

Scope and Current Status of Energy Workshop In Washington DC.

Dr. Chikashi NISHIMURA,

A Secretary of 3rd WMRIF
Fuel Cell Materials Center, NIMS

1st Asia MRIF, February 16, 2009



World Materials Research Institute Forum

WMRIF

First: June & July 2005 at NIMS,
10 countries 13 organization

2nd: June 2007 at BAM, Germany
21 countries 31 organization

3rd: June 2009 at NIST,
Washington DC, USA
~25 countries 40 organizations

Understanding of WMRIs,
each other

Establishment of 7 WGs for
promoting intercommunication

Energy Workshop:
**Materials Technology Contribution
to Energy & Environment Issue**

Commencement of Asia MRIF

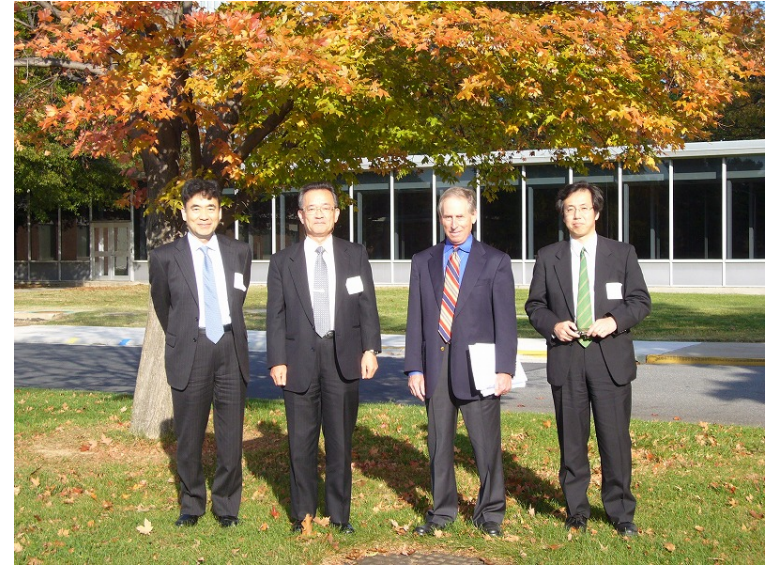
Promoting Communication among Young Scientists to Enhance Research
Collaboration



Preparation for 3rd WMRIF and Energy Workshop

- ★ WMRIF Planning Meeting
at NIST, Washington DC, October 23, 2008
Discussion of whole scheme of 3rd WMRIF
Energy Workshop: Goals, Outputs, Formats,
Selection of Speakers

- ★ Selection of Invited Speakers (20)
Nomination from USA, Europe and Asia
December 2008
10-15 nominees for each session
Prioritization by USA, Europe and Asia
January 2009
Selection of Candidates
at NIST, February 5th, 2009



Dr. Freiman, NIST

NIST, October 23, 2008



Energy Workshop: Materials and Measurement Challenges to Sustainable Energy

Scope:

The workshop will examine current and emerging challenges to Sustainable Energy related to the need for new and improved materials, and materials measurements and standards.

Lectures (20min.+ 10min discussion) would be given by key scientists.



Energy Workshop: Materials and Measurement Challenges to Sustainable Energy

Goals:

Examine challenges to sustainable energy technologies that are related to a need to develop new or improved materials

Development of potential collaborations through WMRIF

Suggestions for new energy policies



Energy Workshop: Materials and Measurement Challenges to Sustainable Energy

Participants:

WMRIF Meeting participants, invited speaker experts, from other institutions and industry, NIST scientists, and open to the public via registration

Outputs:

Summary Paper of Workshop Conclusions

Summary of sessions to be provided to the WMRIF General Assembly



Agenda of Energy Workshop

Energy Workshop: Day 1 June 22 (Mon), 2009	Energy Workshop: Day 2 June 23 (Tue), 2009
<p>900 Welcome Addresses NIST & Linda Horton Statement of Goals for Workshop</p> <p>930 Session 1: Energy/Materials Policy From USA, EU, Asia</p> <p>1100 Coffee Break</p> <p>1120 Session 2: Materials Technologies for Solar Energy Subtopics: inorganic; organic (4 Speakers)</p> <p>1220 Lunch</p> <p>1330 Solar Session (Cont.)</p> <p>1430 Session 3: Hydrogen and Biofuels: Materials from Start to Finish Subtopics: hydrogen generation, Transport and storage, hydrogen fuel cells, biofuels (4 speakers)</p> <p>1530 Break</p> <p>1600 Continue Hydrogen and Biofuels Session</p> <p>1700 Reception + Poster Session, NIST</p> <p>1900 Transport to Hotel</p>	<p>900 Session 4: Energy Storage and Conversion Materials Subtopics: batteries, thermoelectrics,</p> <p>1000 Coffee Break</p> <p>1020 Storage and Conversion Session (Cont.)</p> <p>1120 Session 5: Materials for Energy Efficiency Subtopics: lightweight materials, solid state lighting, higher temperature operation (4 speakers)</p> <p>1220 Lunch</p> <p>1330 Efficiency Session (Cont.)</p> <p>1430 Session 6: Nuclear Energy Subtopics: expiring standards, MSE demands, lifetime prediction, fusion (4 speakers)</p> <p>1530 Coffee Break</p> <p>1550 Nuclear Session (Cont.)</p> <p>1650 Session 7: Summary and Conclusions Priorities and Challenges</p> <p>1730 Transport to Hotel</p>



Agenda of WMRIF General Assembly

3rd WMRIF General Assembly: Day 1 June 24 (Wed), 2009	3rd WMRIF General Assembly: Day 2 June 25 (Thu), 2009
<p>830 Welcome Addresses Dr. Patrick Gallagher, Acting Director, NIST Dr. Eric Amis, Acting Director, MSEL Prof. Dr. Teruo Kishi, President, NIMS</p> <p>900 Report of Secretariat Dr. Masaki Kitagawa, NIMS</p> <p>910 Working Group Reports Working Group Leaders</p> <p>945 Coffee Break</p> <p>1000 Reports from Material Research Institutes, Directors of MRIs (5 minutes each, focus on programs, strategies & plans for energy)</p> <p>1230 Lunch and Group Photo</p> <p>1330 MRI Reports (Cont.)</p> <p>1500 Energy Workshop Summary Mike Simonson, ORNL</p> <p>1600 Breakout on 5 Energy Topics Plans for collaboration</p> <p>1730 Transport to hotel</p> <p>1900 Reception, Crown Plaza Suites Hotel</p>	<p>830 Presentations on Special Topics NanoEHS Synchrotron Sustainability</p> <p>1100 Coffee Break</p> <p>1130 Summary and Resolution of 3rd WMRIF; Agreement on Collaborative Projects</p> <p>1200 Plans and Venue for Next WMRIF and Associated Workshop</p> <p>1230 Lunch</p> <p>1330 Tours of Materials Research in Advanced Measurement Laboratory, NCNR, one other to be determined</p> <p>1600 Individual Working Group Meetings (as needed)</p> <p>1700 Adjourn; Transport to hotel and airports</p>



Candidates of Speakers

☐ Solar Energy

Michael D. McGehee, USA

Michael Graetzel, Switzerland

J. Durrant, UK

Liyuan Han, Japan

☐ Hydrogen and Biofuels

Martin Keller, USA

Detlev Stover, Germany

D. Eliezer, Isreal

Kohei Uosaki, Japan

☐ Storage and Conversion

Alexander Wokaun, Switzerland

Jefferson W. Tester, USA

Ctirad Uher, USA

Kazunori Takada, Japan

☐ Energy Efficiency

Edmund Chu, USA

Pulickel M. Ajayan, USA/EU

Jochen Mannhart, Germany

Kyung-Tae Hong, Korea

☐ Nuclear

Steven Zinkle, USA

Anton Erhard, Germany

Takeo Muroga, Japan

Srikumar Banerjee, India

Concluding Remarks

- Brief introduction of Energy Workshop & 3rd WMRIF

- Let us establish ASIA (Oceania) MRIF!
Let us get to know each other!

- Let us find important and efficient collaborative works
for our future!

- See you at Washington DC in June, 2009.
Attendance of young researchers are desired.