Second International Conference on Processing Materials for Properties

November 5-8, 2000
San Francisco, California

The Mining and Materials Processing Institute of Japan
Tokyo, 107-0052
Japan

The Minerals, Metals & Materials Society
Warrendale, PA 15086-7528
USA

http://www.tms.org/Meetings/Specialty.html
### ORGANIZING COMMITTEE

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Dr. Chikabumi Yamauchi, Nagoya University (MMIJ)

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Dr. Koichi Sudo, Sumitomo Metal Mining Co., Ltd. (MMIJ)
Dr. Takahide Wakamatsu, Meijo University (MMIJ)

**Topic Chairmen:**

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<th>Chairmen</th>
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<tr>
<td>Copper, Nickel, Zinc, Lead and Tin</td>
<td>Dr. M. Hino (MMIJ), Tohoku University, Dr. V. Lakshmanan (TMS) Ortech, Inc.</td>
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<tr>
<td>Rare Metals</td>
<td>Dr. T. Oishi (MMIJ), Kansai University</td>
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<td>Nonferrous Alloys and Light Metals</td>
<td>Dr. T. Nakamura (MMIJ), Tohoku University</td>
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<tr>
<td>High-Technology Materials: Electronic, Magnetic and Photonic Materials</td>
<td>Dr. K. Morinaga (MMIJ), Kyushu University</td>
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<td>High Temperature Materials</td>
<td>Dr. K. Uematsu (MMIJ), Nagaoka University of Technology</td>
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<tr>
<td>Composite Materials</td>
<td>Dr. H. Nakae (MMIJ), Waseda University</td>
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<td>Thin Films and Coatings</td>
<td>Dr. C. Suryanarayana (TMS), Colorado School of Mines</td>
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<tr>
<td>Powder Preparation and Processing</td>
<td>Dr. O. Takai (MMIJ), Nagoya University</td>
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<td>Solidification Processing</td>
<td>Dr. S. Govindarajan (TMS), Motorola, Inc.</td>
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<td>Electrolytic Processing</td>
<td>J. Klansky (TMS), Buehler, Inc.</td>
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<td>Novel Materials Developments in Aqueous Processing</td>
<td>Dr. Y. Awakura (MMIJ), Kyoto University</td>
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<td>Control and Analysis in Materials Processing</td>
<td>Dr. F. Doyle (TMS), University of California – Berkeley</td>
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<td>Resources and its Related Environment</td>
<td>Dr. T. Shoji (MMIJ), University of Tokyo</td>
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<td>Waste Management</td>
<td>Dr. Y. Umetu (MMIJ), Tohoku University</td>
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<td>Iron and Steelmaking</td>
<td>Dr. K. Axler (TMS), Los Alamos National Lab</td>
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<tr>
<td>Novel Materials Developments in Aqueous Processing</td>
<td>Dr. D. R. Shull (TMS), NIST</td>
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<td>Dr. B. Mishra (TMS), Colorado School of Mines</td>
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*This list is not exhaustive and includes additional topics not listed here.*
PRELIMINARY CALENDAR OF EVENTS

Second International Conference on Processing Materials for Properties
RENAISSANCE PARC FIFTY-FIVE HOTEL
SAN FRANCISCO, CALIFORNIA
NOVEMBER 5–8, 2000

SUNDAY, NOVEMBER 5, 2000
Registration .................... 12:00pm–6:00pm / Coat Check
Welcoming Reception .... 6:00pm–8:00pm / Parc Ballroom 2&3

MONDAY, NOVEMBER 6, 2000
Registration .................... 7:00am–5:00pm / Coat Check
Authors Coffee ............... 7:15am–8:15am / Fourth Floor Atrium
Slide Preview ................. 7:00am–5:00pm / Medici
Plenary Session .............. 8:30am–12:00pm / Parc Ballroom 1
Technical Sessions ........ 2:00pm–5:20pm
Non-ferrous Alloys and Light Metals / Cervantes
Composite Materials / DaVinci 2&3
Resources and Its Related Environment / DaVinci 1
Waste Management / Michaelangelo
Iron & Steelmaking / Raphael
Electronic, Magnetic & Photonic Materials / Dante
Control & Analysis in Materials Processing / Rubens
AM Break ....................... 10:15am–10:30am / Atrium
Conference Luncheon .... 12:20pm–2:00pm / Parc Ballroom 2&3
PM Break ....................... 3:45pm–4:00pm / Atrium

TUESDAY, NOVEMBER 7, 2000:
Registration ..................... 7:00am–5:00pm / Coat Check
Authors Coffee ............... 7:15am–8:15am / Parc Ballroom I
Slide Preview .................. 7:00am–5:00pm / Medici
Technical Sessions ........ 8:30am–12:15pm
High Temperature Materials / Cervantes
Composite Materials-II / DaVinci 2&3
Thin Films and Coatings / DaVinci 1
Electrolytic Processing / Michaelangelo
Rare Metals / Raphael
Electronic, Magnetic & Photonic Materials-II / Dante
Copper, Nickel, Zinc, Lead and Tin / Rubens
Aqueous Processing / Parc Ballroom 3
AM Break ....................... 10:15am–10:30am / Atrium
Lunch ................................ 12:15pm–2:00pm / On own
Technical Sessions ........ 2:00pm–5:15pm
Non-ferrous Alloys & Light Metals / Cervantes
Composite Materials-III / DaVinci 2&3
Thin Films and Coatings-III / DaVinci 1
Waste Management-II / Michaelangelo
Solidification Processing / Raphael
Powder Preparation and Processing / Dante
Control & Analysis in Materials Processing-III / Rubens
Iron & Steelmaking-II / Parc Ballroom 3
PM Break ....................... 3:45pm–4:00pm / Atrium
Reception ....................... 6:00pm–7:00pm / Atrium
Conference Banquet ........ 7:00pm–9:30pm / Parc Ballroom

WEDNESDAY, NOVEMBER 8, 2000:
Registration ..................... 7:00am–10:00am / Coat Check
Authors Coffee ............... 7:15am–8:15am / Parc Ballroom I
Slide Preview .................. 7:00am–5:00pm / Medici
Technical Sessions ........ 8:30am–12:10pm
Non-ferrous Alloys & Light Metals-III / Cervantes
Composite Materials-IV / DaVinci 2&3
Thin Films and Coatings-IV / DaVinci 1
Electrolytic Processing-II / Michaelangelo
Solidification Processing-II / Raphael
Powder Preparation and Processing-III / Dante
Copper, Nickel, Zinc, Lead and Tin-II / Rubens
Aqueous Processing-II / Parc Ballroom 3
AM Break ....................... 10:15am–10:30am / Atrium
Lunch ................................ 12:10pm–2:00pm / On own
Technical Sessions ........ 2:00pm–5:15pm
Waste Management-III / Michaelangelo
Powder Preparation and Processing-III / Dante
Iron & Steelmaking-III / Parc Ballroom 3
PM Break ....................... 3:45pm–4:00pm / Atrium
General Information:
The Second International Conference on Processing Materials for Properties (PMP 2000) is planned under the joint organization of The Mining and Materials Processing Institute of Japan (MMIJ) and The Minerals, Metals & Materials Society (TMS). PMP 2000 will provide a forum for the world’s materials community to address the continuing globalization of materials production and the creation of new technologies and materials which are broadening the horizons of materials in associated processing routes.

PMP emphasizes the processing aspects in materials research, development and production. Materials characterization and properties, and major processing science and technology will be included and presented at this conference so as to stimulate mutual interaction among processing in different materials fields, rather than confined in the small number of particular technology, aiming for the Olympics in “materials processing for properties.”

PMP 2000 will take place over the dates of November 5-8, 2000 in San Francisco, California. The headquarters hotel hosting this prestigious conference will be at the Renaissance Parc Fifty-Five Hotel.

Advance Registration:
Take advantage of the discounted advance registration fees. Complete the Advance Registration form in this mailer and return it by Monday, October 2, 2000 to receive the discounted advance registration fee to:

TMS
Meeting Services
184 Thorn Hill Road
Warrendale, PA 15086, USA
Phone: 724-776-9000, ext. 243
Fax: 724-776-3770
E-mail: mtgserv@tms.org

Registration Fee:
- Advance Member: $480
- On-Site Member: $580
- Advance Non-Member: $550
- On-Site Non-Member: $625
- Advance Student: $125
- On-Site Student: $200


Refund Policy:
Written requests must be sent to TMS Meeting Services, 184 Thorn Hill Road, Warrendale, PA 15086. No refunds will be issued after October 1, 2000. A $50 processing fee will be charged on all cancellations.

Social Functions:
- Sunday, November 5, 2000
  Welcoming Reception ....................... 6:00pm-8:00pm
- Monday, November 6, 2000
  Conference Luncheon........................ 12:20pm-2:00pm
- Tuesday, November 7, 2000
  Conference Dinner ............................ 6:00pm-9:30pm

All attendees of the second international conference on processing materials for properties (PMP 2000), including authors and session chairs, are required to register.

Badges must be worn at all times to gain access to the technical sessions and the social functions.
**Accommodations:**
The Headquarters Hotel and site for PMP 2000 is the Renaissance Parc Fifty-Five Hotel, San Francisco, California, USA.

An important component of PMP 2000 is the opportunity to meet with representatives of the university, the industry, etc. from all over the globe. In this respect, the conference venue at Renaissance Parc Fifty-Five Hotel will provide excellent opportunities for networking and discussions with colleagues and associates.

Participants should fax or mail their conference housing form, which is located in this mailer, as early as possible to the Renaissance Parc Fifty-Five Hotel. The housing cut-off is October 4, 2000. After October 4, 2000, the conference rate and availability at the Renaissance Parc Fifty-Five Hotel may not be available.

Fax, mail or call your housing reservation form to:

Renaissance Parc Fifty-Five Hotel
55 Cyril Magnin Street
Market at Fifth
San Francisco, California 94102, USA
Fax: 415-421-5993
Phone: 415-403-6634 or 800-621-1187

**Conference Proceedings Publication:**
All papers presented at the PMP 2000 Conference will be printed in their proceedings.

A hardbound, proceedings book that contains both the papers from oral presentations and abstracts from poster presentations made during the Second International Conference on Processing Materials for Properties is planned to be published and available at the conference. A copy of the proceedings book is included with the registration fee for members and non-members.

Additional copies of the conference proceedings book are available for purchase, in advance, on the registration form included with this brochure. The price per copy is $85, plus shipping and handling.

*(NOTE: The student registration fee does not include a copy of the proceedings book).*

**Poster Session:**
A poster session will be held in conjunction with the PMP 2000 Conference. Presentations will be displayed on 4’x8’ poster boards, no formal oral presentation is required. The poster session will begin on Monday, November 6 and remain in place through Wednesday, November 8, 2000. Abstracts of 150 words or less must be submitted to TMS by October 8, 2000. Poster abstracts will be included in the rear of the proceedings. Abstracts may be submitted through the TMS Conference Management System (CMS) via the World Wide Web at http://cms.tms.org or E-mail abstracts to weissp@tms.org, or send to Peggy Weiss, TMS, 184 Thorn Hill Road, Warrendale, PA 15086, Fax: 724-776-3770.

**Authors Coffee:**
The TMS Authors’ Coffee will be held each morning for authors, chairs and organizers. Authors are asked to attend the authors’ coffee only on the morning of their presentation. The coffee will run from 7:15 am–8:15 am in the Fourth Floor Atrium on Monday and in the Parc Ballroom I room on Tuesday and Wednesday.

**For More Information on the PMP 2000 Conference:**
Dr. Brajendra Mishra
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E-mail: bmishra@mines.edu

Dr. Chikabumi Yamauchi
Department of Materials Science and Engineering
Graduate School of Engineering
Nagoya University
Nagoya 464-8603, Japan
Phone: 81-052-789-3360; Fax: 81-052-789-3228
E-mail: yamauchi@numse.nagoya-u.ac.jp
SPEAKERS

MONDAY, NOVEMBER 6, 2000
Plenary Speaker
Barry Welch

Barry Welch has been a Professor (including Department Head) in the Department of Chemical and Materials Engineering at The University of Auckland for the last 20 years. Prior to that, he was at The University of New South Wales, serving as Head of the School of Chemical Technology. He has also spent periods working in the aluminum industry. Much of his research has focused on materials performance and process dynamics in high temperature metallurgical processing with a special emphasis on the aluminum smelting industry. He has published more than 200 Papers and authored or co-authored several books and Conference Proceedings. His research contributions have been recognized, by his being awarded the TMS Light Metals 2000 Award for meritorious technical contributions to the light metals industry. Other awards include the R H Stokes Medal for Applied Electrochemistry and the R K Murph Medal for contributions to Industrial Chemistry. Currently he consults widely to aluminum smelting companies as well as being a research leader in the High Temperature Materials and Processing Group at the University of Auckland.

MONDAY, NOVEMBER 6, 2000
Plenary Speaker
John J. Moore

John Moore is a Professor and Head of the Department of Metallurgical and Materials Engineering and a Director of Interdisciplinary Materials Science Graduate Program at Colorado School of Mines. Prior to coming to Colorado School of Mines, Professor Moore was the Head of the Department of Chemical and Materials Engineering for the University of Auckland, New Zealand. Professor Moore's research interests are physical (PVD) and chemical (PVD) vapor deposition of thin films and coatings; synthesis and processing of advanced ceramic, intermetallic and composite materials using plasma and reactive synthesis techniques; liquid metal processing and powder metallurgy processing of advanced materials.

MONDAY, NOVEMBER 6, 2000
Plenary Speaker
H. Y. Sohn

H. Y. Sohn received his Ph.D. in 1970 from the University of California, Berkeley. He was Research Associate at SUNY Buffalo and Research Engineer at Du Pont, before joining the University of Utah. Professor Sohn is recipient of Fellow Award from the Korean Academy of Science and Technology, TMS Champion H. Mathewson Gold Medal Award, TMS Extractive Metallurgy Lecturer Award, TMS Extraction and Processing Science Award (1990, 1994, 1999), Fulbright Distinguished Lecturership, and Dreyfus Foundation’s Teacher-Scholar Award.

MONDAY, NOVEMBER 6, 2000
Plenary Speaker
Masahiro Yoshimura

Professor Masahiro Yoshimura is the Director of the Center for Materials Design, Materials and Structures Laboratory at the Tokyo Institute of Technology. Currently in this position for 4 years, Professor Yoshimura has held several research positions throughout France, United States and Japan. The award accomplishments, which Professor Yoshimura has received, are the Centennial Anniversary Academic Award from The Society of Japan in 1991; “Hydrothermal Processing in Ceramics” Academic Award from the Ceramic Society of Japan in 1993-1994; “Effects of Water on Syntheses, Properties and Stabilities of Ceramics” Research Development Award from the Powder and Powder Metallurgy Society of Japan in 1995; “Polymerized Complex Synthesis of Pure High-Temperature Superconducting Oxides”, Society Fellow from the American Ceramic Society in 1996.

MONDAY, NOVEMBER 6, 2000
Luncheon Speaker
Osamu Takai

Osamu Takai is now a Professor at the Department of Materials Processing Engineering, Graduate School of Engineering, Nagoya University, Japan. He was born in Tokyo, Japan on November 3, 1947. He graduated in 1976 from Graduate School of Engineering, The University of Tokyo, where he obtained a Doctor of Engineering Degree. In 1992 he joined Nagoya University. He has been engaged in research in the fields of thin film processing, plasma materials processing and biomimetic materials processing.

TUESDAY, NOVEMBER 7, 2000
Dinner Speaker
Dennis Readey

“Microstructural Surprises”

Dennis W. Readey is the H. F. Coors Distinguished Professor of Ceramic Engineering in the George S. Ansell Department of Metallurgical and Materials Engineering at the Colorado School of Mines. Professor Readey is also Director of the Colorado Center for Advanced Ceramics. Prior to coming to the Colorado School of Mines in 1989 he was Chairman of the Ceramic Engineering Department at the Ohio State University. He currently represents TMS on the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology. He is a fellow and past-president of the American Ceramic Society and a fellow of ASM International. His current research interests include: gas-solid interactions during sintering and corrosion of ceramics; processing of ceramic-metal composites; and defect chemistry and transport processes in compounds.
Conference Co-Sponsors:
The following list of Societies/Associations have been invited to serve as co-sponsors of PMP 2000:
Australasian Institute of Mining and Metallurgy
The Ceramic Society of Japan
Chinese Society for Metals
The Electrochemical Society of Japan
Federation of European Materials Society
Gesellschaft fuer Bergbau, Metallurgie, Rohstoff und Umwelttechnik
The Indian Institute of Metals
The Institute of Mining and Metallurgy, England
The Iron & Steel Institute of Japan
Iron & Steel Society
Japan Foundry Engineering Society
Japan Institute of Light Metals
Japan Society of Powder and Powder Metallurgy
South African Institute of Mining & Metallurgy
The Japan Institute of Metals
The Japan Society for the Promotion of Science
The Korean Institute of Metals
The Metallurgical Society of CIM, Canada
National Association of Corrosion Engineers
The Nonferrous Metals Society of China
The Resources Processing Society of Japan
The Society of Materials Science, Japan
The Society of Powder Technology, Japan
The Surface Finishing Society of Japan

Letters of Invitation:
The Second International Conference on Processing Materials for Properties (PMP 2000) Organizing Committees will issue letters of invitation to individuals requiring such a document. Such letters though, do not commit The Second International Conference on Processing Materials for Properties (PMP 2000) Organizing Committees to providing financial support. Fax, E-mail or mail your request for a letter of invitation to:

Michael Packard, Manager of Meeting Services
TMS
184 Thorn Hill Road
Warrendale, PA 15086, USA
Fax: 724-776-3770
E-mail: packard@tms.org

Americans With Disability Act:
TMS strongly supports the Federal Americans with Disabilities Act (ADA) which prohibits discrimination against, and promotes public accessibility for those with disabilities. In support of this act, we ask that those attendees requiring specific equipment or services contact the TMS Meeting Services Department to advise specific needs in advance.

Audio/Video Recording Policy:
The Minerals, Metals & Materials Society (TMS) reserves the right to any audio and video reproduction of all presentations at every TMS-sponsored meeting. Recording of sessions (audio, video, still-photography, etc.) intended for personal use, distribution, publication, or copyright without the express written consent of TMS and the individual authors is strictly prohibited. Contact the TMS Technical Programming Department to obtain a copy of the waiver release form.
US Airways:
US Airways has been designated as the official carrier for the attendees of the Second International Conference on Processing Materials for Properties (PMP 2000), November 5–8, 2000, San Francisco, California and agrees to offer exclusive low fares for the attendees.

This special fare will offer a 7% discount off Frst or Envoy Class and any published US Airways promotional round trip fare. A 12% discount off unrestricted coach fares will apply with seven day advance reservation and ticketing required. Plan ahead and receive an additional discount by ticketing 60 days or more prior to departure. These discounts are valid provided all rules and restrictions are met and are applicable for travel from all points on US Airways route system.

US Airways:

The above discounts are not combinable with other discounts or promotions, and are valid November 2–11, 2000. Additional restrictions may apply on international travel.

To obtain these discounts, you or your professional travel consultant must call US Airways' Meeting and Convention Reservation Office at 800-334-8644; 8:00am–9:30pm, Eastern Time. Select option "1" when making the call.

Refer to Gold File No. 22631205

Hertz Rent-a-Car System:
Has been selected as the official car rental company for the PMP 2000 Conference, November 5–8, 2000, San Francisco, California, USA.

Meeting rates listed below, with free unlimited mileage, are guaranteed one week before, through one week after, the actual meeting dates and are subject to car availability. Rates are available from all San Francisco locations.

Advance reservations may be made by calling the Hertz Reservations number (US: 1-800-654-2240; Canada: 1-800-263-0600; International: contact your local Hertz reservation center) and identify yourself as an attendee of the PMP 2000 Conference and reference the CV number which follows:

You must give the reservations agent the Hertz CV #010P0006

**Rates**

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Rates include unlimited free miles

**Terms and Conditions:**
- Unlimited mileage allowances on all rates.
- One-way service fee will apply when cars are not returned to renting location.
- Additional daily charges for optional coverages (Loss Damage Waiver, Effect Protection, refueling and state tax) are not included in the rates.
- Drivers must meet standard Hertz age, driver and credit requirements.
- Hertz is a frequent flyer partner with US Airways, Delta, Northwest, United and American Airlines. Frequent flyer information may be requested at time of car booking.
Accompanying Persons Tours:

Accompanying persons tours have been customized to enhance the PMP 2000 experience. To register, please complete the Registration form in this mailer and return it to Cappa & Graham, Inc. Confirmations of the tour will be sent to each participant before the conference.

Please note that reservations will be handled on a first-come, first serve basis and reservations will not be available on-site.

Pre-registration for the tour program will be accepted up to October 1, 2000. Please make your reservations early.

ALL TOURS WILL ORIGINATE AND END AT THE RENAISSANCE PARC FIFTY-FIVE HOTEL.

Tour #1
SIGHTS OF SAN FRANCISCO
Monday, November 6, 2000
8:30am–12:30pm
$35 per person

San Francisco is a captivating blend of exciting and varied areas for discovery. Explore the diverse communities of San Francisco on your private luxury motorcoach and begin to understand The City and its many cultures.

Tour fascinating neighborhoods such as bustling Fisherman’s Wharf, exotic Chinatown, trendy North Beach and elegant Nob Hill. San Francisco is known the world over for its distinctive architecture, superb restaurants and unusual shopping. Whatever your taste—traditional, eclectic, cultural, unusual—San Francisco offers sights, sounds and sensations that are sure to please the most discriminating and inquiring individuals.

Tour #2
CHINATOWN WALKING TOUR
Tuesday, November 7, 2000
9:30am–1:00pm
$40 per person

Enter Chinatown and become immersed in one of the largest Chinese communities outside the Orient. Authentic in atmosphere, over 20,000 Chinese live and work within this 18 square block community downtown San Francisco.

Experienced guides lead you through the secret back alleys explaining what to look for when buying cackling hens or fresh fish in the markets. Select traditional Chinese cookies from one of the many Chinese bakeries, sample teas from the exotic Orient or purchase ancient medicinal herbs from traditional pharmacists.

Elegant pagoda topped buildings, street signs in Chinese, dragon entwined lamp posts and dialects ranging in the hundreds are constant reminders that you are in a thriving and historic ethnic neighborhood.

After tea, enjoy a special Dim Sum lunch. Dim Sum are small delicious steamed or fried tidbits filled with barbecued pork, shrimp, taro root and other Cantonese favorites. The sight, sounds and tastes of Chinatown all come together in this walking tour.

Please note that this is a walking tour—dress for the weather and wear comfortable shoes.

Tour #3:
CALIFORNIA WINE EXPERIENCE
Thursday, November 9, 2000
9:30am–2:30pm
$55 per person

Travel north of San Francisco to the serene beauty of Napa Valley. Deeply rooted throughout California’s expansive valleys and rolling hills are rows of vines producing some of the finest grapes, and in turn, some of the finest wines in the world. Enjoy the scenery as you travel down roads where vineyards stretch as far as the eye can see.

California’s wine industry commenced more than 200 years ago when Padre Junipero Serra began his chain of missions and planted his grapevines. By 1919, California had become America’s leading wine-producing state with nearly 400 million gallons produced in 1990. Now it is your turn to experience some of this winemaking expertise.
About San Francisco:
Overview:
San Francisco is a golden dream come true, a place where heart, mind and soul embrace, lost in the simplicity of delightful deliverance. Fog and sun mingle playfully above America’s favorite city; the cool, cloudy comfort of early morning slowly dissolving into the peaceful warmth of a gentle afternoon glow. Touch it...it is real. Feel it....it is the essence of escape. Savor it.....it is one of a kind. Little wonder why San Francisco has been named the world’s top city twice by readers of Condé Nast Traveler; the top U.S. city seven times since 1988. San Francisco’s neighborhoods comprise its inner beauty, enhancing daydreams, opening doors to new and exciting visions. The City is a cultural wonderland, an ethnic treasure chest where custom, tradition and history are preserved, celebrated, shared. So take your time and explore The City. You’ll find that the Gold Rush days have never really ended here; there’s still plenty of gold to be found. The restless spirit of The City’s Barbary Coast past lives on, fueled by a desire to be different, nurtured by infinite viewpoints, personalities, styles.

Magical moments abound. The echo of cable car bells from atop great hills. The rejuvenation of the soul upon crossing the Golden Gate Bridge. The splendor and elegance of a boat cruise on San Francisco Bay. The soft touching of wine glasses over a gourmet meal. The views. The people. The sights. The sounds. The City. So come and share the wealth. Let your heart, mind and soul wander. Stay as long as you like. San Francisco encourages luxury. It was designed with adventure, romance and pleasure in mind. It is one of life’s great indulgences, so indulge. It is one of the world’s most gratifying escapes, so escape. It is where the world comes to unwind. It is America’s preeminent playground.

The Bay:
San Francisco Bay, a 500-square-mile cleft in the California coastline, has a split Personality. It is both a major center for waterborne commerce and a delightful excuse to just go play. From the Central Valley and Sierra Nevada, 16 California rivers flow into San Francisco Bay. A steady stream of container ships, freighters and cruisers docked at more than 40 deepwater piers attest to its role as a major shipping lane. But it is the fun side of the bay, that lures mariners about and aboard, to skirt the Golden Gate Bridge where ebb tide meets west wind or happily paddle single kayaks in Richardson Bay. Scheduled ferry service, sightseeing and dining cruises offer another opportunity to ply the bay. However, for those who don’t trust their sea legs, landside pursuits on the edge of the water can be just as engaging.

Fisherman’s Wharf:
Eighty-seven percent of San Francisco’s visitors include Fisherman’s Wharf on their itinerary. With good reason. Waterfront marketplaces include The Anchorage, The Cannery, Ghirardelli Square and PIER 39. The Wharf’s working hub, “Fish Alley,” sells thousands oftons of sole, shrimp, salmon, sea bass, squid and other deep sea delicacies annually. During the crab season (mid-November through June) devotees line up for the best of the catch. For an impromptu picnic, order some cracked crab and pick up a loaf of sourdough French bread from a nearby bakery. A fleet of historic ships berths at Hyde Street Pier, a component of the San Francisco Maritime National Historical Park, which also includes the Maritime M euseum. The USS Pampanito, a WWII fleet submarine, may be boarded at Pier 45. On The City’s northern waterfront beyond Hyde Street Pier and the lagoon of Aquatic Park (this is a nice side trip from Fisherman’s Wharf), the nearly four-mile-long Golden Gate Promenade winds past bocce ball courts through Fort Mason and Marina Green to Crissy Field, a shoreline retreat adjoining the Presidio, terminating at Fort Point. Ahead lies the world’s most incredible piece of outdoor sculpture, the majestic Art Deco-style Golden Gate Bridge. Completed in 1937 the bridge links San Francisco to Marin County. For a real aerobic workout, climb the steps near Fort Point that lead up to the bridge and make “the walk of all walks.”

Receive a subscription to the hardcopy of JOM; be eligible for member discounts on TMS conference fees and publications; have easy access to the World Wide Web (WWW) with TMS OnLine, plus an array of other membership benefits and services. Once you’ve been a part of TMS and seen all that’s happening, you’ll want to continue your membership long into the future.

All you need to do is complete a TMS application and return it to the TMS Registration Desk during the conference, along with your $90 payment. Or, you may opt to mail your application and payment to TMS Headquarters, 184 Thorn Hill Road, Warrendale, PA 15086, USA. (Your membership cannot be processed without a completed application.)

Non-member students may apply for Joint ASM/TMS Student Membership for $25.00 annually (students living in North America only), or TMS Student Membership for $15.00 annually (students living outside North America.)

ATTENTION TMS NON-MEMBER ATTENDEES FOR NEW TMS MEMBERS ONLY!
We want you to join TMS and experience the Society and what it has to offer. Pay only $90 and receive membership in TMS for the year 2001!
<table>
<thead>
<tr>
<th>TOUR</th>
<th>TIME</th>
<th>PRICE</th>
<th># OF PEOPLE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday, November 6</td>
<td>8:30am-12:30pm</td>
<td>$35</td>
<td>_________</td>
<td>$________</td>
</tr>
<tr>
<td>Sites of San Francisco</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuesday, November 7</td>
<td>9:30am-1:00pm</td>
<td>$40</td>
<td>_________</td>
<td>$________</td>
</tr>
<tr>
<td>Chinatown Walking Tour</td>
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<tr>
<td>(Ending with Dim Sum Luncheon)</td>
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<tr>
<td>Thursday, November 9</td>
<td>9:30am-2:30pm</td>
<td>$55</td>
<td>_________</td>
<td>$________</td>
</tr>
<tr>
<td>California Wine Experience</td>
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<tr>
<td>(Lunch on your own in beautiful Sonoma Square)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL** $________

REGISTRATION DEADLINE: The registration deadline is October 1, 2000. After this date, tour registration will be taken on space-available basis only at the tour departure site Parc 55 (Cyril Magnin St.)

CANCELLATIONS: Cappa & Graham, Inc. reserves the right to cancel any tour if the minimum pre-registration is not met. In the event of tour cancellation, all pre-registration money will be refunded. Cappa & Graham, Inc. reserves the right to make comparable substitutions if circumstances beyond our control necessitate a change in any elements of the program started.

REFUNDS: There will be no refunds or exchanges after October 1, 2000 unless the tour is canceled. Should tour minimums not be met, all fees will be refunded. Otherwise, tours will operate rain or shine.

TOUR DEPARTURES: Tours depart promptly from the Parc 55 (Cyril Magnin St.). Please arrive 15 minutes prior to departure time. Your conformation notice is your tour ticket.

REGISTRATION AND PAYMENT: Complete and return the registration form with check or money order (in US funds only) or fax the form with your VISA/MasterCard card number. Add 3% convenience fee for credit card charges. Your confirmation will be mailed to you. Makes checks payable to Cappa & Graham, Inc. or list credit card information, and INCLUDE signature. DO NOT SEND THIS FORM TO TMS.

Cappa & Graham, Inc.
401 Terry Francois Blvd., Suite 200, San Francisco, CA 94107
Phone: 415/543-3484      Fax: 415/543/2681      E-mail: cappa@pacbell.net

Payment Options:  □ Check  or  □ Credit Card

Card #: ______________________________________________________________ Exp. Date: _______________________

Name (please print): _____________________________________________________________________________________

Address: __________________________________________________________________________________________________

City: __________________________ State: ______ Zip: __________________________ Country: _________________

Phone: __________________________ Fax: ______________________________

E-Mail: __________________________ Signature: ____________________________
Advance Registration Deadline: October 2, 2000 PAYMENT MUST ACCOMPANY FORM. Forms received past this date will be processed at the on-site fee structure. Instructions: Check your selections, and fill in the necessary information.

TMS or MMIJ Member Number: ______________________________________________________

Please print or type

☐ Dr.  ☐ Prof.  ☐ Mr.  ☐ Mrs.  ☐ Ms.

This address is:  ☐ Business  ☐ Home  ☐ New Address  ☐ Address Correction

Surname: ___________________________________________ First Name: __________________________ Middle Initial: __________

Employer: _____________________________________________________________________________________________________________________________

Address: ______________________________________________________________________________________________________________________________

City: ____________________________________ State/Province: __________________ Zip/Postal Code: ______________ Country: ____________

Telephone: ______________________________ Fax: __________________________________ E-Mail Address: _________________________________

Accompanying Person Name for Badge: ______________________________________________________________________________________________

(Guests do not receive admission to technical sessions.)

REGISTRATION FEES:

<table>
<thead>
<tr>
<th></th>
<th>Advance fees to October 2</th>
<th>On-Site fees after October 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMS Member*</td>
<td>$480</td>
<td>$580</td>
</tr>
<tr>
<td>Non-Member*</td>
<td>$550</td>
<td>$625</td>
</tr>
<tr>
<td>Student**</td>
<td>$125</td>
<td>$200</td>
</tr>
</tbody>
</table>

*Includes technical sessions, coffee breaks, welcoming reception, conference luncheon, banquet, and proceedings.

**Includes technical sessions, coffee breaks, and welcoming reception.

ADDITIONAL SOCIAL FUNCTION TICKETS AND PROCEEDINGS

(for Students/Spouses):

<table>
<thead>
<tr>
<th>Event</th>
<th>Fee</th>
<th>Number</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Welcoming Reception (Saturday, November 5, 2000)</td>
<td>$25</td>
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<td>$</td>
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<tr>
<td>Conference luncheon (Monday, November 6, 2000)</td>
<td>$35</td>
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<tr>
<td>Banquet (Tuesday, November 7, 2000)</td>
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<td></td>
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</tr>
<tr>
<td>Dietary Restrictions:  ☐ Vegetarian (V)  ☐ Kosher (K)</td>
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</tr>
<tr>
<td>PM P2 Proceedings</td>
<td></td>
<td>books @ $85 each = $</td>
<td></td>
</tr>
<tr>
<td>Shipping (U.S.)</td>
<td></td>
<td>books @ $10 each = $</td>
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</tr>
<tr>
<td>Shipping (elsewhere)</td>
<td></td>
<td>books @ $20 each = $</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL FEES: $ ____________________________

Refund policy: Written requests must arrive at TMS no later than October 2, 2000. A $50 processing fee will be charged for all registration cancellations.

PAYMENT OPTIONS:

☐ Check payable to TMS. Payment should be made in US dollars drawn on a US bank or via the following.

☐ VISA  Card Number ___________________________________________  Exp. ___________

☐ MasterCard  Cardholder Name (print) ___________________________________________

☐ Diners Club

☐ American Express  Signature ___________________________________________
RENAISSANCE PARC FIFTY-FIVE HOTEL

RESERVATION FORM
SECOND INTERNATIONAL CONFERENCE ON PROCESSING
MATERIALS FOR PROPERTIES (PMP 2000)

PLEASE COMPLETE THE FORM BELOW AND RETURN TO:
Renaissance Parc Fifty-Five Hotel
Attn: Reservations Manager
55 Cyril Magnin Street
Market at Fifth
San Francisco, CA 94102, USA
Phone: 415-403-6634 or 800-621-1187
Fax: 415-421-5993

I Plan to arrive: ___________________ I Plan to Depart: ___________________

Date Date

Please Check:
☐ Single - $175
☐ Double - $175

Room Tax - 14%

ALL RESERVATION REQUESTS MUST BE GUARANTEED BY THE FIRST NIGHT’S ROOM
AND TAX BY PERSONAL CHECK OR CREDIT CARD. CANCELLATIONS MUST BE MADE
SEVENTY-TWO (72) HOURS PRIOR TO ARRIVAL TO AVOID FIRST NIGHT’S BILLING.

All reservations must be received by: Wednesday, October 4, 2000
Requests prior to and after convention dates will be accepted on a space available basis only at
the prevailing rate. (One card per room)

NAME: ___________________________ Payment Enclosed: ☐ CHECK ☐ CREDIT CARD

FIRM: ___________________________

CARD NO: _________________________

ADDRESS: ________________________ EXPIRATION DATE: _________________________

CITY, STATE, ZIP: ___________________ ☐ VISA ☐ MASTERCARD ☐ AMERICAN EXPRESS

TELEPHONE: ________________________ ☐ OTHER _________________________________

FAX: _______________________________ SIGNATURE: ____________________________

ADDITIONAL PERSONS IN ROOM: ________________________________

Specific Requests: _________________________________________________________________

(Requests Subject to Availability)

_________________________________________ _________________________________

PLEASE NOTE: CHECK-IN TIME IS 3:00PM • CHECK-OUT TIME IS 12 NOON


2000 PMP II: Second International Conference on Processing Materials for Properties Preliminary Technical Program

Plenary Session

Monday AM
November 6, 2000
Parc 55 Hotel

Room: Parc Ballroom I
Location: Renaissance

Session Chair: Brajendra Mishra, Colorado School of Mines, Metall. & Mats. Engr., Golden, CO 80401 USA

8:30 AM
Welcoming Remarks: Brajendra Mishra

8:45 AM
Nonferrous Metals Production: Advances in Process Technology and Environment Protection: Hong Y. Sohn1; University of Utah, Metallurgical Engineering

9:30 AM
Soft Solution-Processing for Advanced Materials–Concept, Realization, and Perspective: Masahiro Yoshimura1; Tokyo Institute of Technology, Mats. and Struct. Lab., Ctr. for Mats. Des., 4259 Nagatsuta, Midori, Yokohama, Kanagawa 226-8503 Japan

10:15 AM Break

10:30 AM
The Development of Graded Thin Film/Coating Systems: John J. Moore1; Brajendra Mishra1; D. Zhong1; T. Dennin1; E. Hixson1; S. Challappalli1; The Colorado School of Mines, Adv. Coat. and Surf. Eng. Lab., Golden, CO 80401 USA

11:15 AM
Future Materials Requirements for High Energy-Intensity Production of Aluminum: Barry Welch1; University of Auckland, P.O. Box 42-240, Coates Ave., Orakei, Auckland 1130 New Zealand

2:30 PM
Influence of Heat Treatment Conditions on the Mechanical Properties of New Rheocasting Aluminium Parts: Helmut Kaufmann1; Peter J. Uggowitzer2; Leichtmetall Kompetenzzentrum Ranshofen, Ranshofen A-5282 Austria; ETH Zurich, Instit. for Metall., Sonneggstrasse 3, Zurich CH-8092 Switzerland

2:55 PM
Synthesis and Thermal Properties of Ti-Based Amorphous Alloys with a Large Supercooled Liquid Region: Pei-Yew Lee3; Nan-Fong Hsu; C. Y. Ma3; National Taiwan Ocean University, Mats. Eng. Dept., 2, Pei-Ning Rd., Keelung, Taiwan 202 Taiwan; Chung-Shan Institute of Science & Technology, Mats. and Electro-Optics Rsch. Div., P. O. Box 90008-8-4, Lung-Tan, Tao-Yuan, Taiwan 325 Taiwan

3:20 PM
Titanium Powder Production by Reactive Molten Salt as a Reductant: Tetsuya Uda1; Toru H. Okabe2; Yoshiyo Waseda3; Tohoku University, Rsch. Ctr. for Metall. Process Eng., Instit. for Adv. Mats. and Process., 2-1-1 Katahira Aoba-ku, Sendai, Miyagi Pref. 980-8577 Japan; Tohoku University, Instit. of Adv. Mats. and Process., 2-1-1 Katahira Aoba-ku, Sendai, Miyagi Pref. 980-8577 Japan

3:45 PM
Modeling of the Reactive Immersion of Ceramic Particles into Molten Aluminum Alloy: Kevorkijan M. Varuzan1; Independent Researcher, Lackova 139, Limbus 2341 Slovenia

4:00 PM
Properties of AlMgSi1 Wrought Alloy Components Produced by Means of the NRC-Process: Heimo Wabusseg1; Giancarlo Gullo1; Helmut Kaufmann2; Peter J. Uggowitzer2; Swiss Federal Institute of Technology ETH, Instit. of Metall., ETH Zentrum, Sonneggstrasse 3, Zurich CH-8092 Switzerland; Centre of Competence on Light Metals, LKR, P.O. Box 26 Lambrechtshause-nerstrasse, Ranshofen A-5282 Austria

Non-ferrous Alloys and Light Metals - I

Monday PM
November 6, 2000
Parc 55 Hotel

Room: Cervantes
Location: Renaissance


2:00 PM Keynote
Use of Refractory Hard Cathodes to Reduce the Energy Consumption in Aluminium Smelting: Mark P. Taylor1; Comalco Aluminium Limited, GPO Box 153, Brisbane, Queensland 4001 Australia
2:30 PM Property/Processing Relationships for Continuously Fabricated MMC Fiber-Reinforced Wire: Shannon L. Sampson; Joseph T. Blucher; Jacqueline A. Isaacs; 1Northeastern University, Mech. Ind. and Manu. Eng., 334 Snell Eng., 360 Huntington Ave., Boston, MA 02115 USA

2:55 PM Characterisation of Corrosion Properties of ZA-27/Quartz Metal Matrix Composites: P. V. Krupakara; Jayagopal Uchil; Trivikram; 1RV College of Engineering, Dept. of Chem., Bangalore, Karnataka 560059 India; 2Mangalore University, Dept. of Matl. Sci., Mangalagangothri, Mangalore India; 3RV College of Engineering, Dept. of Mech. Eng., Mysore Rd., Bangalore 560059 India

3:20 PM Oxidation Behaviour of Aluminium-6061/Hematite Particulate MMC's at Elevated Temperatures: S. C. Sharma; N. Shanmukha; M. Krishna; 1R.V. College of Engineering, Dept. of Mech. Eng., Rah. and Dev., Bangalore, Karnataka 8600535 India

3:45 PM Break

4:00 PM Fabrication and Mechanical Properties of the SiCf/Oxide Matrix Composites: Makoto Yoshida; Kennya Nagahisa; Kazuya Kitani; Naoto Ohta; Toshibiro Ishikawa; Jin Pan; Gen Sasaki; Hideharu Fukunaga; 1Hirosima University, Mech. Eng., 1-4-1 Kagamiyama, Higashi, Hiroshima 739-8527 Japan; 2Toyo Tanso Company Limited, Eng. and Dev. Ctr., 2181-2 Nakahime, Ohnohara-Cho, Mitoyo-Gun, Kagawa Pref. 769-1612 Japan; 3Ube Industries Limited, Ube Rsch. Lab., 1978-5 Kogushi, Ube City, Yamaguchi Pref. 755-8633 Japan

4:25 PM Study on Oxidation Resistance of High Temperature of Electrodeposited RE-Ni-W-P-SiC Multiple Functional Composite Materials: Guo Zhongcheng; Yang Xianwan; Zhai Dacheng; Zhu Xiaoyun; 1Kunming University of Science and Technology, Dept. of Metall., Kunming, Yunnan 650093 China

Resources and Its Related Environment
Monday PM Room: DaVinci 1
November 6, 2000 Location: Renaissance Parc 55 Hotel

Session Chairs: Keith Axler, Los Alamos National Laboratory; Yoshiaki Umetsu, Tohoku University; Tetsuya Shoji, The University of Tokyo

2:00 PM Keynote

2:30 PM Economic Growth and Relationships between Key Metals and Energy Consumption: Tosihide Ito; Jie Liu; Takashi Nishigama; 1Kansai University, Dept. of Inform., Osaka 569-1095 Japan; 2Kyoto University, Grad. Sch. of Enegy Sci., Kyoto 606-8501 Japan

2:55 PM A Macro Model for Steel Usage Pattern in Japan: Keiji Kakudate; Yoshihiro Adachi; Toshio Suzuki; 1The University of Tokyo, Grad. Sch., 7-3-1, Hongo, Bunkyo-ku, Tokyo 113-8656 Japan; 2The University of Tokyo, Dept. of Metall., 7-3-1, Hongo, Bunkyo-ku, Tokyo 113-8656 Japan

3:20 PM Recovery of Pure MnO₂ from Medium-Grade Local Manganese Ores: M. B. Morsi; 1Central Metallurgical Research and Development Institute, Pyro. Div., P.O. Box 87, Helwan, Cairo, Egypt

3:45 PM Break


4:50 PM Challenges Facing Mine Development: S. Nagae; H. Ikeda; 1Metal Mining Agency of Japan, Tokiwa Bldg. 1-24-14, Toranomon, Minato-Ku, Tokyo 105-0001 Japan

Waste Management - I

Monday PM Room: Michaelangelo
November 6, 2000 Location: Renaissance Parc 55 Hotel


2:00 PM Keynote
Utilization of Mining and Smelting Technology and Facilities to Waste Management in Japan: Yoshikiko Maceda; Kiyomi Yamaguchi; 1Dowa Mining Company Limited, Waste Mgmt. Busi. Unit, 1-8-2 Marunouchi, Chiyoda-ku, Tokyo 100-8282 Japan

2:30 PM Utilization of Wastes in Production of Portland Cement and Associated Environmental Measures-Separation and Decomposition of Chlorine: Mitsuhiro Ito; 1Taiheiyo Cement Corporation, Eng. and Tech. Dept., 3-8-1, Nishikanda, Chiyoda-ku, Tokyo 101-8357 Japan

2:55 PM Removal of Impurities during Silver Recycle Processes: Takeshi Kanata; Mamoru Takayanagi; Yashushi Akahori; Itaru Jimbo;
3:20 PM  Elimination of Nickel from Copper Scrap Melt: Hiroyuki Sano
Shin-ya Iwahori; Mitsuru Tanahashi; Chikabumi Yamauchi; Taiping Lou; Nianxin Fu; 1Nagoya University, Research Center for Advanced Waste and Emissions Management, Furo-cho, Chikusa-ku, Nagoya 464-8603 Japan; 2Nagoya University, Department of Materials Science and Engineering, Furo-cho, Chikusa-ku, Nagoya 464-8603 Japan

3:45 PM  Break

4:00 PM  Precipitation Selectivity of Titanium Compounds from BF-Slags: Zhitong Sui
Yuhai Li; Guangqiang Li; Junwei Ma; Taiping Lou; Nianxin Fu; 1Northeastern University, School of Materials and Metallurgy, P.O. Box 119, Shenyang, Liaoning 110006 PRC

4:25 PM  The Processing of the Solid Household and Industrial Waste in the Slag's Bubbled Smelt with the Usage of the Vanyukov's Furnaces: Andrey V. Tarasov
Valery M. Paretsky; 1State Research Institute of Non-Ferrous Metals, Gintsvetmet, 13 Acad. Korolyov St., Moscow 129515 Russia

4:50 PM  Disposal of Wasted Fluoride and Chloride Gases in the Manufacturing Process of Semiconductors: Hideki Yamamoto
Junji Shibata; 1Kansai University, Department of Chemical Engineering, 3-3-35 Yamate, Suita, Osaka 564-8680 Japan

3:20 PM  Reduction Rate of Chromite Ore by Fe-C-Si Melts: Takamitsu Nakasuga
Haiping Sun; Kunihiko Nakashima; Katsumi Mori; 1Kyushu University, Department of Materials Science and Engineering, Faculty of Engineering, 6-10-1 Hakozaki, Higashi-ku, Fukuoka 812-8581 Japan

3:45 PM  Break

4:00 PM  Non-Isothermal Gravimetric Investigation on Kinetics of Reduction of Magnesia by Carbon and Aluminum: Keiji Okumura
Hong Lan; Masamichi Sano; 1Nagoya University, Department of Materials Process Engineering, Furo-cho, Chikusa-ku, Nagoya, Aichi 464-8603 Japan

4:25 PM  Magnetic Separation of Inclusion in Molten Metal Using a High Magnetic Field: Kensuke Sasse
Norihisa Waki; Shigeo Asai; 1Nagoya University, Graduate School of Engineering, Furo-cho, Chikusa-ku, Nagoya, Aichi 464-8603 Japan; 2Daido Institute of Technology, 2-21 Daido-cho, Minami-ku, Nagoya, Aichi 457-8531 Japan

4:50 PM  Application of Equal Channel Angular Extrusion to the Control of Microstructure in Stainless Steels: N. Saito
M. Mabuchi; M. Nakanishi; M. Nakamura; I. Shigematsu; G. Yamauchi; T. Asahina; 1National Industrial Research Institute of Nagoya, 1-1 Hirate-cho, Kita-ku, Nagoya, Aichi 462-8510 Japan; 2Daido Institute of Technology, 2-21 Daido-cho, Minami-ku, Nagoya, Aichi 457-8531 Japan

Electronic, Magnetic & Photonic Materials - I

Monday PM  Room: Dante
November 6, 2000  Location: Renaissance Parc 55 Hotel

Session Chairs: S. Govindarajan, Motorola; Takuo Takeshita, Mitsubishi Materials Co.

2:00 PM  Keynote
Enabling of Low-Cost, High Rate PVD Processing of Electronic Thin-Films using Intelligent Process Control: Bruce Lanning

2:30 PM  Processing of Ultrafine Ferrite Particles from Sulfuric Acid Pickling Solution: Yasuhito Konishi
Kazunari Mizoe; 1Osaka Prefecture University, Department of Chemical Engineering, 1-1 Gakuen-cho, Sakai, Osaka 599-8531 Japan

2:55 PM  Microstructural Effects on the Damping Capacity of Fe-Cr-Mn Alloys: Kazuya Miyahara
Keiichi Tomita; Shiori Zada; Chang-Yong Kang; Naohiro Igarashi; 1Nagoya University, Department of Molecular Science and Engineering, Furo-cho, Chikusa-ku, Nagoya 464-8603 Japan; 2Nagoya University, Graduate School of Engineering, Furo-cho, Chikusa-ku, Nagoya 464-8603 Japan; 3Pukyong National University, Department of Metallurgy and Engineering, Yong-Dang-Dong, Nam-gu, Pusan South Korea; 4University of Tokyo, Department of Fundamentals of Science, Yamazaki, Noda-shi, Chiba-Pref 278-8510 Japan
Control & Analysis in Materials Processing - I

Monday PM
November 6, 2000
Parc 55 Hotel


2:00 PM Keynote
Materials Process Modelling: A General Tool or a Specialty: 

2:30 PM Keynote
In-Situ Characterization of Sintering Properties with Non-Contact Ultrasonic Measurements: 
James C. Foley; David K. Rehbein; 1Ames Laboratory, Metall. and Cer. Pgm., 122 Metals Development, Ames, IA 50011 USA

3:00 PM Evaluation of Frictional Properties of Polycrystalline Diamond at Room Temperature:  
Ali Soleman Al-Watban; 1Riyadh Technical College, P.O. Box 53699, Riyadh 11593 Saudi, Arabia

3:25 PM Structure and Performance Evaluation of Hydrogen Sensor for Molten Copper under Industrial Conditions:  
Koji Katsura; Kunihiro Kojide; Takashi Iwamoto; Noriaki Kurita; Norihiko Fukatsu; Teruo Ohashi; 1TYK Corporation, Adv. Mats. Rsch. and Dev. Ctr., 3-1 Ohata-cho, Tajimi 507-8607 Japan; 2Nagoya Institute of Technology, Mats. Sci. and Eng. Dept., Gokiso-cho, Showa-ku, Nagoya 466-855 Japan

3:50 PM Break

4:05 PM
Conventional V, Hot Die Forging of Alloy 685: Process Optimisation for Properties:  
V. Gopala Krishna; Balram Gupta; 1Government of India Ministry of Defense, Def. Rsch. and Dev., Org. Reg. Ctr. for Military Mats., P.O. Kanchanbagh, Hyderabad 500058 India

4:30 PM
Conduction Electron Generation upon Oxygen Release of Indium Tin Oxide:  
Hiroyuki Fujimura; Shinya Otsuka-Yao-Matsuo; Naoki Ono; Takahisa Omata; 1Osaka University, Dept. of Mats. Sci. and Process., Grad. Sch. of Eng., 2-1, Yamada-oka, Suita 5650871 Japan; 2Mitsui Mining and Smelting Company Limited, Elect. Mats. Sect., 2081, Tohsen, Ohmuta 8360003 Japan

4:55 PM
Equal Channel Angular Extrusion (ECAE): From Macromechanics to Structure Formation:  
Vladimir Segal; 1Johnson Matthey Electronics R&D, Prin. Rsch. Sci., 15128 E. Euclid Ave., Spokane, WA 99216 USA

Copper, Nickel, Zinc, Lead and Tin - I

Tuesday AM
November 7, 2000
Room: Rubens
Location: Renaissance Parc 55 Hotel


8:30 AM Keynote
Thermodynamic Study of Oxygen-Smelting of Copper or Nickel Matte:  
Kimio Itagaki; 1Tohoku University, Instit. for Adv. Mats. Process., 2-1-1 Katahira Aoba-ku, Sendai 980-8577 Japan

9:00 AM
Modern View on Composition of Autogenous Smelting Slags and Methods of Their Decoppering:  
Valery M. Paretsky; Andrey V. Tarasov; 1State Research Institute of Non-Ferrous Metals, Gintsvetmet, 13 Acad. Korolyov St., Moscow 129515 Russia

9:25 AM
Increase in the Productivity of PS-Converters at Saganoseki Smelter & Refinery:  
Masatoshi Maeda; 1Nippon Mining & Metals Company Limited, Saganoseki Smelt. and Refine., Saganoseki-cho, Oita-pre. 879-2201 Japan

9:50 AM
A Model Study of Splash in a Peirce-Smith Converter:  
Yasumasa Hattori; Kiimachi Utsunomiya; Yoshiaki Morii; Toyokazu Okubo; 1Sumitomo Metal Mining, Pyromettall. Rsch. Ctr., Niihama Rsch. Labs., Oto 145-1, Funaya, Saijo, Ehime 793-0005 Japan; 2Sumitomo Metal Mining, Niihama Rsch. Labs., Isouracho 17-5, Niihama 982-0002 Japan

10:15 AM Break

10:30 AM
The Q_{235} (A_{2}) of Seawater Microbe Corrosion in Dayao Gulf:  
Wang Li; Chen Jiafu; Qiao Qianli; 1Northeastern University,

The Oxidation Rate of Pb and Ni in the Copper by Slag: Kunihiko Nakashima; Keisuke Yamamoto; Etsuro Sibata; Hiroko Tahori; Kyushu University, Dept. of Matls. Sci. and Eng., Faculty of Eng., 6-10-1 Hakozaki, Higashi-ku, Fukuoka 812-8581 Japan

Study of the Influence of Chemical Composition on the Machinability Properties of Brasses: Cândida Guerra Vilarinho; Paulo Davim; Fernando Castro; Universidade do Minho, Dept. Eng. Mech., Rua Capitão Alfredo Guimarães, Guimarães 4810 Portugal; Universidade de Aveiro, Secção Autónoma de Eng. Mech., Campus Universitário de Santiago, Aveiro 3810 Portugal

Electronic, Magnetic and Photonic Materials - II
Tuesday AM Room: Dante
November 7, 2000 Location: Renaissance Parc 55 Hotel

Session Chairs: Bruce Lanning, ITN Energy Systems; Kenji Morinaga, Kyushu University, Dept. of Matls. Sci. and Eng.

8:30 AM Keynote
The Development of Processes for the Production of Selected Rare Earth Electronic Materials: Renato G. Bautista; University of Nevada at Reno, Metall. and Matls. Eng. Dept., Reno, NV 89557 USA

9:00 AM Keynote
Processing and Applications of Rare Earth Metals and Intermetallic Compounds: Ken-ichi Machida; Osaka University, Dept. of Appl. Chem., 2-1 Yamadaoka, Suita, Osaka 565-0871 Japan

9:30 AM Aqueous/Organic Processing of Rare-Earth Carbonate Powders from Rare-Earth Loaded Carboxylate Solutions Using CO2 Gas: Yasuhiro Konishi; Yoshiyuki Noda; Osaka Prefecture University, Dept. of Chem. Eng., 1-1 Gakuen-cho, Sakai, Osaka 599-8531 Japan

9:55 AM Rare-Earth-Based Hydrogen Storage Alloys for Batteries: Nobuhiro Kuriyama; Tetsuo Sakai; Hideaki Tanaka; Hiroyuki T. Takeshita; Itsuki Uehara; Osaka National Research Institute, 1-8-31 Midorigaoka, Ikeda, Osaka 563-8577 Japan; Industrial Technology Center of Toyama Prefecture
9:50 AM Preparation and Optical Properties of Aluminium Fluoroberyllate Glasses: Shigeru Fujino; Kenji Morinaga; 1Kyushu University, Grad. Sch. of Eng. Sci., Kasugakouen 6-1, Kasuga 816-8580 Japan

10:15 AM Break

10:30 AM Exfoliation and Photocatalytic Activities of Layered Oxides KSr2Nb3O10: Michikazu Hara; Norikazu Ooto; Takeshi Sumida; Junko N. Kondo; Kazunari Domen; 1Tokyo Institute of Technology, Rsch. Lab. of Resources Utilization, 4259 Nagatsuda-cho, Midori-ku, Yokohama, Kanagawa 226-8503 Japan

10:55 AM Magnetic Properties of Electrodeposited Ni-Fe Alloy Films: Kenji Hara; Shinji Yamashita; Hisayuki Kaku; Michiaki Ikeda; Shunsuke Kawano; Takeshi Ohgai; Tetsuya Akiyama; Hiroaki Nakano; Hisaaki Fukushima; 1Yaskawa Electric Corporation, Minami-Ku, Nagoya, Chubu-ken 457-8545 Japan; 2Kyushu University, Fac. of Eng., 6-10-1 Hakozaki, Higashi-ku, Fukuoka 812-8581 Japan; 3Kyushu Sangyo University, Fac. of Eng., 2-3-1 Matsukadai, Higashi-ku, Fukuoka 813-8503 Japan

11:20 AM Hard Magnetic Properties of Quenched Sm-Fe-N Powders: Takahiko Iriyama; Ryo Omatsuzawa; Takayuki Nishio; Norio Okochi; Yuichiro Fujita; 1Daido Steel Company Limited, Rsch. and Dev. Lab., 2-30 Daido-Cho, Minami-Ku, Nagoya 457-8545 Japan


High Temperature Materials

Tuesday AM Room: Cervantes Location: Renaissance
November 7, 2000 Parc 55 Hotel

Session Chairs: Keith Axler, Los Alamos National Laboratory; Keizo Uematsu, Nagaoka University of Technology, Dept. of Mats. Sci. and Eng.

8:30 AM Keynote
The Preparation and Characterization of Boron-Carbon-Nitrogen Nanotubes by a DC Arc Plasma: Yusuke Moriyoshi; Y. Shimizu; T. Watanabe; 1Hosei University, Fac. of Eng., 3-7-2 Kajinocho, Koganei-shi, Tokyo 184-8584 Japan; 2Tokyo Institute of Technology, 2-12-1 Ookayama, Meguro-ku, Tokyo 152-8550 Japan

9:00 AM Origin of the Fracture Strength of Silicon Nitride Ceramics: Hiroya Abe; T. Hotta; M. Naito; N. Shinohara; M. Okumiya; K. Uematsu; 1Japan Fine Ceramics Center, 2-4-1 Mutsuno, Atsutaku, Nagoya, Aichi 456-8587 Japan; 2Asahi Glass Company Limited, 1150 Hazawa, Kanagawaku, Yokohama, Kanagawa 221 Japan; 3Nagaoka University of Technology, Dept. of Chem., 1603-1 Kamitomioka, Nagaoka, Niigata 940-2188 Japan

9:25 AM + Kinetic Effect of Moisture on Production of Ceramics: Yutaka Saito; Nozomu Uchida; Keizo Uematsu; 1Nagaoka University of Technology, Chem. Dept., Kamitomioka 1603-1, Nagaoka, Niigata 940-2188 Japan


10:15 AM Break

10:30 AM Influence of Slurry pH on the Compaction Pressing of Alumina Ceramics: Midori Saito; Nozomu Uchida; Keizo Uematsu; 1Nagaoka University of Technology, Chem. Dept., Kamitomioka 1603-1, Nagaoka, Niigata 940-2188 Japan


11:20 AM Study on the Corrosion Mechanism of Al2O3-C-ZrO2 Refractory in the Melts of Smelting Reduction with Iron Bath: Qingcai Liu; Dengfu Chen; Jing Lin; 1University of California and Chongqing University, PRC, Dept. of Mech. and Aero. Eng., 9500 Gilman Dr., La Jolla, CA 92093-0411 USA; 2Chongqing University, Sch. of Mats. Eng., Chongqing 400044 PRC; 3Chongqing Jianshu University, Dept. of Appl. Sci., Chongqing 400045 PRC

11:45 AM Synthesis of Highly Oriented Zr(Y)O2 Films by Sol-Gel Method: Hiroshi Yamamura; Noritaka Horii; Katsuyoshi Kakinuma; 1Kanagawa University, Faculty of Eng./Dept. of Appl. Chem., 3-27-1 Rokkakubashi, Yokohama, Kanagawa-kenn 221-8686 Japan
Thin Films and Coatings - I

Tuesday AM  Room: DaVinci 1
November 7, 2000  Location: Renaissance
Parc 55 Hotel


8:30 AM  Keynote
Advanced Processing for the Creation of Functional Thin Films Using Laser Ablation: Tomoji Kawai;
1Osaka University, ISIR-Sanken, 8-1 Mihogaoka, Ibaraki 567-0047 Japan

9:00 AM
Mesoporous Silica Coatings Through Triblock-Copolymer Templated Processing: Jose M. Gomez-Vega;
Atsushi Hozumi; Hiroyuki Sugimura; Osamu Takai; 1Nagoya University, Dept. of Matls. Process. Eng., Grad. Sch. of Eng., Furo-cho, Chikusa-ku, Nagoya, Aichi 462-8603 Japan; 2National Industrial Research Institute of Nagoya, 1-1 Hirate-cho Chikusa-ku, Nagoya, Aichi 462-8510 Japan

9:25 AM
Friction and Wear Performance of Unbalanced Magnetron Sputter-Deposited Diamond-Like Carbon Multilayer Coatings: Eiji Iwamura;
1Kobe Steel Limited, Mats. Rsch. Lab., 1-5-5 Takatsukadai Nishi-ku, Kobe, Hyogo-ken 651-2271 Japan

9:50 AM
Preparation of YSZ Thin Films by RF Plasma-Enhanced Metal Organic Chemical Vapor Deposition: Takashi Nishimura;
Takamichi Ichikawa; Nagahiro Saito; Akio Fuwa; 1Waseda University, Dept. of Matl. Sci. and Eng., 3-4-1 Okubo, Tokyo 169-0027 Japan

10:15 AM  Break

10:30 AM
Study on Corrosion Resistance of Electrodeposited RE-Ni-W-P-SiC Composite Coating: Guo Zhongcheng;
Yang Xianwan;
1Kunning University of Technology and Science, Dept. of Metall., Kunming, Yunnan 650093 China

11:20 AM
Effect of Gas Flow on Ion Carburizing of Steel: Naotatsu Asahi;
Hirotugu Takeuchi; Yoshiyuki Hunaki; Khou Khyou Pin; Ryichi Urao;
Ibaraki University, Sch. of Eng., 4-12-1, Nakamarusawa, Hitachi, Ibaraki 316-0033 Japan; 2Aida Engineering Company, Simomarusawa, Sagamihara, Kanagawa 229-1134 Japan; 3Nihon Denshi Kogyou Company, Miyashita, Sagamihara, Kanagawa 229-1112 Japan

11:45 AM
Study on Microstructure of Electrodeposited RE-Ni-W-P-SiC Composite Coating: Guo Zhongcheng;
Zhu Xiaoyun; Zhai Dacheng; Yang Xianwan;
1Kunning University of Science and Technology, Dept. of Metall., Kunming, Yunnan 650093 China

Electrolytic Processing - I

Tuesday AM  Room: Michaelangelo
November 7, 2000  Location: Renaissance
Parc 55 Hotel

Session Chairs: Georges Kipouros, Dalhousie University, Dept. of Min. and Metall. Eng., Halifax, Nova Scotia B3J 2X4 Canada; Masazumi Okido, Nagoya University, Dept. of Matls. Sci. & Eng.

8:30 AM  Keynote
Electrochemical Implantation to Form Functional Films in Molten Salt Systems: Yasuhiro Ito;
1Kyoto University, Grad. Sch. of Energy Sci., Sakyo-ku, Kyoto 606-8501 Japan

9:00 AM
Superplasticity in Electro-Deposited Nickel: S. X. McFadden;
R. S. Mishra; A. K. Mukherjee;
1University of California, Dept. of Chem. Eng. and Matls. Sci., One Shields Ave., Davis, CA 95616 USA

9:25 AM
Electrodeposition Behavior of Zn-Cr Alloys from Methanol Baths: Tetsuya Akiyama;
Shigeo Kobayashi; Toshiaki Tsuru;
1Kyushu Sangyo University, Fac. of Eng., Dept. of Chem. Eng. and Matls. Sci., One Shields Ave., Davis, CA 95616 USA

9:50 AM
Recovery of Molybdenum and Rhenium from Sulfide Concentrate by Electro-Oxidation and Precipitation: Tsembel Darjaa;
Toru H. Okabe; Yoshiaki Umetsu;
1Tohoku University, Grad. Sch. of Eng., 2-1-1 Katahira Aoba-ku, Sendai, Miyagi 980-8577 Japan; 2Tohoku University, Instit. for Adv. Matls. Process., 2-1-1 Katahira Aoba-ku, Sendai, Miyagi 980-8577 Japan

10:15 AM  Break

10:30 AM
Experimental Study of High Current Density Electrolysis at Tamano Refinery: Kenji Haiki;
Hibi Kyodo Smelting Company Limited, Tamano Smelt. and Refine., 6-1-1, Hibi, Tamano City, Okayama Pref 706-8511 Japan

10:55 AM
High Throughput of Cathode Copper by New Anode Body Press Machine at Onahama No. 1, 2 Tankhouse: Koji Iwami;
1Onahama Smelting and Refining Company Limited, Onahama Div., 1-1 Nagisa, Onahama, Iwaki, Fukushima 971-8101 Japan

11:20 AM
Effect of Gas Flow on Ion Carburizing of Steel: Naotatsu Asahi;
Hirotugu Takeuchi; Yoshiyuki Hunaki; Khou Khyou Pin; Ryichi Urao;
Ibaraki University, Sch. of Eng., 4-12-1, Nakamarusawa, Hitachi, Ibaraki 316-0033 Japan; 2Aida Engineering Company, Simomarusawa, Sagamihara, Kanagawa 229-1134 Japan; 3Nihon Denshi Kogyou Company, Miyashita, Sagamihara, Kanagawa 229-1112 Japan

11:45 AM
Study on Microstructure of Electrodeposited RE-Ni-W-P-SiC Composite Coating: Guo Zhongcheng;
Zhu Xiaoyun; Zhai Dacheng; Yang Xianwan;
1Kunning University of Science and Technology, Dept. of Metall., Kunming, Yunnan 650093 China
Aqueous Processing - I

Tuesday AM
November 7, 2000
Location: Renaissance

Session Chairs: Renato G. Bautista, University of Nevada-Reno; Yasuhiro Awakura, Kyoto University, Dept. of Mats. Sci. and Eng.

8:30 AM  Keynote
Aqueous Processing of Materials—Where Is Our Expertise Taking Us?: Fiona M. Doyle;
1University of California, Dept. of Mats. Sci. and Eng., 551 Evans Hall, #1760, Berkeley, CA 94720-1760 USA

9:00 AM
Direct Fabrication of LiCoO2 Films on Papers by Electrodeposition: Takeshi Fujiwara1; Yoshinori Nakagawa1; Seung-Wan Song1; Tomoaki Watanabe1; Ryo Teranishi1; Masahiro Yoshimura1;
1Tokyo Institute of Technology, Matsls. and Struct. Lab., Ctr. for Mats. Des., 4259 Nagatsuda, Midori, Yokohama, Kanagawa 226-8503 Japan

9:25 AM
Chemical Corrosion Resistance Coating on Aluminum Substrates by the Sol-Gel Process: Shinji Hirai1; Kazuyoshi Shimakage1; Kenji Wada1;
1Muroran Institute of Technology, Dept. of Matsls. Sci. and Eng., 27-1 Mizumoto-cho, Muroran-shi, Hokkaido 050-8585 Japan;
2National Institute for Research in Inorganic Materials, Tsukuba, Japan

9:50 AM
Hydrothermal Corrosion of TiN, TiAlN and CrN Films on SUS-304 in 100 MPa Water: Sergiy Korablov1; Masahiro Yoshimura1;
1Tokyo Institute of Technology, Matsls. and Struct. Lab., Ctr for Matsls. Des., 4259 Nagatsuda, Midori, Yokohama, Kanagawa 226-8503 Japan

10:15 AM  Break

10:30 AM
Precipitation Stripping of Samarium Oxalate Particles: Yasuhiro Fukunaka1; Toshihiro Kuzuya1; Masakazu Niinai1; Eishi Kusaka1;
1Kyoto University, Dept. of Energy Sci. and Tech., Kyoto 606-8501 Japan

Composite Materials - II

Tuesday AM
November 7, 2000
Location: DaVinci 2&3


8:30 AM  Keynote
Synthesis of Advanced Composite Oxides Thin Film by the Liquid Phase Deposition Method from Aqueous Solution: Shigehito Deki1;
1Kobe University, Depts. of Chem. Sci. and Eng., Rokko-dai-cho, Nada-ku, Kobe, Hyogo Pref. 657-8501 Japan

9:00 AM
Wear Resistance of Metal Matrix Composites: Tadeusz Hejnowski1;
1Technical University of Lublin, Fac. of Mech. Eng., 36 Nadbystrzycka 36 St., Lublin 20-618 Poland

9:25 AM
Production and Assessment of TiC Reinforced Al-Fe-V-Si Alloy: Ali Kalkanli1;
1Middle East Technical University, Metall. and Matls. Eng. Deps., Inonu, Ankara, Bulvari 06531 Turkey

9:50 AM
New Process for the Fabrication of Cast Al Alloy Matrix Composites: Toshiaki Kimura1; Hideki Yamaura1; Hideo Nakaé1;
1Hitachi Metals, Cast. Tech. Rsch. Lab., 11 Kinugaoka, Moka, Tochigi-ken 321-4367 Japan;
2Waseda University, Dept. of Matsls. Sci. and Eng., 3-4-1 Okubo, Shinjyuku, Tokyo 169-8555 Japan

10:15 AM  Break

10:30 AM
A Study on the Mechanical Behavior of ZA-27 Alloy/Quartz Particulate Composites: P. V. Krupakara1; R.V. College of Engineering, Dept. of Chem., Bangalore, Karnataka 560059 India
10:55 AM
Corrosion Studies of Hematite Reinforced Aluminium-6061 MMC’s at Elevated Temperatures: S. C. Sharma; N. Shanmukha; M. Krishna; 1R.V. College of Engineering, Dept. of Mech. Eng., Rsch. and Dev., Bangalore 560059 India

11:20 AM

Powder Preparation and Processing - I

Tuesday PM  Room: Dante
November 7, 2000  Location: Renaissance
Parc 55 Hotel


2:00 PM Keynote
Morphology Control in Particle Preparation by Aerosol Method: Kikuo Okuyama; 1Hiroshima University, Dept. of Chem. Eng., Higashi, Hiroshima 739-8527 Japan

2:30 PM

2:55 PM
Structural and Mechanical Behavior of Boron Modified Low-Carbon PM Superalloys: K. K. Sharma; N. Chary; R. K. Sood; 1Defense Metallurgical Research Laboratory, Hyderabad, A.P. 500058 India

3:20 PM
A New Technology for Production of Two Component Composite Powders with Solvent Extraction-Crystallization Stripping: Junji Shibata; Shigeno Matsumoto; Hideki Yamamoto; 1Kansai University, Fac. of Eng., Dept. of Chem. Eng., 3-3-35, Yamate, Suita, Osaka 564-8680 Japan

3:45 PM Break

4:00 PM
Study of Quench Gas Injection for In-Flight Nitridation of Molybdenum Disilicide Powders in an Induction Plasma: Gervais Soucy; Mohamed Rahmane; Xiaobao Fan; Takamasashi Ishigaki; 1University of Sherbrooke, Plasma Tech. Rsch. Ctr., Sherbrooke, Quebec J1K2R1 Canada; 2Universite Hassan II, Phys. Dept., Fac. Sci. and Tech., Mohammadia 20650 Maroc; 3Nanomaterials Research Corporation, 2620 Trade Ctr. Ave., Longmont, CO 80503 USA; 4National Institute for Research in Inorganic Materials, 1-1 Namiki, Tsukuba-shi, Ibaraki 305-0044 Japan

4:25 PM
Low-Temperature Processing of Ba-Doped Lead Zinc Niobate Powder with Chemical Solution Deposition: Hisao Suzuki; Toshitaka Ota; Minoru Takahashi; 1Shizuoka University, Dept. of Matls. Sci., 3-5-1 Johoku, Hamamatsu, Shizuoka 432-8561 Japan; 2Nagoya Institute of Technology, Cer. Rsch. Lab., 10-6-29 Asahigaoka, Tajimi, Gifu 507 Japan

4:50 PM

Control & Analysis in Materials Processing - II

Tuesday PM  Room: Rubens
November 7, 2000  Location: Renaissance
Parc 55 Hotel

Session Chairs: Hani Henein, University of Alberta; Shiya Otsuka-Yao-Matsuo, Osaka University, Dept. of Matls. Sci. and Process.

2:00 PM Keynote
Hydrogen Sensor for Molten Metals and its Application to Materials Processing: Norihiko Fukatsu; Noriaki Kurita; Teruo Ohashi; 1Nagoya Institute of Technology, Dept. Matls. Sci. and Eng., Gokiso-cho, Showa-ku, Nagoya 466-8555 Japan

2:30 PM
Software Sensors for Real Time Optimization of Incoherent Materials Exploitation and Processing: Giuseppe Bonifazi; Floriana La Marca; Paolo Massacci; 1Università Di Roma, Dept. di Ing. Chim. Matl. Metall., Via Eudossiana 18, Roma 00184 Italy

2:55 PM Numerical Analysis of Influences of Operational Parameters on Fluid Flow and Heat Transfer in Funnel Type Mold of Thin Slab Caster: Hwa-Soo Park; Jong-Kyu Yoon; Hwa-Kyu Nam; 1Seoul National University, Sch. of Matls. Sci. and Eng., San 56-1 Shinrim-2, Dong Kwanak-ku, Seoul 151-742 Korea; 2Kookmin University, Sch. of Metallu. and Matls. Eng., 861-1 Chongnung-dong, Songbuk-gu, Seoul 136-702 Korea

3:20 PM
Development of Bonded Sm-Fe-N Magnet Using Reduction and Diffusion Method: Kenji Ohmori; Atsushi Kawamoto; Shoichi Yoshizawa; Takashi Ishikawa; Kaname Takeya; 1Sumitomo Metal Mining Company Limited, 3-18-5, Nakakokubun, Ichikawa, Chiba 272-8588 Japan
Non-ferrous Alloys & Light Metals - II

Tuesday PM
November 7, 2000
Parc 55 Hotel

Session Chairs: Mark P. Taylor, Comalco Aluminum; Yasuhiro Miura, Kyushu University, Dept. of Materials Science and Engineering.

2:00 PM Keynote
Effect of Processing on Mechanical Anisotropy and Formability of Textured Zircaloy Sheet: K. Linga Murty; Susan A. Lloyd
1North Carolina State University, Nuc. Eng. Dept., P.O. Box 7909, Raleigh, NC 27695-7909 USA

2:30 PM
The Effect of Sc on the Microstructure of Al Alloys: Tadashi Aiura; Yasuhiro Miura; Kyushu University, Dept. of Materials Science and Engineering; 1Kobe Steel Limited, Chofu Plant, Shimonoseki 752-0953 Japan

2:55 PM
Mechanical Properties of Heavily Deformed Copper Alloy: Koichi Miyake; Dierk Raabe; Hidefusa Takahara; Mitsui Mining and Smelting Company Limited, Corp. R&D Ctr., Haraichi Ageo, Ageo, Saitama 362-0021 Japan

3:20 PM

3:45 PM Break

4:00 PM
Wettability of Tin-Bismuth-Silver Solders: Teruo Tanabe; Kyoto University, Mats. Sci. and Eng., Yoshida Honmachi, Kyoto 606-8501 Japan

4:25 PM
Oxidation Behavior of Molten Cu-Be Alloys: Mitsuru Tanahashi; Jutaro Miura; Takaharu Iwadachi; Hiroyuki Sano; Toshiharu Fujisawa; Chikabumi Yamauchi; Nagoya University, Dept. of Materials Science and Engineering, Furo-cho Chikusa-ku, Nagoya, Aichi 464-8603 Japan; NGK Insulators Limited, New Metals Div., 1 Maegatacho, Handa, Aichi 475-0825 Japan; Nagoya University, Rsch. Ctr. for Adv. Waste and Emiss. Mgmt., Furo-cho Chikusa-ku, Nagoya, Aichi 464-8603 Japan

4:50 PM
Research, Technical and Economical Analysis of the Thermal Methods of Production Alumina (Al$_2$O$_3$), Technical Aluminum and Its Alloys at the High Temperature Shaft-Furnace: Shelkov E.M. Ivtan; Volovik A.V. Ivtan; Samotechny 18, Appartm. 61, Moscow 103473 Russia

Composite Materials - III

Tuesday PM
Room: DaVinci 2&3
Parc 55 Hotel

Session Chairs: Ivar Reimanis, Colorado School of Mines; Keisaku Ogi, Kyusyu University, Dept. of Materials Processing Engineering.

2:00 PM Keynote
New Processing of Whisker Reinforced Metal Matrix Composites: Hideharu Fukunaga
1Hiroshima University, Dept. of Mechanical Engineering, Kagamiyama, Higashi Hiroshima 739-8527 Japan

2:30 PM
Fabrication of Al Matrix Composite by Reactive Infiltration Process: Makoto Kobashi; Naoyuki Kanetake; Takao Choh
1Nagoya University, Materials Process Engineering Dept., Furo-cho, Chikusa-ku, Nagoya, Aichi 464-8603 Japan

2:55 PM +
Control of Ag Distribution in YBCO/Ag Composites: Takashi Kuroki; Kazuhiro Nishizono; Nobuyuki Mori; Keisaku Ogi
1Kyushu University, Dept. of Materials Processing Engineering, 6-10-1 Hakozaki, Higashi-ku, Fukuoka 812-8581 Japan; 2Kyushu University, Dept. of Materials Processing Engineering, 6-10-1 Hakozaki, Higashi-ku, Fukuoka 812-8581 Japan; 3Kyushu University, Depts. of Physics and Chemistry, 6-10-1 Hakozaki, Higashi-ku, Fukuoka 812-8581 Japan

3:20 PM
3:45 PM Break

4:00 PM
Thermal Expansion Behavior of Aluminum-Matrix Composites Processed by Solid- and Liquid-State Routes: Horacio Elio Nassini1; Mario Moreno1; Carlos González Oliver2; 1Comisión Nacional de Energía Atómica, Unidad Tecnológica Pilcaniyeu, Avda. Bustillo 9500, San Carlos de Bariloche, Río Negro 8400 Argentina; 2Consejo Nacional de Investigaciones Científicas y Técnicas, Unidad Tecnológica Pilcaniyeu, Avda. Bustillo 9500, San Carlos de Bariloche, Río Negro 8400 Argentina

4:25 PM
Mechanical Alloying of Ti-Based MMC Alloys by the ZOZ Attritor: Sedat Ozbilen1; Cemil Cetinkaya1; 1Gazi University, Metall. Edu. Dept., Fac. of Tech. Edu., Teknikokullar, Ankara, Turkey

4:50 PM
Fabrication of the Alumina Short Fiber Reinforced High Chromium Cast Irons by an Infiltration Process: Michiru Sakamoto1; Hua-Nan Liu1; Mikio Nomura1; Keisaku Ogai1; 1Kyushu National Industrial Research Institute, Matsl. Eng. Dept., Shuku, Tosu, Saga Prefecture 841-0052 Japan; 2Isobe Iron Works Company Limited, Higashi-Minato, Kokura-Kita, Kitakyushu, Fukuoka Prefecture 803-0802 Japan; 3Kyushu University, Dept. of Matls. Sci. and Eng., Fukuoka, Fukuoka Prefecture 812-0053 Japan

Thin Films & Coatings - II

Tuesday PM Room: DaVinci 1 Location: Renaissance Parc 55 Hotel


2:00 PM Keynote
Development of a Novel Ni Coating Technique of Ni(OH)2 Powder for Ni-MH Batteries: Koji Hoshide1; Takahiro Uno1; Kazusuke Sato1; 1Mitsubishi Materials Company, Cntl. Rsch. Instit., 1-297 Kitabukuro-cho, Omiya, Saitama 330-8508 Japan

2:30 PM
Thermal Fatigue Resistance of a Multilayer Thermal Barrier Coating: Tadeusz Hejwowski1; Andrzei Weronski1; 1Technical University of Lublin, Fac. of Mech. Eng., 36 Nadbystrzycka 36 St., Lublin 20-618 Poland

2:55 PM
Mechanical Properties of Reactively Sputtered (Ta,Si)N Hard Coating: S. K. Hwang1; J. W. Nah1; W. S. Choi1; C. M. Lee1; 1Inha University, Dept. of Metall. Eng., 253 Yonghyun-Don, Nam-Gu, Incheon 402-751 Korea

3:20 PM
Surface Reactions in Low-Temperature Plasma Deposition of Silicon-Oxide Films: Yasushi Inoue1; J. Iwai1; H. Sugiyama1; O. Takai1; 1Nagoya University, Matsl. Process. Eng. Dept., Furo-cho, Chikusa-ku, Nagoya, Aichi 464-8603 Japan


The Influence of Thermophysical Properties on the Calculation Accuracy of Solidification Thermokinetics: Frantisek Kavicka; Josef Stetina; Jay M. Khodadadi; 1Technical University of Brno, Mech. Eng. Dept., Brno, Technicka 2 616 69 Czech Republic; 2Auburn University, Dept. of Mech. Eng., 201 Ross Hall, Auburn, AL 36849-5341 USA

Waste Management - II

Tuesday PM Room: Michaelangelo
November 7, 2000 Location: Renaissance Parc 55 Hotel


2:00 PM Keynote
Application of Thermal Plasma Technology in the Treatment of Waste: Patrick R. Taylor; 1University of Idaho, Plasma Process. Lab., P.O. Box 443024, Moscow, ID 83844-3024 USA

2:30 PM
The Use of Washability Curves to Predict Critical Glass Fragments (Cullets) Size Classes Recovery According to Their Detected Optical-Digital Properties: Giuseppe Bonfazi; Paolo Massacci; 1Universita Di Roma, Dept. di Ing. Chimi., Matl., delle Mat. Prime e Metall., Via Eudossiana 18, Roma 00184 Italy

2:55 PM
Sulfur Recovery from the Leached Residue Produced by the Direct Leaching of Zinc Concentrate: Toyohisa Fujita; K. Koike; H. Masuda; 1Akita University, Fac. of Eng. and Resource Sci., I-1 Tegata Gakuencho, Akita 010-8502 Japan; 2Akita Zinc Company Limited, Iijima Refinery, Akita 011-0911 Japan

3:20 PM +
The Separating of Perovskite from Treated BF-Slag: Junwei Ma; Zhitong Sui; Bingchen Chen; 1Northeastern University, Sch. of Matls. and Metall., P.O. Box 119, Shenyang, Liaoning 110006 PRC; 2Northeastern University, Dept. of Min. Dress., Shenyang, Liaoning 110006 PRC

Iron & Steelmaking - II

Tuesday PM Room: Parc Ballroom III
November 7, 2000 Location: Renaissance Parc 55 Hotel

Session Chairs: Gordon Irons, McMaster University, Canada; Masahiro Kawakami, Toyohashi University of Technology, Dept. of Prod. Sys. Eng.

2:00 PM Keynote
Out Look of Innovative Refining Process in the 21st Century: Katsukiyo Marukawa; 1Osaka University, Sumitomo Met. Ind. Ltd., Japan

2:30 PM

2:55 PM
Hot-Dip Galvanizing Features of Various Grades of Spherical Graphite Cast Iron: Annelize Els-Botes; Danie Hattingh; 1Port Elizabeth Technikon, Fac. of Mech. Eng., Private Bag X6011, Port Elizabeth 6000 South Africa

3:20 PM
Control of Mixing Phenomena between Two Liquids using Lorentz Force: Toshiyuki Kozuka; Masayasu Kawahara;
Solidification Processing - II

Wednesday AM  Room: Raphael  Location: Renaissance  Parc 55 Hotel


8:30 AM  Keynote
Computer Simulation of Casting-Recent Development: I. Ohnaka; J. D. Zhu; T. Ohmichi; S. Kashiwai; Il. Yasuda; Osaka University, Dept. of Adapt. Mach. Sys., Grad. Sch. of Eng., Yamadakura 2-1, Suita-shi, Osaka 565-0871 Japan

9:00 AM
New Composite Cast Alloys Based on Copper and Technological Peculiarity of Processing: B. A. Kyrygovsky; V. I. Dubodelov; V. A. Seredenko; H. V. Seredenko; V. V. Khristenko; Physico, Tech. Inst. of Mets. and Alloys of the NAS, Kyiv, Ukraine

9:25 AM
Reactive Casting of NiAl and Simultaneous Joining to Steel: Kiyotaka Matsurada; Masayuki Kudoh; Hokkaido University, Div. of Matls. Sci. and Eng., Kita 13 Nishi 8, Kita-ku, Sapporo, Hokkaido 060-8628 Japan

9:50 AM
Plasma-Arc Zone Refining of Silicon: Kouji Mimura; Manabu Kishida; Minoru Ishiihi; Tohoku University, Inst. for Adv. Matls. Process., 2-1-1 Katsurahara Aoba-ku, Sendai, Miyagi 980-8577 Japan

10:15 AM  Break

10:30 AM
Numerical Simulation of Ostwald Ripening using the Phase-Field Model: Machiko Ode; Seong Gyou Kim; Won Tea Kim; Toshio Suzuki; University of Tokyo, Grad. Sch., 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-8565 Japan; Kansai National University, Dept. of Matls. Sci. and Eng., Kansai 573-701 Korea; Chongji University, CNM and Dept. of Phys., Chongjiu 360-764 Korea; University of Tokyo, Dept. of Metallurg., 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-8565 Japan

10:55 AM

11:20 AM
Metal/Mould Interfacial Heat Transfer during Solidification of Cast Iron Against Cast Iron Chills: Narayan K. Prabhu; University of Manchester and UMIST, Manchester Matls. Sci. Ctr., Grosvenor St., Manchester M1 7HS UK; University of Birmingham, IRC in Matls., Elms Rd., North Campus, Edgbaston, Birmingham B15 2TT UK

11:45 AM
No-Inner Core Continuous Casting of Metal Pipe: Zhongming Ren; Shanghai University, Matls. Dept., 149 Yan Chang Rd., Shanghai 200072 China

Cu, Ni, Zn, Pb and Sn - II

Wednesday AM  Room: Rubens  Location: Renaissance  Parc 55 Hotel

Session Chairs: Hong Y. Sohn, University of Utah, USA; Takahiko Okura, Nikko Techno Service Co.

8:30 AM  Keynote
Technological Advances for Reducing Production Costs of Commodity Metals: Robert L. Stephens; Douglas J. McKay; Cominco Research, P.O. Box 2000, Trail, British Columbia V1R 4S4 Canada

9:00 AM
Phase Equilibrium between Nickel Alloy Containing Minor Elements and FeO-MgO-SiO2 Slag: Hector Mario Henao; Mitsuhisa Hino; Kimio Iyagaki; Tohoku University, Inst. for Adv. Matls. Process., Katahara 2-1-1, Aoba-ku, Senda 980-8577 Japan

9:25 AM
Activity Measurements of Several Molten Sulfide Systems: Kazuo Koike; Mitsuhisa Hino; Akira Yazawa; Akita University, Faculty of Eng. and Res. Sci., Tegata-Gakuen-choh 1-1, Akita 010-8502 Japan; Tohoku University, Inst. for Adv. Matls. Process., Katahara 2-1-1, Sendai 980-8577 Japan
Recent Operation in the Gresik Smelter and Refinery: Teruyuki Matsutani; Toshihiko Igarashi; Moto Goto; PT Smelting, Gresik Smelt. and Refine., Desa Roomo, Kecamatan Manyar P.O. Box 555, Gresik, East Java 61151 Indonesia

High-Performing Flash Smelting Furnace at Saganoseki Smelter & Refinery: Chikashi Suenaga; Nippon Mining & Metals Company Limited, Saganoseki Smelt. and Refine., Saganoseki, Oita-gu, 879-2201 Japan

New Operational Calculation Process for the T-FSF: Soichiro Tanaka; Hibi Kyodo Smelting Company Limited, Tamano Smelter and Refinery, 6-1-1, Hibi, Tamano City, Okayama Pref 706-8511 Japan

Balance of the Circulation Materials and Behavior of the Various Components in the Lead Smelting Process at Chigirishima Refinery: Koichi Yamazaki; Toshio Kurikami; Toho Zinc Company Limited, Chigirishima Refinery, 5562-1 Higashino-cho, Toyota-gun, Hiroshima-ken 725-0222 Japan


Semi-Solid Processing of Al-Wrought Alloys: Andreas Wolf; Kurt Steinhoff; Peter J. Uggowitzer; Gian-Carlo Gullo; Swiss Federal Institute of Technology Zürich, Inst. of Metall., ETH Zentrum Sonneggstrasse 3, Zürich CH-8092 Switzerland; University of Stuttgart, Inst. for Met. Form. Tech., Holzgartenstrasse 17, Stuttgart D-70174 Germany; SM AG, Development & QM, Altdorf CH-6460 Switzerland

Mitsubishi Materials’ High Performance Oxygen Free Copper and High Performance Alloys: Norihisa Iida; Tsutomu Masui; Yutaka Koshiba; Mitsubishi Materials Corporation, Sakai Plant, 1-9-3-cho, Chikko Shinmachi, Sakai, Osaka 592-8331 Japan; Mitsubishi Materials Corporation, Copper & Copper Alloy Prod. Dept. Non-Ferr. Alloys Co., 5-11-cho, Marunouti, Chiyodaku, Tokyo 100-8222 Japan

TEM and SIMS Study of Duplex Structure of Anodic Films on Aluminum: Sachiko Ono; Noboru Masuko; Chiba Institute of Technology, Dept. of Metall., 2-17-1 Tsudanuma, Narashino, Chiba 275-0016 Japan


Field Emission from CVD Diamond Fabricated by Pulse-Modulated Microwave Plasma: Yukihiro Sakamoto; Matsufumi Takaya; Chiba Institute of Technology, Dept. of Precision Eng., 2-17-1, Tsudanuma, Narashino, Chiba 275-0016 Japan

Deposition of Tantalum Oxide Thin Film by Laser Ablation: Nobuaki Sato; Tohoku University, Inst. for Adv. Matls. Process., 2-1-1 Katahira, Aoba-ku, Sendai 980-8577 Japan

Non-ferrous Alloys & Light Metals - III

Wednesday AM Room: Cervantes
November 8, 2000 Location: Renaissance Parc 55 Hotel

Session Chairs: John N. Hryn, Argonne National Laboratory; Teruo Tanabe, Kyoto University, Dept. of Matls. Sci. and Eng.

8:30 AM Keynote
Silicon in the World: Masafumi Maeda; The University of Tokyo, Inst. of Indust. Sci., Roppongi 7-22-1, Minato-ku, Tokyo, Japan

9:00 AM
Aging Process of Alloyed ADI: Hamid Bayati; Roy Elliott; University of Manchester, Manchester Matls. Sci. Ctr., Grosvenor St., Manchester M1 7HS UK

9:25 AM +
Effect of Carbon Addition on the Microstructures and Mechanical Properties of IMI 205: Zhiqiang Chen; Yuegang Li; Michael H. Loretto; The University of Birmingham, Interdisc. Rsch. Ctr. in Matls. for High Perform. Appls., IRC in Materials, Birmingham, Edgbaston B15 2TT UK
10:15 AM Break

10:30 AM

10:55 AM
Production of Lead Oxide Film by PVD and Its Application to a Thin Film Solid Cell: **Masami Taguchi**; 1Akita University, Dept. of Mats. Sci. and Eng., 1-1 Tegata Gakuenmachi, Akita 010-8502 Japan

11:20 AM
In$_x$Ga$_{1-x}$As Islands Grown on CaF$_2$ Si(111) by Molecular Beam Epitaxy: **Y. Takeda**; Y. Moriya; Y. Sadayoshi; Y. Nonogaki; 1Nagoya University, Dept. of Mats. Sci. and Eng., Grad. Sch. of Eng., Nagoya 464-8603 Japan

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**Powder Preparation & Processing - II**

**Wednesday AM**

**Room:** Dante  
**Location:** Renaissance Parc 55 Hotel

**Session Chairs:** Raj Mendiratta, Indian Institute of Technology, Delhi, India; Mitsuhiro Ito, Taiheiyo Cement Corporation, Eng. & Tech. Dept.

**8:30 AM Keynote**
Nano-Particulate Design and Preparation for Targeting and Controlled Release of Drugs: **Yoshinobu Fukumori**; Hideki Ichikawa; Hiroyuki Tokumitsu; Futoshi Shikata; Masahito Miyamoto; Testuya Watanabe; 1Kobe Gakuin University, Faculty of Pharm. Sci. and Tech. Res. Ctr., 518 Arise, Iwakadani-cho, Nishi-ku, Kobe 651-2180 Japan

**9:00 AM**
Continuous Hydrothermal Synthesis of Metal Oxides in Sub- and Supercritical Water: **Tadafumi Adschiri**; 1Tohoku University, Dept. of Chem. Eng., Aoba-ku Ramakami Aza, Aoba-07, Sendai 980-8579 Japan

**9:25 AM**
Sintered Co-Fe-Ti Alloys with Refined Microstructures: **J. G. Cabanas-Moreno**; H. A. Calderon; H. Mendoza; G. Garcia; R. Martinez; M. Umemoto; 1Instituto Politecnico Nacional, Apdo Postal 75-373, Mexico, D.F. 07300 Mexico; 2Toyohashi University of Technology, Toyohashi, Aichi, Japan

**9:50 AM**

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**Electrolytic Processing - II**

**Wednesday AM**

**Room:** Michaelangelo  
**Location:** Renaissance Parc 55 Hotel

**Session Chairs:** S. X. McFadden, University of California-Davis; Tetsuya Akiyama, Kyushu Sangyo University, Dept. of Chem. Eng.

**8:30 AM Keynote**
Challenges in Electrolytic Processing of Materials: **Georges J. Kipouros**; 1Dalhousie University, Dept. of Min. and Metall. Eng., P.O. Box 1000, 1360 Barrington St., Halifax, Nova Scotia B3J 2X4 Canada

**9:00 AM**
+ Structure of Zn-Cr Alloy Electrodeposited on Steel at High Current Densities: **Masao Miyake**; Tetsuji Hirato; Eiichiro Matsubara; Yasuhiro Awakura; 1Kyoto University, Dept. of Mats. Sci. and Eng., Yoshida-hommachi, Sakyo-ku, Kyoto 606-8501 Japan; 2Tohoku University, Instit. for Matls. Rsch., 2-1-1 Katahira, Aoba-ku, Sendai, Miyagi 980-8577 Japan

**9:25 AM**
Electrochemical Behavior of Copper in Ammonium Imide Type Room Temperature Molten Salts: **Kuniaki Murase**; Koji Nitta; Tetsuji Hirato; Yasuhiro Awakura; 1Kyoto University, Dept. of Mats. Sci. and Eng., Yoshida-hommachi, Sakyo-ku, Kyoto 606-8501 Japan

**9:50 AM**
Electrodeposition of Zn-Te Semiconductor Film from Acidic Aqueous Solution: **Ryoichi Ichinoh**; Kensuke Kuroda; Masazumi Okido; 1Nagoya University, CIRSE, Furo-cho Chikusa-ku,
Nagoya 464-8603 Japan; 2Nagoya University, Dept. of Mats. Sci., Furo-cho Chikusa-ku, Nagoya 464-8603 Japan

10:15 AM Break

10:30 AM
Formation of Hydrogen Absorption Film by Electrodeposition in Molten Salts: Hiroaki Yamamoto1; Takahiro Sakamoto2; Kensuke Kuroda1; Ryoichi Ichino2; Masazumi Okido1; 1Nagoya University, CIRSE, Furo-cho Chikusa-ku, Nagoya 464-8603 Japan; 2Nagoya University, Dept. Mats. Sci., Furo-cho Chikusa-ku, Nagoya 464-8603 Japan

10:55 AM
The Effect and Automatic Control of the Electrolysis of Metal Aqueous Solution by Organic Additive: Li Shixiong1; Zhang Chuanfu1; 1Central South University of Technology, Dept. of Metall., Changsha 410083 PRC

11:20 AM
Electrowinning of Titanium in Fluoride Melt: Toshihide Takenaka1; Nao Murakami1; Takashi Matsui1; Masahiro Kawakami1; 1Toyohashi University of Technology, Dept. of Prod. Sys. Eng., Hibarigaoka 1-1, Tempaku-cho, Toyohashi 441-8580 Japan

11:45 AM
Production of Strong Reducing Solvent by Electrolyzer Equipped with Bipolar Membrane: Satoshi Yamashita1; Noboru Masuko1; 1Chiba Institute of Technology, Dept. of Metall. Eng., 2-17-1 Tsudanuma, Narashino-shi, Chiba 275-8588 Japan

10:15 AM Break

10:30 AM
Preparation of Mono-Dispersed Droplet using Ultrasonic: Kunihiko Takeda1; 1Sibaura Institute of Technology, Dept. of Matls. Sci. and Eng., Minato-ku 1088548 Japan

10:55 AM
Surface Conditioning of ABS for Metallization–A Study on Cleaner Processes: Luiz Alberto Teixeira1; Marcela Costa Santini1; 1Catholic University of Rio de Janeiro, Dept. Mats. Sci. and Metall., CP. 38008, Gavea, Rio de Janeiro, RJ 22453-900 Brazil

11:20 AM
New Hydro-Metallurgical Process for Electrolytic Copper Refinery Slimes at Saganoseki Smelter and Refinery: Akinori Toraiwa1; Yoshifumi Abe1; 1Nippon Mining and Metals Company Limited, Saganeoke Smelter and Refiery, Saganeoke-cho, Oita-ken 879-2201 Japan

11:45 AM
Aqueous Oxidation of Sodium Phosphate by Dissolved Oxygen Using Sulfur Dioxide in a Catalytic Reaction: Satoshi Yamashita1; Takabumi Kondo1; Noboru Masuko1; 1Chiba Institute of Technology, Dept. of Metall. Eng., 2-17-1 Tsudanuma, Narashino-shi, Chiba 275-8588 Japan

Aqueous Processing - II

Wednesday AM
November 8, 2000
Parc 55 Hotel

Session Chairs: Fiona Doyle, University of California-Berkeley; Junji Shibata, Kansai University, Dept. of Chem. Eng.

Room: Parc Ballroom III
Location: Renaissance

8:30 AM Keynote
New Approaches for Electrochemical Preparation of CdS Film: Hideki Minoura1; 1Gifu University, Grad. Sch. of Eng., Yanagido 1-1, Gifu 501-1193 Japan

9:00 AM +
Electrochemically Deposited LiCoO2 Film on Platinum Metal Substrate under Hydrothermal Condition: Seung-Wan Song1; 1Tokyo Institute of Technology, Matsl. and Struct. Lab., 4259 Nagatsuta Midori, Yokohama 226-8503 Japan

9:25 AM
Ultra-High Purification of Transition Metals by Anion Exchange Applying Various Oxidation States: Tamás Kekesi1; Masahito Uchikoshi1; Kouji Mimura1; Yongfu Zhu1; Minoru Isshiki1; 1Tohoku University, Inst. for Adv. Mats. Process., 2-1-1 Katahira Aoba-ku, Sendai, Miyagi 980-8577 Japan; 2MRC Japan, Inc., R&D Div., 2-1-15 Meigetsu, Tagajo, Miyagi 985-0843 Japan

9:50 AM
Ambient-Temperature Precipitation of Heavy-Metal Ions from Aqueous Solutions as Ferrite-Type Compounds: Oscar Perales Perez1; Yoshiaki Umetsu1; Kazuyuki Tohji1; Atsuo Kasuya1; 1Tohoku University, Ctr. for Interdis. Rsch. 3-ch. Aramaki aza Aoba, Aoba-ku, Sendai, Miyagi-ken 980-8578 Japan; 2Tohoku University, Inst. for Adv. Mats. Process., Katahira 2-1-1, Aoba-ku, Sendai, Miyagi-ken 980-8577 Japan; 2Tohoku University, Dept. of Geosci. and Tech., Aramaki aza Aoba Aoba-ku, Sendai, Miyagi-ken 980-8578 Japan

Composite Materials - IV

Wednesday AM
November 8, 2000
Parc 55 Hotel


Room: DaVinci 2&3
Location: Renaissance

8:30 AM Keynote
Processing and Characterization of Cu-Al2O3 Nano-Scale Composites Produced by In-Situ Reduction: Marcelo Senna Motta1; Eduardo A. Brocchi1; P. K. Jena1; Guillermo Solórzano1; 1PUC-Rio, Matls. Sci. and Metall. Dept., P.O. Box 38090-Gávea, Rio de Janeiro, RJ 22451-970 Brazil

9:00 AM +
Damping Behaviour of Aluminite Particulate Reinforced ZA-27 Alloy Metal Matrix Composite: Shanta Sastry1; Jayagopal Uchil2; M. Krishna3; 1N.M.K.R.V College for Women, Phys. Dept.,
9:25 AM
Prediction of Galvanic Corrosion Rates for Garnet/LM-6 Metal Matrix Composites in Sodium Chloride Solutions: V. T. Vijayalakshmi; Jayagopal Uchil; K. H. Thipperudrappa; M. Krishna; N.M.K.R.V. College for Women, Dept. of Chem., Jayanagar III Block, Bangalore 560011 India

10:05 AM
Damping Behavior and Mechanical Properties of a MnB Particle- Reinforced INCRAMUTE Matrix Composite: Fuxing Yin; Yoshiaki Ohsawa; Akira Sato; Yoshiaki Kawahara; National Research Institute for Metals, Matls. Creation Station, Sengen 1-2-1, Tsukuba, Ibaraki 305-0047 Japan; B.B. Materia Company Limited, Chiba 267-0066 Japan

10:30 AM
Elastic Behavior of Aluminate Particle Reinforced Re-ZA-27 Alloy Metal Matrix Composite: Shanta Sastry; Jayagopal Uchil; S. C. Sharma; M. Krishna; B. M. Satish; NMRKV College for Women, Dept. of Phys., Jayanagar, Bangalore, Karnataka 560011 India; Mangalore University, Dept. of Matl. Sci., Mangalore, India; RV College of Engineering, Rsch. and Dev. Dept., Dept. of Mech. Eng., Bangalore 560 059 India

10:55 AM

Waste Management - III

Wednesday PM Room: Michaelangelo Location: Renaissance Parc 55 Hotel

Session Chairs: Georges J. Kipouros, Dalhousie University, Halifax, Canada; Toshiharu Fujisawa, Nagoya University, Res. Ctr. for Adv. Waste and Emis. Mgmt.

2:00 PM Keynote
Industrial Wastes Management for Construction Materials: V. A. Mymrin; Alfonso J. Vazquez Vaamonde; P. A. Alexeev; Profsouznaia Str., 152-4-119, Moscow 117321 Russia; Avda Gregorio del Amo 8, Madrid 28040 Spain; Profsouznaia Str. 152-4-71, Moscow 117321 Russia

2:30 PM
Extraction of Valuable Compounds from Egyptian Zinc Concentrate: Kamilia A. El-Barawy; Samir Z. El-Tawil; M. B. Morsli; M. M. Nasri; Zaki I. Mohamed; Central Metallurgical Research and Development Institute, Pyrometall. Div., P.O. Box 87, Helwan, Cairo, Egypt

2:55 PM
3:20 PM
Bioleaching of Waste Nickel Condenser Powder: Hiroshi Nakazawa; Wu Shouming; Hayato Sato; Yasuo Kudo; Iwate University, Fac. of Eng., 4-3-5, Ueda, Morioka-shi, Iwate Prefecture 020-8551 Japan

3:45 PM Break

4:00 PM
The Roles of Metallic Compounds on Dioxins Generation-Decomposition Behavior from Thermodynamics and Quantum Chemistry: Nagahiro Saito; Mituhito Hirota; Takahiro Ishizaki; Akio Fujiwara; Waseda University, Depts. of Matl. Sci. and Eng., 3-4-1 Okubo, Shinjuku-ku, Tokyo 169-0027 Japan

4:25 PM
Zinc and Lead Recovery from Model Ash Compounds: Shin-ji Abe; Tadakazu Kagami; Katsuyasu Sugawara; Takuo Sugawara; Akita University, Fac. of Eng. and Res. Sci., 1-1 Tegata Gakuen-cho, Akita City, Akita Pref. 010-8502 Japan; Mitsubishi Material Company, 1-3-25 Koshikawacho, Bunkyo-ku, Tokyo 112-0002 Japan

4:50 PM
Recovery of Nickel from Spent Electroless Nickel Plating Solution by Solvent Extraction: Mikiya Tanaka; Mikio Kobayashi; Mansour Ahmed S. AlGhamdi; Kenji Tategata; Hiroko Sato; Iwate University, Fac. of Eng., 4-3-5, Ueda, Morioka-shi, Iwate Prefecture 020-8551 Japan

Iron & Steelmaking - III

Wednesday PM
November 8, 2000
Parc 55 Hotel

Session Chairs: Patrick R. Taylor, University of Idaho; Masanori Iwase, Kyoto University, Dept. of Egy. Sci. and Tech.

2:00 PM Keynote
Influence of the Production Condition and the Preforming Process of IF-Steel on the Impact Behavior: Angelika Spalek; Gerd Reisner; Ewald Werner; Andreas Pichler; Peter Stiasny; Christian Doppler Laboratorium für Moderne Mehrphasenstähle, Lehrstuhl A für Mechanik, TU-München, Boltzmannstr. 15, Garching D-85747 Germany; VEST-ALPINE STAHL Linz GmbH, Rsch., Dev. and Test. Div., Vrest-Alpine-Strasse 3, Linz A-4031 Austria

2:30 PM
The Fracture Toughness of Cold Work Tool Steels: Ewald Werner; Werner Liebfahr; Johann Blaha; Christian-Doppler-Laboratorium, Lehrstuhl A für Mechanik, TU München, Boltzmannstrasse 15, Garching D-85747 Germany; Böhler Edelstahl GmbH, Mariazellerte Straße 25, Kapfenberg A-8605 Austria
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