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Editorial: Metallic Foams Special Section

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Porous metals and metallic foams have been, for the last 25 years, the focus of very active research and development activities around the world, both at the academic and industrial levels. These materials are used when the combination of metal properties with the characteristics of a properly designed cellular structure provides advantages over other types of materials. They possess a spectrum of unique properties that can be tailored as a function of the final application, such as high impact energy absorption under mechanical load, high specific stiffness and strength, high fire resistance, air and water permeability, unusual acoustic properties for a metallic component, and low relative thermal conductivity.

Porous metals and metallic foams are now produced by various companies and used in numerous applications such as lightweight structures, biomedical implants, dust and fluid filters, engine exhaust mufflers, porous electrodes, heat exchangers, sound absorbers, mechanical damping devices, sensors and catalyst substrates. This is currently a wide topic in which several research areas (physics, chemistry, materials science, engineering) merge together to develop improved materials that could be used in a clever way to solve particular engineering problems.

By holding the 9th International Conference on Porous Metals and Metallic Foams in Barcelona, Spain (MetFoam) in September 2015, we provided a state-of-the-art review forum for scientists working in this field that hopefully enriched discussions and networking, continuing a nice "tradition" of the eight previous conferences on the same topic. These eight international conferences have already contributed to the success of those materials. Previous conferences were held in Bremen (1999, 2001) and Berlin (2003), both in Germany, Kyoto (2005) in Japan, Montreal (2007) in Canada and Bratislava (2009) in Slovakia as well as Busan, Korea (2011), and Rayleigh, USA (2013). Now MetFoam 2017 is approaching and will be celebrated in Nanjing, China.

This special issue of *Advanced Engineering Materials* mainly contains a selection of the papers presented during MetFoam 2015. The conference encompasses 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 from 36 countries. Scientists and engineers representing universities, federal laboratories, and industries attended.

It is our hope that this selection of papers will provide a representative insight into the developments presented at MetFoam 2015.

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