

# 22<sup>nd</sup> Annual Conference on Fossil Energy Materials

July 8-10, 2008

Omni William Penn Hotel  
Pittsburgh, Pennsylvania



## AGENDA



### TUESDAY, JULY 8, 2008 - LAWRENCE WELK ROOM

- 11:00 a.m. Registration - **LAWRENCE WELK FOYER**
- 1:00 p.m. Introduction and Opening Remarks  
*Robert Romanosky,*  
**National Energy Technology Laboratory**



### SESSION 1 - ADVANCED ALLOYS & CONCEPTS

#### SESSION CHAIR: **IAN WRIGHT, OAK RIDGE NATIONAL LABORATORY**

- 1:10 - 1:40 p.m. Development of Alumina Forming Austenitic Stainless Steels  
*Yuki Yammamoto, Oak Ridge National Laboratory*
- 1:40 - 2:10 p.m. Nanoprecipitates via Internal Oxidation  
*Joachim Schneibel, Oak Ridge National Laboratory*
- 2:10 - 2:40 p.m. Room-temperature Ductility Enhancement of Mo Alloys by Nano-sized Metal Oxide Dispersions  
*Bruce Kang, West Virginia University*
- 2:40 - 2:50 p.m. **BREAK - LAWRENCE WELK FOYER**
- 2:50 - 3:20 p.m. Update on the Status of ODS Alloys for Fossil Energy Applications  
*Ian Wright, Oak Ridge National Laboratory*
- 3:20 - 3:50 p.m. Control of Defects and Microstructure in ODS Alloys  
*Andrew Jones, University of Liverpool*
- 3:50 - 4:20 p.m. Oxide Dispersion Strengthened Materials for Fossil Energy Applications  
*Bimal Kad, University of California at San Diego*
- 4:20 - 4:50 p.m. Development of Fireside Corrosion Models for Advanced Combustion Systems  
*Steve Kung, Babcock & Wilcox*
- 4:50 p.m. **ADJOURN**

# **22<sup>nd</sup> Annual Conference on Fossil Energy Materials**

## **July 8-10, 2008**

### **Omni William Penn Hotel Pittsburgh, Pennsylvania**

**WEDNESDAY, JULY 9, 2008 - LAWRENCE WELK ROOM**

7:30 - 8:30 a.m. Registration / Continental Breakfast - **LAWRENCE WELK FOYER**

#### **SESSION 2 - ADVANCED ALLOYS & CONCEPTS, CONTINUED**

**SESSION CHAIR: MARY ANNE ALVIN,  
NATIONAL ENERGY TECHNOLOGY LABORATORY**

8:30 - 9:00 a.m. Materials Performance in CO<sub>2</sub> and CO<sub>2</sub>-steam Environments  
*Ken Natesan, Argonne National Laboratory*

9:00 - 9:30 a.m. Steam Turbine Materials and Corrosion  
*Gordon Holcomb,  
National Energy Technology Laboratory*

9:30 - 10:00 a.m. Materials and Component Development for Advanced Turbine Systems  
*Mary Anne Alvin,  
National Energy Technology Laboratory*

10:00 - 10:10 a.m. **BREAK - LAWRENCE WELK FOYER**

10:10 - 10:40 a.m. Performance and Behavior of CSEF Steels at Compositional Extremes  
*Mike Santella, Oak Ridge National Laboratory*

10:40 - 11:10 a.m. Advanced Processing of Metallic Powders for Fossil Energy Applications  
*Iver Anderson, Ames Laboratory*

11:10 - 11:40 a.m. Computational and Experimental Development of Novel High Temperature Alloys  
*Matthew J. Kramer, Ames Laboratory*

11:40 - 1:00 p.m. **LUNCH - BOB AND DOLORES HOPE ROOM**  
**INVITED SPEAKER: JOHN OAKEY, CRANFIELD UNIVERSITY “ ADVANCED  
MATERIALS RESEARCH IN THE EUROPEAN COMMUNITY”**

#### **SESSION 3 - COATINGS & PROTECTION OF MATERIALS**

**SESSION CHAIR: PATRICIA RAWLS,  
NATIONAL ENERGY TECHNOLOGY LABORATORY**

1:00 - 1:30 p.m. The Performance of Aluminum-Rich Oxidation-Resistant Coatings for Iron-Base Alloys  
*Ying Zhang, Tennessee Technological University*

# 22<sup>nd</sup> Annual Conference on Fossil Energy Materials

July 8-10, 2008  
Omni William Penn Hotel  
Pittsburgh, Pennsylvania

## WEDNESDAY, JULY 9, 2008 - LAWRENCE WELK ROOM

- 1:30 - 2:00 p.m. Development of Metallic Slurry Coatings  
*Beth Armstrong, Oak Ridge National Laboratory*
- 2:00 - 2:30 p.m. Development of NDE Methods for Thermal Barrier Coatings  
*J.G. Sun, Argonne National Laboratory*
- 2:30 - 2:45 p.m. **BREAK - LAWRENCE WELK FOYER**
- 2:45 - 3:15 p.m. Aluminide Coatings for Power Generation Applications  
*Ying Zhang, Tennessee Tech University*
- 3:15 - 3:45 p.m. Microstructure, Processing, Performance Relationships for High Temperature Coatings  
*Thomas Lillo, Idaho National Laboratory*
- 3:45 - 4:15 p.m. Coatings for Ultrasupercritical Boilers  
*Kent Coleman, Electric Power Research Institute (EPRI)*
- 4:15 p.m. **ADJOURN**

## THURSDAY, JULY 10, 2008 - LAWRENCE WELK ROOM

- 7:30 - 8:30 a.m. Registration / Continental Breakfast - **LAWRENCE WELK FOYER**

### SESSION 4 - FUNCTIONAL MATERIALS

**SESSION CHAIR: CYNTHIA POWELL,**  
**NATIONAL ENERGY TECHNOLOGY LABORATORY**

- 8:45 - 9:15 a.m. Commercial Process for Silicon Carbide Fibrils, A New Material for High-temperature Combustion  
*Richard Nixdorf, Remaxco*
- 9:15 - 9:45 a.m. Development of a Porous Support for Thin Palladium Membranes  
*Stephen Paglieri, Los Alamos National Laboratory*
- 9:45 - 10:15 a.m. Sealing/Joining Technology for Gas Separation Membranes  
*Scott Weil, Pacific Northwest National Laboratory*

**22<sup>nd</sup> Annual  
Conference on Fossil Energy Materials  
July 8-10, 2008  
Omni William Penn Hotel  
Pittsburgh, Pennsylvania**

**THURSDAY, JULY 10, 2008 - LAWRENCE WELK ROOM**

- 10:15 - 10:30 a.m.      **BREAK - LAWRENCE WELK FOYER**
- 10:30 - 11:00 p.m.      Integrated Design of Refractory Alloys For Fossil Energy Applications  
*Omer Dogan,*  
**National Energy Technology Laboratory**
- 11:00 - 11:30 p.m.      Refractory Materials For Slagging Gasifiers  
*Cynthia Powell,*  
**National Energy Technology Laboratory**
- 11:30 a.m.              Closing Remarks  
*Robert Romanosky,*  
**National Energy Technology Laboratory**
- 11:45 a.m.              **ADJOURN**