

Editorial



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Numerous types of cellular metals have been developed in the past decades and have become an independent class of new engineering materials by now. They possess a spectrum of unique properties such as high impact energy absorption capability, air, and water permeability, unusual acoustic properties, and low relative thermal conductivity. Their applications include shock and impact absorbers, dust and fluid filters, engine exhaust mufflers, porous electrodes, heat exchangers, sensors, and catalyst substrates. Porous and cellular metals and metallic foams should be now used to tackle engineering problems that are awaiting a solution. To enable this, it is crucial to bring together scientists and application engineers so that the ones developing and producing such materials know of the ones who could apply them and vice versa. This was the motivation for holding the International Conference on Porous Metals and Metal Foams (MetFoam).

The past six international conferences of the MetFoam series have already contributed to the success of those materials. Previous conferences were held at Bremen (1999, 2001) and Berlin (2003), both in Germany, Kyoto (2005) in Japan, Montreal (2007) in Canada and Bratislava (2009) in Slovakia. The 7th International Conference (MetFoam 2011) was held in Busan, Korea in September 2011. Recent achievements in porous metals and metallic foams were extensively discussed there.

This special issue of AEM contains a selection of the papers presented at MetFoam 2011. The principal purpose of the conference was to provide a state-of-the-art review of porous metals and metallic foams. This was achieved by encompassing papers dealing with basic fundamentals, fabrication, morphological, and microstructural characterization, property profiles, secondary operations, and various applications of porous metals and metallic foams. More than 200 papers were presented by a broad group of researchers and scientists representing universities, federal laboratories, and industries. The complete collection has been published in a book.^[1] It is our hope that this selection of more easily accessible papers provides a representative insight into the developments presented at MetFoam 2011.

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[1] B.-Y. Hur, B.-K. Kim, S.-E. Kim, S.-K. Hyun, (Eds.), Proceedings of 7th International Conference on Porous Metals and Metallic Foams (MetFoam2011), GS Intervisio, Seoul, Korea, 2012.