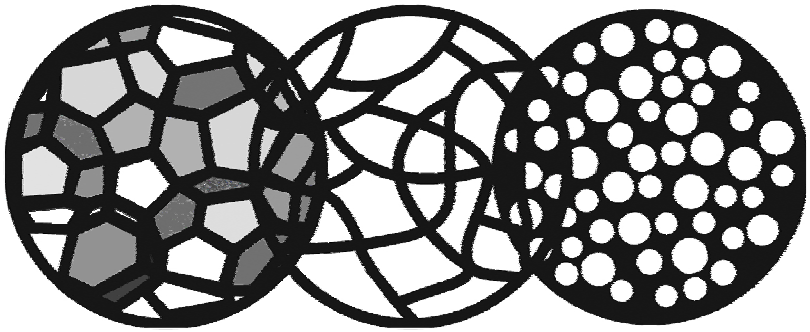
MetFoam 2007



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Porous Metals and Metallic Foams

Proceedings of the Fifth International Conference on Porous Metals and Metallic Foams
September 5–7, 2007
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DEStech Publications, Inc.

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Preface

Since its creation at the turn of the 20th century, the biennial International Conference on Porous Metals and Metallic Foams (MetFoam) is the main forum for scientific and technological exchange on metallic foams. After incubating for two cycles in Bremen (in 1999 and 2001), the conference traveled to Berlin in 2003 and Kyoto in 2005. The current 2007 edition of MetFoam conference was held for the first time in North America, in Montreal, Canada, in September 2007. The conference was intended to share the latest developments in the area of metlalic foams and porous metals and drew 247 participants from 27 countries, representing the largest attendance to this conference since its creation. The scientific communications (219) were split into about 76% from academia/national laboratories and 24% from industry. The conference covered materials development, characterization, simulation and applications of porous, cellular and foamed metals and alloys.

Metallic foams are relatively new materials that offer opportunities in a wide range of applications. They can be used, for example, to manufacture light-weight structures, biomedical implants, filters, heat exchangers, sound absorbers, mechanical damping devices, electrodes, sensors and catalyst substrates. The MetFoam 2007 conference showed that the metallic foam field continues to grow in terms of both basic and applied research and applications. Besides new developments on aluminum foams which have been traditionally the most studied foams, this conference was marked by a significant increase in the number of communications about nonaluminum foams, e.g.: nickel and steel foams for energy-related applications (batteries, fuel-cells, engines), porous titanium for biomedical applications and nano-porous gold. These new directions will hopefully trigger the development of new applications and/or the improvement of existing ones.

The editors of this book would like to acknowledge the contribution of both the scientific and the local organization committees of the conference and to all (anonymous) referees who kindly accepted to contribute to the preparation of this document. We would also like to thank all participants who accepted to share their work at the conference and submitted their papers for the proceedings volume. Our special acknowledgements go to Ms. Sylvie Lamontagne and Karine Requena from the conference secretariat (Quebec Materials Network) who put all their energy and resources for the preparation of the conference and this proceeding.

Finally, the editors would like to acknowledge the supporting organizations and sponsors, the National Research Council Canada, Quebec Materials Network, Northwestern University, Hahn-Meitner-Institut, McGill University, Inco, Quebec Metal Powders (QMP), Centre québécois de recherche et de développement de l'aluminium (CQRDA), Fraunhofer IFAM, MetSoc and the Advanced Engineering Materials journal.

See you in Bratislava in 2009,

Montréal, Berlin, Evanston, January 2008

Louis-Philippe Lefebvre (Conference chairman)
John Banhart (Technical program co-chair)
David Dunand (Technical program co-chair)

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