# Challenging Glass 4



# **COST Action TU0905 Final Conference**

Editors
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Freek Bos
Jan Belis
Jean-Paul Lebet





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# Challenging Glass 4 & COST Action TU0905 Final Conference

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#### Preface

Challenging Glass and the European research network COST Action TU0905 "Structural Glass – Novel design methods and next generation products" have successfully joined forces in the organisation of the Challenging Glass 4 & COST Action TU0905 Final Conference. This international scientific conference – held 6-7 February 2014 at the EPFL in Lausanne, Switzerland – focuses on the Architectural and Structural Application of Glass and gathers world class designers, engineers, researchers and industrial partners to discuss on the advances in structural glass design and engineering. Within the Challenging Glass conference series this conference is the fourth edition – following the editions held at the TU Delft in the Netherlands in 2008, 2010 and 2012 – while for COST Action TU0905 it follows the mid-term conference held in Porec, Croatia in 2013.

This book provides the proceedings of the Challenging Glass 4 & COST Action TU0905 Final Conference and as such it forms the Final Action Publication of the COST Action TU0905. Nearly 100 peer-reviewed papers, published by more than 180 authors from 22 different countries, provide a profound state-of-the-art in structural glass design and engineering. The papers are divided over 11 subthemes, which address multiple scale levels ranging from glass material strength to high-end glass applications in structures and façades. Moreover, 5 keynote papers provide inspiring projects and ideas for further reflection.

Organising this conference and editing the conference proceedings has once again been an enjoyable experience. We would like to acknowledge all authors for their contributions, all scientific committee members for their valuable comments, our esteemed keynote speakers for their inspiring presentations and of course all conference participants for their interest in this event. In addition, we are grateful to our platinum sponsor Glas Trösch, our gold and silver sponsors and several non-profit organisations for supporting the organisation of this conference.

Finally, we would like to acknowledge COST for supporting both the conference and publication of these conference proceedings, and all COST Action TU0905 members, Domain Committee rapporteur Prof. Kiril Gramatikov, Action's Science officer Dr Thierry Goger and Administrative Officer Ms. Carmencita Malimban for their great and valuable support during the course of COST Action TU0905.

We wish you an enjoyable conference and we trust you will encounter inspiring publications in these proceedings.

Christian Louter, Freek Bos, Jan Belis & Jean-Paul Lebet

Conference Organisers
February 2014

#### Conference Organisation

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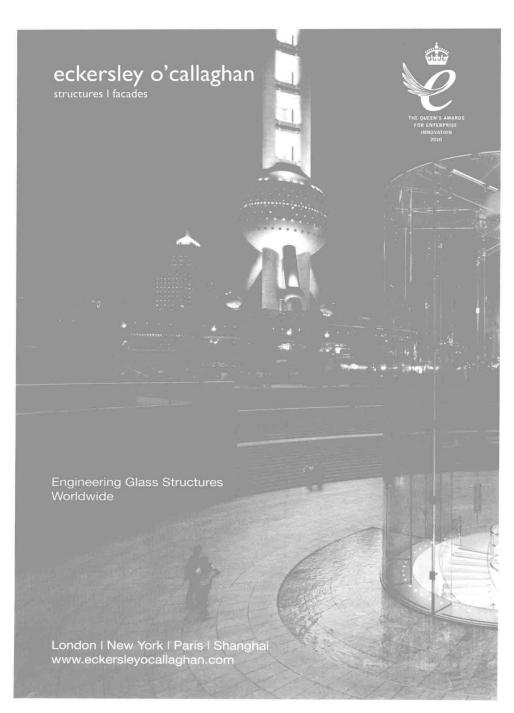


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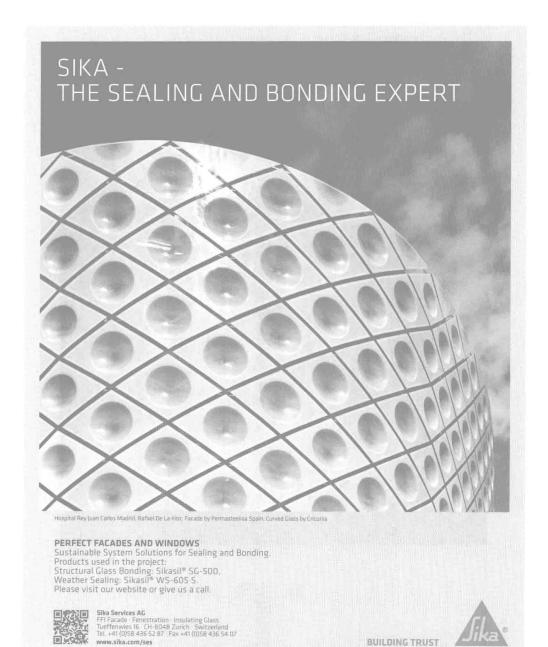


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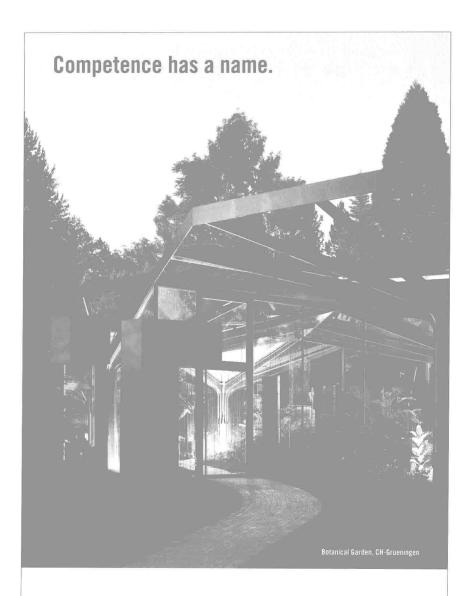


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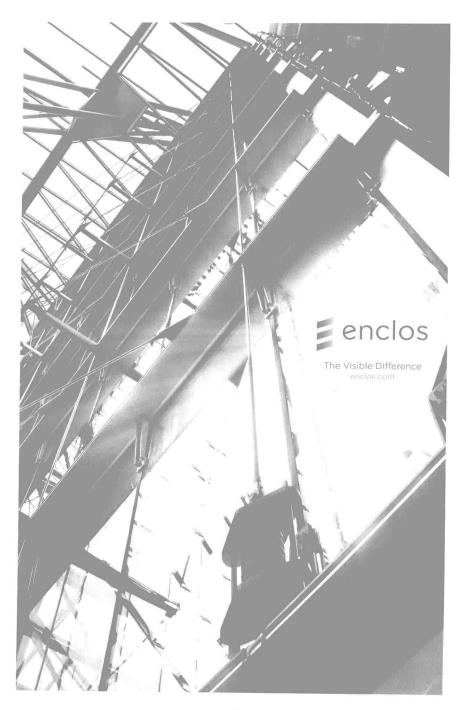


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xxix