

Title (en)  
HIGH QUALITY SPHERICAL POWDERS FOR ADDITIVE MANUFACTURING PROCESSES ALONG WITH METHODS OF THEIR FORMATION

Title (de)  
QUALITATIV HOCHWERTIGE KUGELFÖRMIGE PULVER FÜR VERFAHREN DER GENERATIVEN FERTIGUNG UND VERFAHREN ZU IHRER HERSTELLUNG

Title (fr)  
POUDRES SPHÉRIQUES DE HAUTE QUALITÉ POUR PROCÉDÉS DE FABRICATION ADDITIVE AINSI QUE LEURS PROCÉDÉS DE FORMATION

Publication  
**EP 3687720 A4 20210804 (EN)**

Application  
**EP 18849902 A 20180727**

Priority

- US 201762551981 P 20170830
- US 201815962216 A 20180425
- US 2018044089 W 20180727

Abstract (en)  
[origin: US2019061005A1] Methods for forming a high-quality powder from a feedstock powder of feedstock particles having irregular shapes are provided. The method includes exposing the feedstock powder to a plasma field to form a treated powder of treated particles having a more spherical shape than the feedstock particles. Prior to the plasma field exposure, the feedstock particles have an oxidized layer thereon as a result from previous exposure to water. After exposure to the plasma field, the treated particles are substantially free from an oxidized layer.

IPC 8 full level  
**B22F 9/04** (2006.01); **B22F 1/052** (2022.01); **B22F 1/065** (2022.01); **B22F 1/142** (2022.01); **B22F 1/145** (2022.01); **B22F 9/08** (2006.01); **B22F 9/12** (2006.01); **B33Y 70/00** (2020.01)

CPC (source: EP US)  
**B22F 1/052** (2022.01 - EP US); **B22F 1/065** (2022.01 - EP US); **B22F 1/142** (2022.01 - EP US); **B22F 1/145** (2022.01 - EP US); **B22F 9/04** (2013.01 - EP US); **B22F 9/082** (2013.01 - EP US); **B22F 9/12** (2013.01 - EP US); **B33Y 70/10** (2020.01 - EP US); **B22F 2009/0828** (2013.01 - EP US); **B22F 2009/084** (2013.01 - EP US); **B22F 2202/13** (2013.01 - US); **B22F 2301/052** (2013.01 - US); **B22F 2301/15** (2013.01 - US); **B22F 2301/35** (2013.01 - US); **B22F 2304/10** (2013.01 - US); **B22F 2998/10** (2013.01 - EP US); **B22F 2999/00** (2013.01 - EP US); **Y02P 10/25** (2015.11 - EP)

Citation (search report)

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- [YA] US 2017165791 A1 20170615 - KAMACHI KOH [JP], et al
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Designated contracting state (EPC)  
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**US 2019061005 A1 20190228**; CA 3071833 A1 20190307; CN 111093866 A 20200501; EP 3687720 A1 20200805; EP 3687720 A4 20210804; JP 2020532650 A 20201112; JP 2022023873 A 20220208; JP 2023082045 A 20230613; WO 2019045923 A1 20190307

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**US 201815962216 A 20180425**; CA 3071833 A 20180727; CN 201880055675 A 20180727; EP 18849902 A 20180727; JP 2020512563 A 20180727; JP 2021169478 A 20211015; JP 2023045898 A 20230322; US 2018044089 W 20180727