MATERIALS EDUCATION FOR THE 21ST CENTURY WORKFORCE

The 18th Biennial Conference on National Materials Policy

May 24-25, 2004
National Academies’ Keck Center
Washington, DC

MONDAY, MAY 24

7:00AM  Registration and Continental Breakfast

8:15AM  Welcome and Charge to the Conference
        Aris Christou, University of Maryland
                Vice President, Federation of Materials Societies

8:30AM  Introduction to Materials Mini-Camp for High School Students and Teachers (camp will continue throughout the day)
        Chuck Hayes, ASM Materials Education Foundation
                Daniel Steinberg, Princeton University

THE CHANGING UNDERGRADUATE AND GRADUATE MATERIALS CURRICULA

Organizers:  G. Slade Cargill, III, Lehigh University
                Members of the University Materials Council

8:45AM  “Undergraduate Curricula in MS&E:  Current Trends and Future Possibilities”
        Linda Vanasupa, Cal. Poly. State University, San Luis Obispo
9:05AM “Design in Undergraduate MS&E Programs”  
*Emily Allen, San Jose State University*

9:25AM “ABET and Undergraduate Materials Education”  
*G. Slade Cargill, III, Lehigh University*

9:40AM “Developments in Graduate Education in Materials Science and Engineering”  
*Alan Cramb, Carnegie Mellon University*

9:55PM Panel Discussion

10:25AM Break

**CONTINUING EDUCATION/COMMUNITY COLLEGES**

*Organizers: Ernest Levert, Lockheed-Martin*  
*Jud Ready, Georgia Tech*  
*David Richerson, University of Utah*

10:40AM “Keeping Faculty on the Leading Edge of MSE Education with National Educators’ Workshops”  
*James A. Jacobs, Norfolk State University*

11:00AM “Success, Failures and Lessons Learned from Experience with Associate Degree Program in Metallurgy”  
*John McKay & Pat Pohar, South Piedmont Community College*

11:20AM “Materials Engineering Technology: The Role of Community Colleges in Preparing the Technical Workforce of the 21st Century”  
*Michael Kenney & John Pridgeon, ASM International*

11:40AM “Integration of Employability Skills in Materials Education Through Skills USA”  
*Tim Lawrence, SkillsUSA*

12:00PM Panel Discussion
12:30PM  Luncheon

John Hopps, Deputy Under Secretary of Defense

INFORMAL EDUCATION

2:00PM  “Increasing Public Awareness and Literacy in Science and Materials”

David Richerson, University of Utah

2:20PM  “Strange Matter’: Development of an Interactive Materials Science Exhibition and the Community Outreach Program”

Shenda Baker, Harvey Mudd College

2:40PM  Outreach Programs of the National Building Museum

Stacie Lemmon, National Building Museum

3:00PM  Panel Discussion

3:30PM  Break

PROGRAMS TO ENHANCE K-12 EDUCATION IN MATERIALS SCIENCE & TECHNOLOGY

Organizers:  Iver Anderson, Iowa State University
John Ballance, Materials Research Society
Chuck Hayes, ASM Materials Education Foundation
Daniel Steinberg, Princeton University

3:45PM  “Encouraging Physical Science Careers through Competition Opportunities”

Eric Packenham, National Science Teachers Association

4:05PM  “Establishing a High School Curriculum in Materials Science in the U.K”

Peter Davies, Institute of Materials, Minerals and Mining
4:25PM “Material Science & Design: Spanning the Reality Divide between High School and the World Beyond”
   Kate Heroux, Lake Forest High School

4:45PM “Materials Education Outreach to Middle and High Schools in the Lehigh Valley”
   Wojciech Misiolek & Andy Prescott, Lehigh University
   Kelly P. Wardlow, East Norristown Middle School

5:05PM Panel Discussion

5:35PM Materials Mini-Camp Presentation

6:00PM First Day Wrap-Up

RECEPTION AND DINNER

6:30PM Reception

7:15PM Dinner

“The Congressional Perspective”

TUESDAY, MAY 25

8:00AM Continental Breakfast

GLOBAL WORKFORCE ISSUES AND THE STATUS OF FACILITIES FOR MATERIALS RESEARCH
Organizer: Toni Marechaux, National Materials Advisory Board

9:00AM “Definitions, Drivers, and Dilemmas”
   Toni Marechaux, National Materials Advisory Board
9:20AM  “Globalization and the Engineering Workforce”  
   Jennie S. Hwang, H-Technologies Group

9:40AM  “Innovations in Global Research”  
   R. Byron Pipes, University of Akron

10:00AM  Panel Discussion

10:30AM  Break

**CONFERENCE WRAP-UP**

10:45AM  Action Agenda

12:00PM  Conference Adjournment

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12:30PM  University Materials Council Luncheon and Meeting