

WMRIF



WMRIF

World Materials Research Institutes Forum

An Introduction by Axel Griesche

Federal Institute for Materials Research and Testing (BAM)

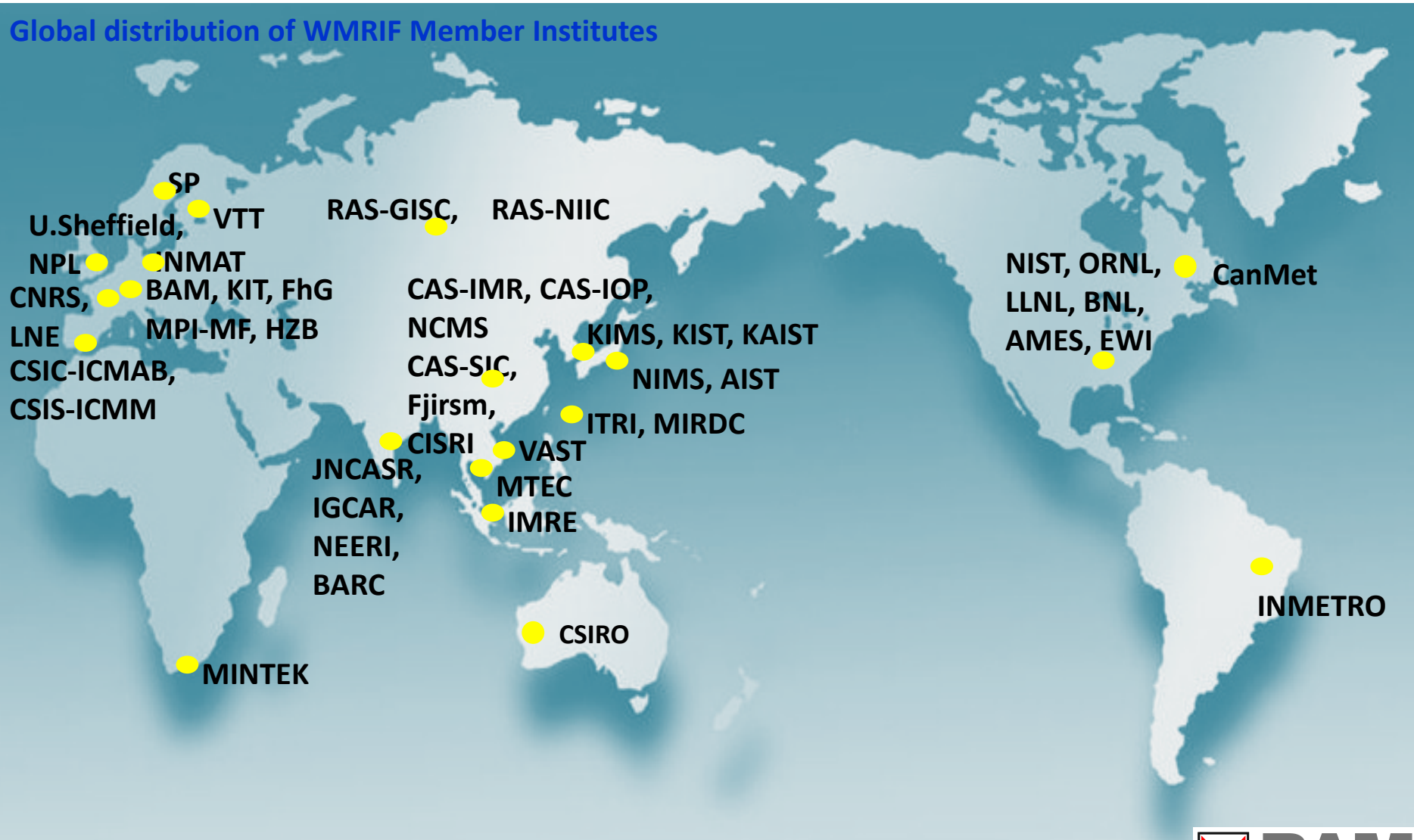


- Origin and aims
- Development
- Activities
- Outlook

- International networking of major national materials research institutes
- One global voice of materials researchers
- Increased communication *Research-Economy-Society*
- Recommendations in *Materials Science Outlook*
- Sharing knowledge and instrumentation
- Continued training of outstanding materials scientists

- 2005: Discussion Group at NIMS, Japan
- 2007: Foundation of WMRIF during 2nd Meeting at BAM, Germany
- 2009: 3. General Assembly and Symposium at NIST, USA
- 2011: 4. General Assembly and Symposium at IMR, Shenyang, China
- Today: 49 Institutes in 23 Countries on all 5 Continents

Global distribution of WMRIF Member Institutes



Six active working groups

1. Research resource mapping for better collaboration
Leader: Dr. Adam Schwartz (LLNL, USA)
2. Material Science Outlook
Published by NIMS and terminated
3. Promotion of young scientists
Leader: Prof. Dr. Werasak Udomkichdecha (MTEC, Thailand)
4. Global database
Leader: Dr. Graham Sims (NPL, UK)
5. Materials for sustainable energy technology
Leader: Dr. J. Michel Simonson (ORNL, USA)
6. Materials reliability
Leader: Prof. Dr. Erja Turunen (VTT, Finland)
7. Materials simulation
Leader: Dr. Christian Mailhot (LLNL, USA)

Organization: World Materials Research Institutes Forum (WMRIF)

General Assembly MRI members

WG1

Promotion of Research
Collaboration
using Large-scale Facility



Leader: Dr. Adam Schwartz
(LLNL)

WG2

Publication of Materials
Science Outlook

(terminated)

WG3

Attracting the
Young Scientists



Leader:
Prof. Werasak
Udomkitchdecha (MTEC)

WG4

Promotion of Global
Database



Leader :
Dr. Graham Sims (NPL)

Presidential Board



President
Prof. Dr. Thomas
Boellinghaus
(BAM)



Vice Presidents
Prof. Sukekatsu
Ushioda (NIMS)



Dr. Tomás Díaz
de la Rubia
(LLNL)



Honorary President
Prof. Teruo Kishi
(formerly NIMS)

Secretariat



Secretary General
Dr. Jürgen Lexow
(BAM)



Dr. Masaki
Kitagawa
(Advisor)



Dr. M. Takemura
(NIMS)

Asia-
Oceanic
WMRIF

Europe-
Africa
WMRIF

America
WMRIF

WG7

Research on Materials Simulation



Leader: Dr. Christian Mailhot (LLNL)
EU Leader: Dr. Axel Griesche (BAM)
Asia Leader: Dr. Taizo Sasaki (NIMS)

WG6

Research on Structural
Materials Reliability



Leader: Prof. Erja Turunen (VTT)
Asia Leader : Dr. Kyungtae Hong (KIST)
America Leader : Dr. Jose Ramirez (EWI)

WG5

Research on Materials for
Sustainable Energy and Environment



Leader: Dr. J. Michel Simonson (ORNL)

INCREASING VISIBILITY

- Web site updated
- Communication among MRIs
- Dialogue with MSE associations

INCREASING PARTICIPATION

- Knowledge exchange
- Cooperation in Working Groups
- Exchange of personnel

Welcome to the Knowledgebase of Interatomic Models

An online resource for standardized testing and long-term warehousing of interatomic models and data. This includes the development of application programming interface (API) standards for coupling atomistic simulation codes and interatomic potential subroutines.

Please choose an item from the above menu.

The members of the KIM project can be contacted on the OpenKIM Google Group.

Latest News (visit the news archive for more)

First stable version of the KIM API released

(23-Feb-2012)

The KIM development team is pleased to announce the release of version 1.0.0 of the KIM application programming interface (API). By conforming to this API, simulation code will seamlessly work with any supported interatomic model written in any supported language. The interface is computationally efficient and only requires relatively minor changes to existing codes. See more at First stable version of the KIM API.

KIM Board Election Results (07-Feb-2012)

The slate of nominees for the KIM Board (Prof. Sadasivan Shankar and Aidan Thompson) has been elected.

Outlook I

NIST Material Measurement Laboratory

Interatomic Potentials Repository Project

OVERVIEW

This repository provides a source for interatomic potentials (force fields) and evaluation tools to help researchers obtain interatomic models and judge their quality and applicability. Users are encouraged to download interatomic potentials, and developers are welcome to contribute potentials for inclusion. The potentials provided have been submitted or vetted by their developers and appropriate references are provided. While many potentials are metallic and of the embedded-atom (EAM) form, other classes of potentials and materials are welcome.

If you find this website useful, including using potentials you downloaded, please cite this project in addition to the proper interatomic potential reference:

C.A. Becker, "Atomistic simulations for engineering: Potentials and challenges," in Tools, Models, Databases and Simulation Tools Developed and Needed to Realize the Vision of ICME, ASM (2011). <http://www.ctcms.nist.gov/potentials>

Please note that, due to the wide range of interatomic potential functions and formats, it is the user's responsibility to check that the interatomic potentials produce expected results. More information can be found in the [FAQ](#).

WORKSHOPS

Each year since 2008, NIST has hosted workshops on "Atomistic Simulations for Industrial Needs." More information can be found [here](#).

<https://openkim.org/>

AMDS 2012

The 3rd Asian Materials Data Symposium

April 15-18, 2012
Okinawa Jichikai
Naha, Japan



- Home
- Program
- Organizers
- Call for Papers
- Important Dates
- Abstract/Paper Submission
- Publications
- Registration
- Hotel Information

About the Symposium

The 3rd Asian Materials Data Symposium (AMDS2012) will be held at Okinawa Jichikaikan in Naha, Japan, on April 15-18, 2012. The objective of the symposium is to provide a forum where a broad range of people interested in materials databases -- managers, developers, distributors and users -- meet and exchange their views. The symposium program will include invited talks by world-renowned speakers in addition to contributed presentations (oral and poster).



Prof. Teruo Kishi (Japan)
Former President of NIMS
Honorary Chair



Toshio Ogata (Japan)
General Chair



Masayoshi Yamazaki (Japan)
Secretary General

Concerning Radiation Safety in Japan



**Materials Genome Initiative
for Global Competitiveness**

June 2011



Cyrus Wadia

+

WG7 Research on Materials Simulation

K.J. Kurzydowski, WUT-INMAT

F.A. Kuznetsov, RAS-IIC

J. Dechaumphai, MTEC

E.J. Mittemeijer, MPI Metal Research

S. van Venrooy, B. Nestler, KIT

G.-L. Bona, EMPA

C.S. Sundar, IGCAR

S. Babu, EWI

W. Zhang, SICCAS



5th WMRIF General Assembly and Symposium at EMPA, Dübendorf, Schweiz; 12-15 May 2013

Topic: **Materials meet Life**

Activities

- Biocatalysis
Fermentation
Enzymes
- Biopolymers
- Implant
Surfaces
- Interactions
Skin - Materials
- Plasmatechnology
- Adaptive
Membranes
and Fibers
- Foams,
Fibers & Fabrics
- nanoSafety
- Biofilms &
Antifoulants

The image shows a hand pointing at a globe in the center. Surrounding the globe are ten ovals, each containing a topic. The background is a blue-tinted image of a hand holding a globe. The topics are arranged in a circular pattern around the globe.

wmrif.bam.de