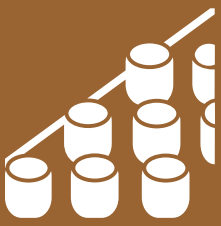

Materials

an Open Access Journal by MDPI

CiteScore: 6.4
Indexed in PubMed
Impact Factor: 3.2

Special Issue Reprint

Additive Manufacturing Volume 1

Edited by: Prashanth Konda Gokuldoss and Zhi Wang

Additive manufacturing (AM) is one of the manufacturing processes that warrants the attention of industrialists, researchers and scientists, because of its ability to produce materials with a complex shape without theoretical restrictions and with added functionalities. There are several advantages to employing additive manufacturing as the primary additive manufacturing process. However, there exist several challenges that need to be addressed systematically. A couple such issues are alloy design and process development. Traditionally alloys designed for conventional cast/powder metallurgical processes were fabricated using advanced AM processes. This is the wrong approach considering that the alloys should be coined based on the process characteristics and meta-stable nature of the process. Hence, we must focus on alloy design and development for AM that suits the AM processes. The AM processes, however, improve almost every day, either in terms of processing capabilities or processing conditions. Hence, the processing part warrants a section that is devoted to these advancements and innovations. Accordingly, the present Special Issue (book) focuses on two aspects of alloy development and process innovations. Here, 45 articles are presented covering different AM processes including selective laser melting, electron beam melting, laser cladding, direct metal laser sintering, ultrasonic consolidation, wire arc additive manufacturing, and hybrid manufacturing. I believe that this Special Issue bears is vital to the field of AM and will be a valuable addition.

mdpi.com/books/reprint/2187