



## **AMERICAN CERAMIC SOCIETY**

**St. Louis Section  
*and the*  
Refractory Ceramics Division**

**Fifty-first Annual Symposium**

**on**

**Refractories**

**March 25-26, 2015**

**Hilton St. Louis Airport Hotel**

**Theme:**

**“Refractories as Engineered Ceramics”**

## PROGRAM

### “Refractories as Engineered Ceramics”

March 24<sup>th</sup>, 2015

5:00 P.M. Kickoff Event – Take Me Out to the Ballpark Village St. Louis

March 25<sup>th</sup>, 2015

7:15 A.M. Registration and Coffee

8:00 Morning Technical Sessions  
Welcome and Introductions

**St. Louis Section Chairman**

*Roger Smith*

Bucher Emhart Glass

**Refractory Ceramics Division Chair**

*Ben Markel*

Resco Products

**Co-Program Coordinators**

*Mike Alexander*

Riverside Refractories

*Matthew Lambert*

Allied Mineral Products

8:15 New Forefront Measuring Techniques for Characterizing Engineered Refractories  
*Peter Quirnbach and Hartmut Koerber – Deutsches Institut fuer Feuerfest and Keramik (DIFK),  
Almuth Sax – University of Koblenz-Landau, Germany*

8:45 Thoughts on Additive Manufacturing for Refractory Application Abstract  
*James Hemrick – Oak Ridge National Laboratory*

9:15 A Potential Short-Cut to Quantitative Mineralogy  
*William Carty, Kuo-pin Tseng and Hyojin Lee – Alfred University*

9:45 Coffee Break

10:15 Physical Properties of a Refractory Castable with Various Alumina Aggregates  
*Mike Alexander – Riverside Refractories*

10:45 Carbon Bonded Refractory Composites  
*Duane DeBastiani – Vesuvius Pittsburgh, USA, Stefano Martelli – Vesuvius Genoa, Italy,  
Philippe Guillo – Vesuvius Feignes, France*

11:15 Tailoring Composite Properties through Engineered Ceramics  
*Jeremy Watts – Missouri S&T*

11:45-1:00 Luncheon Banquet

## **Afternoon Session**

- 1:00-1:45 Presentation of the T.J. Planje St. Louis Refractories Award to **Victor C. Pandolfelli – Federal University of S. Carlos - Brazil**
- 2:00 Castables for Industrial Applications - Still Room for Improvement  
*Dale Zacherl – Almatís, Inc.*
- 2:30 Coffee Break
- 3:00 Novel Deflocculation System for Silica Fume Containing Castables with Enhanced Robustness to Raw Material Variations  
*Carl Zetterström, C. Wöhrmeyer, E. Frier and J. Pommay – Kerneos, France*
- 3:30 Micro-Gel Bonded Castables - A Bond with Potentials  
*Bjorn Myhre and Hong Peng – Elkem Silicon Materials*
- 4:00 ACerS President's Council of Student Advisors (PCSA): Annual Report of Student Activities  
*Jessica Rimsza and Bradley Richards*
- 4:30 Questions & Discussion  
Co-Program Coordinator
- 4:45 RCD Annual Members Meeting
- 5:00 Closing Remarks  
*Roger Smith*  
Bucher Emhart Glass  
*Ben Markel*  
Resco Products
- 5:00-7:00 Exposition and Cocktail Hour
- |                                |                          |
|--------------------------------|--------------------------|
| Almatís                        | Kercher Industries       |
| AluChem                        | Kerneos, Inc.            |
| Alteo-Alumina                  | Kyanite Mining Corp.     |
| American Ceramic Society       | LAEIS GmbH               |
| BassTech International         | Orton Ceramic Foundation |
| Calucem, Inc.                  | Possehl Erzkontor N.A.   |
| China Mineral Procurement, LLC | PQ Corporation           |
| Christy Minerals               | RED Industrial Products  |
| Cilas Particle Size            | Refractory Minerals      |
| DIFK GmbH, Germany             | TAM Ceramics             |
| Elkem Silicon Materials        | Washington Mills         |
| Great Lake Minerals            | ZIRCAR Ceramics, Inc.    |
| IMERYS Refractory Minerals     |                          |
- 7:00 Dinner Buffet with Speaker - Marcus Fish, ACerS Ceramic and Glass Industry Foundation

March 26<sup>th</sup>, 2015

6:30 A.M. Refractory Ceramics Division (RCD) Breakfast Meeting

8:15 Morning Technical Sessions  
Welcome and Introductions

**St. Louis Section Chairman**

*Roger Smith*

Bucher Emhart Glass

**Refractory Ceramics Division Chair**

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Resco Products

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Riverside Refractories

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8:30 **Invited Paper – 2014 AI Allen Award Winner**  
In-Depth Microstructural Evolution Analyses of Cement-Bonded Spinel Refractory Castables:  
Novel Insights Regarding Spinel and CA<sub>6</sub> Formation  
*Eric Sako, Mariana Braulio and Victor Pandolfelli – Federal University of Sao Carlos, Brazil*  
*Enno Zinngrebe and Sieger van der Laan – Ceramics Research Centre, The Netherlands*  
**Appeared in the J. Amer. Ceram. Soc., 95[5] 1732-1740 (2012)**

9:30 Protecting Metallic Anchors and Vessel from Alkali Corrosion by Innovative Refractory Paints  
*Vanessa Halapa – Calderys France*

10:00 Coffee Break

10:30 Maximize Energy Savings by Selecting the Right Insulating Firebricks  
*Steve Chernack – Morgan Thermal Ceramics*

11:00 Improvement of Refractory Castables with an Innovative Calcium Aluminate Binder System  
*Robert Stacy and Douglas Ostrander – Calucem, Inc., Nikolaus Kreuels and Ingrid Mikanovic – Calucem GmbH, Germany*

11:30 An Alternative Advanced Alumina for Advanced Refractory Ceramics  
*Elodie Chabas – Alteo-Alumina*

12:00 Questions & Discussion  
Co-Program Coordinator

**St. Louis Section Chairman**

*Roger Smith*

Bucher Emhart Glass

**Refractory Ceramics Division Chair**

*Ben Markel*

Resco Products

12:30 St. Louis Section Officer Business Meeting & Lunch



## REGISTRATION FORM

**Please select:**

- Pre-Registration Fee (Deadline March 20)     \$225.00
- On-Site Registration Fee     \$275.00
- Emeritus/Senior Fee     \$125.00
- Student Fee     \$50.00
- Exhibitor for Exposition (Table Top)     \$300.00  
**(Exhibitor cost does not include registration fee)**
- Lunch -  Chicken  Fish  Pasta/Vegetarian
- Dinner Buffet
- Guest for Dinner     \$40.00

*(Fill in below)*

NAME:
NAME ON BADGE:
COMPANY:
ADDRESS:
CITY/STATE/ZIP:
EMAIL:
TEL/FAX:

**METHOD OF PAYMENT**

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MC: <input type="checkbox"/>	VISA: <input type="checkbox"/>	AMEX: <input type="checkbox"/>
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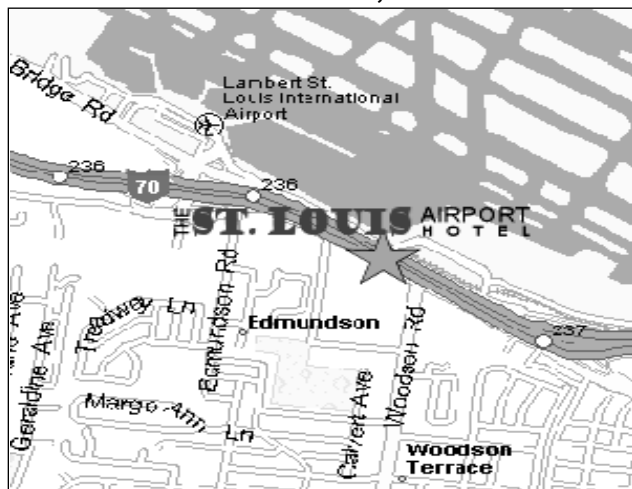
Company or Personal Check in U.S. Dollars  
**(Make checks payable to: St. Louis Section)**

Send To: Patty Smith  
Missouri S&T  
105 Straumanis-James Hall  
401 W. 16<sup>th</sup> St.  
Rolla, MO 65401  
Tel (573) 341-6265  
Fax (573) 341-2071  
Email: psmith@mst.edu

**NOTE: Dress Attire – Semi Casual (Tie Optional)**

### LOCATION

**Hilton St. Louis Airport Hotel**  
10330 Natural Bridge Road  
St. Louis, MO



A block of rooms has been set aside at the Hilton St. Louis Airport Hotel in St. Louis, MO for this meeting. Please refer to **Group Code SAC** at the Hilton when reserving a room for which the rate is \$104.00 single/double per night or you can reserve online. **Reservations must be made before March 2<sup>nd</sup> 2015**

### HOTEL ACCOMMODATIONS

Hilton Hotel (**Mar 2, 2015**) (314) 426-5500

The web page address

is: [http://www.hilton.com/en/hi/groups/personalized/S/STLHIHF-SAC-20150321/index.jhtml?WT.mc\\_id=POG](http://www.hilton.com/en/hi/groups/personalized/S/STLHIHF-SAC-20150321/index.jhtml?WT.mc_id=POG)

- Hampton Inn     (314) 429-2000
- Drury Inn     (314) 423-7700
- Marriott Airport     (314) 423-9700