

# PACRIM8

## Registration

Register for PACRIM8 and this Symposium (included in PACRIM registration) at [www.ceramics.org/PACRIM8](http://www.ceramics.org/PACRIM8) or call ACeRS Customer Service at 1-866-721-3322 or 1-240-646-7054

Please note: you can register for the entire PACRIM program, or for just one-day.

Please also confirm your registration to the GMIC by calling or e-mailing Executive Assistant, Donna Ransom at +1-614-523-3033 or [dransom@gmic.org](mailto:dransom@gmic.org).



Flat Glass

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Organized by the American Ceramic Society

[www.ceramics.org/PACRIM8](http://www.ceramics.org/PACRIM8)

## Improving Strength in Industrial Glass

“The Future of Glass  
Strength—A Society Changing  
Symposium”

Thursday June 4, 2009

Vancouver, BC—Canada



International  
Commission on  
Glass



TNO Science &  
Industry

# The Future of Glass—A Society-Changing Symposium

Today's commercial glass in common materials like architectural insulation and glazing, bottles, and automotive glasses typically exhibits strength of only a half percent, or one-two-hundredth (1/200<sup>th</sup>) of their theoretical strength as proven in the laboratory. Many fiberglass products function at higher levels, but still fall far short of the theoretical. Despite this weakness, presently glass serves our society in countless ways, seen and unseen by the public-at-large.

How much more could glass serve society, if even 10 to 25 percent of its intrinsic strength could be tapped?

An innovative symposium on the strength of glass is being held on Thursday, June 4, 2009 at the Pac-Rim 8 meeting being held in Vancouver, B.C. Canada, (May 31-June 5, 2009). Sponsors are The Glass Manufacturing Industry Council, The International Commission on Glass and the TNO. The objective of the symposium is to bring together experts in the field of glass strength to identify those research areas which can potentially provide us with deep insight into reducing the gap between the useable and inherent strength of glass. We all know that higher strength glasses could revolutionize material selection in many industrial and consumer markets.



Container Glass

Prior to this symposium, there are traditional technical sessions being held during the Pac-Rim meeting dealing with the strength of glasses.

This symposium will be conducted after these sessions. It will consist of speakers addressing 8 specific topics related to glass strength as listed below. The format of the talks is not the traditional technical presentation format.

Instead, the speakers will be discussing where the holes are in our understanding of glass strength as it relates to their fields of expertise. It is expected that about half the time allotted for each topic will be taken up with interactions between the speakers and the audience and within the audience itself. At the end of the day, there will be a round table discussion between additional glass strength experts from around the world and the audience. The outcome of this round table discussion is expected to be a consensus as to 2-5 coordinated research projects which would give us the most insight into how we can utilize a higher percentage of the inherent strength of glass and discuss possible sources of funding for the research. We want to have a broad cross section of individuals in attendance for whom the strength of glass is important: either from a scientific point of view, in relating to glass products that they are associated with, or from the perspective of having current needs which could be met today by higher strength glass. We believe that only with broad participation can we arrive at those research projects which stand the highest potential of revolutionizing the glass industry.



Fiber Glass

## Who should attend this conference?

- Glass company senior technical personnel with an interest in broadening their company's product range and capabilities
- Engineers, researchers, and scientists with an interest in glass strength from glass companies, national labs, universities, and government agencies
- Product development specialists from industries using glass whose products might acquire added-value if glass were stronger: architects, automobile designers, bottlers, solar and wind energy specialists, chemical, nuclear, aviation, space, oceanography.

## Initial Speaker List

- *Developments of High Strength Fiberglass Compositions and their Applications to Address Current Global Issues;* **David Hartmann and Peter McGinnis, Owens-Corning Fiberglass**
- *Issues and Opportunities in the Development of Lightweight, High Strength Glass Containers,* **Emilio Spinosa, Owens-Illinois, Inc.**
- *Post-forming Methods to Increase the Strength of Glass,* **Adam Ellison, Corning, Inc.**
- *The Role of Coatings and other Surface Treatments in the Strength of Glass,* **Carlo Pantano, Penn State University**
- *The Improvement of Fracture Toughness of Glass by Surface-Modifying Coating,* **Bulent Yoldas, Refika Budakoglu, Sisecam**
- *The Elastic Properties of Silicate Glasses,* **Tanguy Rouxel, University, Rennes**
- *Nano-scale Fatigue and Failure Processes in Glass,* **Matteo Ciccotti, University of Montpellier**
- *Modeling Glass Failure and the Strength of Oxide Glasses,* **Alastair Cormack, Alfred University**