao Hori, Nuclear Systems Association, Japan

Panelists: "Short-term Perspective of Nuclear Hydrogen Production"

Karl Verfondern, Research Center Juelich, Germany

"Nuclear Hydrogen in Nuclear Vision 2050"

Kazuaki Matsui, Institute of Applied Energy

"Solar Hydrogen Production Using Concentrated Solar Thermal Energy"

Yutaka Tamaura, Tokyo Institute of Technology

"A New Roadmap to Hydrogen Economy in Japan"

Kenzo Fukuda, Institute of Applied Energy

12:00-13:30 Lunch

13:30-15:00 Panel 2 "Hydrogen production (1)"

Chair: Kenzo Fukuda, Institute of Applied Energy

Panelists: "Overview of JAERI's R&D on Nuclear Hydrogen Production"

Ryutaro Hino, Japan Atomic Energy Research Institute

"The optimized thermal power of nuclear plant for hydrogen production"

Hidetoshi Karasawa, Hitachi Ltd.

"FR-MR Concept and it's Role on Sustainable Energy Supply in 21st Century"

Masanori Tashimo, Energy Think Tank

15:30-17:30 Panel 3 "Hydrogen production (2)"

Chair: Yukitaka Kato, Tokyo Institute of Technology

Panelists: "Liquid Fuel Production Using Fossil Fuel and Renewable Energy with CO<sub>2</sub> Zero Emission"

Masaki Onozaki, Institute of Applied Energy

"Hydrogen from industrial processes and reforming of fossil fuels"

Tomoji Hikita, Japan Institute of Energy

"Organic Decomposition in Supercritical Water by an Aid of Ruthenium (IV) Oxide as a Catalyst -Exploitation of Biomass Resources for Hydrogen Production-"

Yukihiro Izumizaki, Shinshu University

"A Review of Hydrogen Production from Nuclear Energy"

Ryuji Tsukada, Chiyoda Corporation

18:00- Party (5,000 JPY)



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**Saturday 6<sup>th</sup> November, 2004**

9:30-11:00 Panel 4 "Toward Hydrogen Economy"

Chair: Kazuaki Matsui, Institute of Applied Energy

Panelists: "Incentives for Energy Succession"

Eiji Oshima, High Pressure Gas safety Institute of Japan

"Reducing Peak Temperatures For Thermochemical Hydrogen Production: Liquid-cooled Reactors, Molten-salt Heat Transport, and Inorganic Membranes."

Charles W. Forsberg, Oak Ridge National Laboratory, USA

"Features of Nuclear Hydrogen Production and Perspectives for its Deployment in the Future Energy Architecture"

Masao Hori, Nuclear Systems Association, Japan

"Hydrogen Career System Based on Nuclear Power for Future Society"

Yukitaka Kato, Tokyo Institute of Technology

12:00-13:30 Lunch

13:30-15:30 Panel 5 "Proposal for Hydrogen Economy"

Co-chairs: C. Forsberg, K. Verfondern, K. Fukurda, K. Matsui, Y. Kato

Free discussion: Volunteers

\* 20 min for presentation is offered for each panelist.