

Focused Session 1:  
Geopolymers, Inorganic  
Polymers, Hybrid  
Organic-Inorganic  
Polymer Materials

Wednesday, January 25, 2012  
**Focused Session 1: Poster  
Session**

5:00 PM-7:30 PM

Room: Exhibition Hall, Ocean Center

**(ICACC-FS1-P136-2012) Influence of activating solution's composition on products stability and thermomechanical properties of volcanic ash-based geopolymers (Invited)**

Patrick N Lemougna, Uphie F Chinje Melo, University of Yaoundé, Cameroon; Marie-Paule Delplancke, Université Libre de Bruxelles, Belgium; Hubert Rahier\*, Vrije Universiteit Brussel, Belgium

**(ICACC-FS1-P137-2012) Thermal Resistance Properties of Geopolymers Containing Ground Granulated Blast Furnace Slag**

Jeffery Eichler\*, Tammy Metroke, Universal Technology Corporation, USA; Michael Henley, Air Force Research Laboratory, USA

**(ICACC-FS1-P138-2012) Properties of low calcium fly ash based geopolymer pastes**

Youngcheol Choi\*, Joohyung Kim, Gyudon Moon, Youngun Cho, Bongchun Lee, Sanghwa Jung, Korea Conformity Institute, Republic of Korea

**(ICACC-FS1-P139-2012) Effect of elevated temperature exposure on the performance of fly ash based geopolymer**

Youngcheol Choi\*, Joohyung Kim, Bongchun Lee, Sanghwa Jung, Korea Conformity Institute, Republic of Korea

Thursday, January 26, 2012  
**Chemistry, Processing and  
Microstructure**

1:30 PM-6:00 PM

Room: Coquina Salon A

Session Chair(s): Hubert Rahier, John Provis

**1:30 PM**

**(ICACC-FS1-001-2012) Geopolymers and other alkali-activated binders - Design, characterization and optimization of performance and durability (Invited)**

John L Provis\*, Susan Bernal, Rachel San Nicolas, Laura Gordon, University of Melbourne, Australia; Peter Duxson, Zeobond Pty Ltd., Australia; Jannie S.J. van Deventer, University of Melbourne, Australia

**2:00 PM**

**(ICACC-FS1-002-2012) On the Effects of Water Content and Si/Al on the Structure and Properties of Geopolymers (Invited)**

Miladin Radovic\*, Maricela Lizcano, Texas A&M University, USA

**2:30 PM**

**(ICACC-FS1-003-2012) Dissolution rate of silica in solution required to form geopolymer binder (Invited)**

Sylvie Rossignol\*, Alexandre Autef, CEC-GEMH -ENSCI, France; Emmanuel Joussein, GRESE, France; Gilles Gasgnier, IMERYS, France

**3:00 PM**

Break

**3:20 PM**

**(ICACC-FS1-004-2012) Advanced Characterization of Geopolymer Pore Architecture Using Gas Adsorption**

Katie Cychoz\*, Quantachrome Inc., USA;  
Tammy Metroke, Universal Technology Corporation, USA; Matthias Thommes, Quantachrome Inc., USA; Michael Henley, Air Force Research Laboratory, USA

**3:40 PM**

**(ICACC-FS1-005-2012) Porosity Characteristics of Geopolymers: Influence of Synthesis Conditions**

Tammy Metroke\*, Universal Technology Corporation, USA; Matthias Thommes, Katie Cychoz, Quantachrome Inc., USA; Michael Henley, Air Force Research Laboratory, USA

**4:00 PM**

**(ICACC-FS1-006-2012) Lime-potassium carbonate as an alkali activator for untreated kaolinite (Invited)**

Hubert Rahier\*, Muayad Esayfan, Vrije Universiteit Brussel, Belgium; Hani Khoury, University Jordan, Jordan; Tine Tysmans, Jan Wastiels, Vrije Universiteit Brussel, Belgium

**4:30 PM**

**(ICACC-FS1-007-2012) Geopolymerization technology for manufacture of cold setting building materials**

B. D Nayak, S. D Muduli, D. S Rao, Barada Mishra\*, CSIR-IMMT, India

**5:00 PM**

**(ICACC-FS1-008-2012) PVA-fibre reinforced fly-ash based geopolymer composites**

Kristoffer Krnel\*, Natalija Petkovic, Tomaz Kosmac, Jozef Stefan Institute, Slovenia

Friday, January 27, 2012

**Fiber-reinforced Geopolymer Composites**

8:00 AM-10:00 AM

Room: Coquina Salon A

Session Chair(s): Tomaz Kosmac

**8:00 AM**

**(ICACC-FS1-009-2012) Fibre-Matrix Interactions in Geopolymer Matrix Composites**

Michael Welter\*, Kenneth MacKenzie, Victoria University of Wellington, New Zealand

**8:20 AM**

**(ICACC-FS1-010-2012) Properties of Basalt Fiber Reinforced Geopolymer Composites**

Gregory P Kutyla\*, Sean Musil, Waltraud M. Kriven, University of Illinois at Urbana-Champaign, USA

**8:40 AM**

**(ICACC-FS1-011-2012) High Temperature 4-Pt Flexural Strength of Chopped Fiber Reinforced Geopolymer Composites (Invited)**

Timothy P Dietz, Waltraud M. Kriven\*, University of Illinois at Urbana-Champaign, USA

**9:10 AM**

**(ICACC-FS1-012-2012) Microwave Processing of Chopped Silicon Carbide Reinforced Geopolymers**

Morgana L Fall\*, Shawn Michael Allan, Ceralink Inc., USA; Waltraud M Kriven, University of Illinois at Urbana Champaign, USA; Holly S Shulman, Ceralink Inc., USA

**9:40 AM**

Break

# **Bioapplications, Inorganic-organic Hybrids, and Phosphate-based Inorganic Polymers**

Henry A Colorado\*, Roopa Ganga, Dileep Singh, Argonne National Laboratory, USA

10:00 AM-12:00 PM

Room: Coquina Salon A

Session Chair(s): Waltraud Kriven

**10:00 AM**

**(ICACC-FS1-013-2012) Metakaolin Nanosilver as Biocide Agent in Geopolymer (Invited)**

Jose Serafín Moya\*, Belen Cabal, Jesus Sanz, ICMM-CSIC, Spain

**10:30 AM**

**(ICACC-FS1-014-2012) Organic-Aluminosilicate Interface Interactions (Invited)**

Brayden Edward Glad\*, Waltraud M Kriven, University of Illinois at Urbana-Champaign, USA

**11:00 AM**

**(ICACC-FS1-015-2012) Ligational Aspects of the Mesogenic Schiff-base, N,N'-di-(4'-octadecyloxybenzoate) salicylidene diaminoethane with Some Rare Earth Metal Ions**

Sanyucta Kumari\*, T. R Rao, Angad K Singh, Banaras Hindu University, India

**11:20 AM**

**(ICACC-FS1-016-2012) CeramicAsh: a new ultra low cost chemically bonded ceramic material**

Henry A Colorado\*, J.Ming Yang, UCLA, USA

**11:40 AM**

**(ICACC-FS1-017-2012) Chemically bonded phosphate ceramics for stabilizations of high-sodium containing waste streams**