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Record 1 of 1**Author(s):** Banhart, J; Baumeister, J**Editor(s):** Schwartz, DS; Shih, DS; Evans, AG; Wadley, HNG**Title:** Production methods for metallic foams**Source:** POROUS AND CELLULAR MATERIALS FOR STRUCTURE APPLICATIONS, 521: 121-132 1998**Book series title:** MATERIALS RESEARCH SOCIETY SYMPOSIUM PROCEEDINGS**Language:** English**Document Type:** Proceedings Paper**Conference Title:** Materials-Research-Society Symposium on Porous and Cellular Materials for Structural Applications**Conference Date:** APR 13-15, 1998**Conference Location:** SAN FRANCISCO, CA**Conference Sponsors:** Mat Res Soc.; USN, Off Naval Res.; NASA, Mat Div.; USA, Army Res Off, Mat Sci Div.

Abstract: The possibilities for making metallic foams or similar porous metal structures are reviewed. The various processes are classified according to the state of the starting metal - liquid, powdered, ionised. Liquid metal can be foamed directly by injecting gas, gas-releasing foaming agents or by producing supersaturated metal-gas solutions. Indirect methods include investment casting and usage of filler materials. Metal powders can also be used as starting materials for metallic foams: mixtures of such powders with foaming agents are compacted to foamable precursor materials that can be foamed in a second step. Instead of foaming agents inert gas can be directly entrapped in the precursor. Metal foams can also be made from metal powder slurries or by using polymer/powder mixtures. Finally, galvanic electro-deposition also allows to make highly porous metallic structures with open pores.

Addresses: Fraunhofer Inst Appl Mat Res, IFAM, D-28717 Bremen, Germany**Reprint Address:** Banhart, J, Fraunhofer Inst Appl Mat Res, IFAM, Lesumer Heerstr 36, D-28717 Bremen, Germany.**Cited Reference Count:** 0**Times Cited:** 31**Publisher:** MATERIALS RESEARCH SOCIETY**Publisher Address:** 506 KEYSTONE DRIVE, WARRENDALE, PA 15088-7563 USA**ISSN:** 0272-9172**ISBN:** 1-55899-427-0**29-char Source Abbrev.:** MATER RES SOC SYMP P**Source Item Page Count:** 4**Subject Category:** Materials Science, Multidisciplinary**ISI Document Delivery No.:** BL94H[Back to Results](#)ISI Web of Knowledge
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