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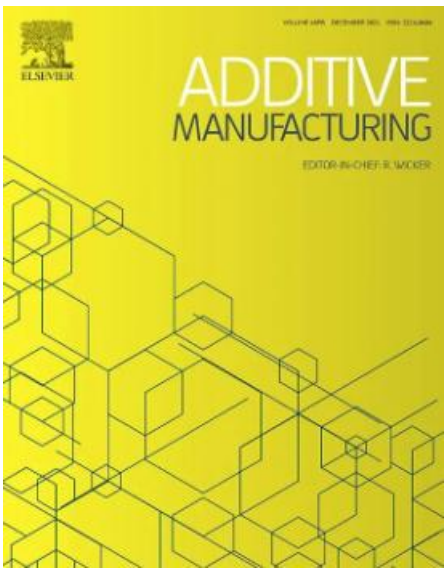
2022 年《Additive Manufacturing》发文分析

2022-第 31 期

《Additive Manufacturing》创刊于 2014 年，为学术界和世界领先行业提供关于增材制造方面的研究论文和评论，包括增材制造领域的新技术、工艺、方法、材料、系统和应用等，是同行评审 TOP 期刊，由 Elsevier 出版社出版。该刊的期刊影响因子为 11.632。

本期快报对《Additive Manufacturing》2022 年发表的 587 篇论文进行分析，以便我校师生能快速了解增材制造方面的前沿经典和发文态势。



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一、论文产出机构分析

2022 年发文量前十的机构有 CNRS（法国国家科学研究中心）、Northwestern Polytechnical University Xia（西北工业大学）、Chinese Academy of Sciences（中国科学院）、Huazhong University of Science and Technology（华中科技大学）、Oak Ridge National Laboratory（橡树岭国家实验室）、Pennsylvania State University（宾夕法尼亚州立大学）、National University of Singapore（新加坡国立大学）、Shanghai Jiao Tong University（上海交通大学）、Nanyang Technological University（南洋理工大学）、Lawrence Livermore National Laboratory（劳伦斯利弗莫尔国家实验室）。东南大学以 2 篇文献位居 100。

	Institution	Scholarly Output	Views Count	Field-Weighted Citation Impact	Citation Count
1.	CNRS	22	403	1.52	32
2.	Northwestern Polytechnical University Xian	19	689	1.99	39
3.	Chinese Academy of Sciences	18	437	1.39	24
4.	Huazhong University of Science and Technology	17	524	2.88	49
5.	Oak Ridge National Laboratory	16	333	0.65	10
6.	Pennsylvania State University	15	497	1.49	28
7.	National University of Singapore	14	338	1.78	26
8.	Lawrence Livermore National Laboratory	13	325	1.29	16
9.	Nanyang Technological University	13	306	1.53	19
10.	Shanghai Jiao Tong University	13	415	1.29	16

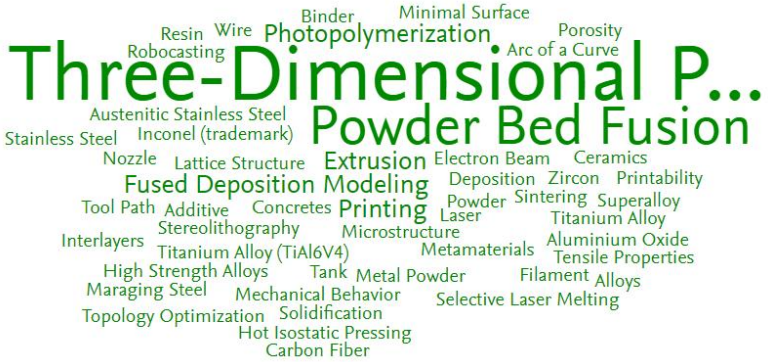
二、研究主题和关键词共现分析

2022 年研究主题主要集中在 Microstructure; Titanium Alloy (TiAl6V4); Inconel (Trademark) 、 Fused Deposition Modeling; Mechanical Properties; 3D Printers、Stereolithography; Aluminium Oxide; 3D Printers 、 3D Printers; Geopolymers; Concretes 、 Lattice Structure; Three-Dimensional Printing; Sandwich Beam Report from template。

Topic	Scholarly Output	Publication Share	Field-Weighted Citation Impact	Prominence percentile
Microstructure; Titanium Alloy (TiAl6V4); Inconel (Trademark) T.1114	237	1.39% ▲	2.31	99.979
Fused Deposition Modeling; Mechanical Properties; 3D Printers T.3401	87	1.11% ▲	1.33	99.901
Stereolithography; Aluminium Oxide; 3D Printers T.15028	35	2.27% ▲	1.43	99.110
3D Printers; Geopolymers; Concretes T.49112	20	1.22% ▲	2.73	99.430
Lattice Structure; Three-Dimensional Printing; Sandwich Beam T.12169	13	0.68% ▲	1.61	99.189

研究的关键词主要集中在 Three-Dimensional Printing、Powder Bed Fusion、

Fused Deposition Modeling、Extrusion、Photopolymerization、Lattice Structure、Electron Beam、Titanium Alloy (TiAl6V4)等。



三、研究作者分析

发文量前十的作者为西北工业大学 Lin,xin、华中科技大学 Shi, Yusheng、诺丁汉大学 Hague, Richard J.M、埃尔朗根-纽伦堡大学 Körner, Carolin、诺丁汉大学 Tuck, Christopher J、深圳大学 Chen, Zhangwei、东北大学 Chiba, Akihiko、西北工业大学 Huang, Weidong、劳伦斯利弗莫尔国家实验室 Matthews, Manyalibo J 、里斯本新大学 Oliveira, J. P。

	Author	Affiliation	Scholarly Output	Views Count	Field-Weighted Citation Impact	Citation Count
1.	Lin, Xin	Northwestern Polytechnical University Xian	7	293	2.98	20
2.	Shi, Yusheng	Huazhong University of Science and Technology	7	161	1.19	8
3.	Hague, Richard J.M.	University of Nottingham	6	292	2.44	14
4.	Körner, Carolin	Friedrich-Alexander University Erlangen-Nürnberg	6	107	0.70	4
5.	Tuck, Christopher J.	University of Nottingham	6	288	3.48	20
6.	Chen, Zhangwei	Shenzhen University	5	118	0.84	4
7.	Chiba, Akihiko	Tohoku University	5	223	3.13	15
8.	Huang, Weidong	Northwestern Polytechnical University Xian	5	224	3.97	19
9.	Matthews, Manyalibo J.	Lawrence Livermore National Laboratory	5	146	2.09	10
10.	Oliveira, J. P.	NOVA University Lisbon	5	276	20.89	100

四、研究前沿

根据关键词，限定材料科学学科，利用 ESI 研究前沿进行检索，挑选出其中 9 篇高被引论文。

1.

Post-yielding fracture mechanics of 3D printed polymer-based orthopedic cortical screws

作者:Agarwal, R (Agarwal, Raj) [1] ; Mehtani, HK (Mehtani, Hitesh Kumar) [1] ; Singh, J (Singh, Jaskaran) [1] ; Gupta, V (Gupta, Vishal) [1]

来源：POLYMER COMPOSITES 卷 43 期 10 页 6829-6837

出版时间：OCT 2022

文献类型：Article

全文链接：https://onlinelibrary.wiley.com/doi/full/10.1002/pc.26620

2.

Perspectives on Additive Manufacturing Enabled Beta-Titanium Alloys for Biomedical Applications

作者:Sing, SL (Sing, Swee Leong)

来源：INTERNATIONAL JOURNAL OF BIOPRINTING 卷 8 期 1 页 1-8

出版时间：2022

文献类型：Article

全文链接：https://www.proquest.com/docview/2665623540?accountid=26779

3.

Effects of fine grains and sintering additives on stereolithography additive manufactured Al2O3 ceramic

作者:Zhang, KQ (Zhang, Keqiang) ; He, RJ (He, Rujie) ; Ding, GJ (Ding, Guojiao) ; Bai, XJ (Bai, Xuejian) ; Fang, DN (Fang, Daining)

来源：CERAMICS INTERNATIONAL 卷 47 期 2 页 2303-2310

出版时间：JAN 15 2021

文献类型：Article

全文链接：

https://reader.elsevier.com/reader/sd/pii/S0272884220327681?token=21F58399DC222827AD4F34523B05370985A215FE7352D8B07FEBECC5E90D814DF4110933294D8DB2C9E1D63D7188A6E9&originRegion=us-east-1&originCreation=20221124020452

4.

Additive manufacturing of advanced ceramic materials

作者:Lakhdar, Y (Lakhdar, Y.) ; Tuck, C (Tuck, C.) ; Binner, J (Binner, J.) ; Terry, A (Terry, A.) ; Goodridge, R (Goodridge, R.)

来源：PROGRESS IN MATERIALS SCIENCE 卷 116

出版时间：FEB 2021

文献类型：Review

全文链接：

https://www.sciencedirect.com/science/article/pii/S0079642520301006?via%3Dihub

5.

Processing parameters in laser powder bed fusion metal additive manufacturing

作者:Oliveira, JP (Oliveira, J. P.) ; LaLonde, AD (LaLonde, A. D.) ; Ma, J (Ma, J.)

来源：MATERIALS & DESIGN 卷 193

出版时间：AUG 2020

文献类型：Article

全文链接：

https://www.sciencedirect.com/science/article/pii/S0264127520302963?via%3Dihub

6.

Controlling interdependent meso-nanosecond dynamics and defect generation inmetal 3D printing

作者:Khairallah, SA (Khairallah, Saad A.) ; Martin, AA (Martin, Aiden A.) ; Lee, JRI (Lee, Jonathan R. I.) ; Guss, G (Guss, Gabe) ; Calta, NP (Calta, Nicholas P.); Hammons, JA (Hammons, Joshua A.) ; Nielsen, MH (Nielsen, Michael H.); Chaput, K (Chaput, Kevin) ; Schwalbach, E (Schwalbach, Edwin) ; Shah, MN (Shah, Megna N.) ;

来源：SCIENCE 卷 368 期 6491 页 660-+特刊 SI

出版时间：MAY 8 2020

文献类型：Article

全文链接：https://www.science.org/doi/10.1126/science.aay7830

7.

Revisiting fundamental welding concepts to improve additive manufacturing: From theory to practice

作者:Oliveira, JP (Oliveira, J. P.) ; Santos, TG (Santos, T. G.) ; Miranda, RM (Miranda, R. M.)

来源：PROGRESS IN MATERIALS SCIENCE 卷 107

出版时间：JAN 2020

文献类型：Review

全文链接：

https://www.sciencedirect.com/science/article/pii/S0079642519300726?via%3Dihub

8.

Metal additive manufacturing in aerospace: A review

作者:Blakey-Milner, B (Blakey-Milner, Byron); Gradl, P (Gradl, Paul); Snedden, G (Snedden, Glen) ; Brooks, M (Brooks, Michael); Pitot, J (Pitot, Jean) ; Lopez, E (Lopez, Elena) ; Leary, M (Leary, Martin) ; Berto, F (Berto, Filippo) ; du Plessis, A (du Plessis, Anton)

来源：MATERIALS & DESIGN 卷 209

出版时间：NOV 2021

文献类型：Review

全文链接：

https://www.sciencedirect.com/science/article/pii/S0264127521005633?via%3Dihub

9.

Hot cracking mechanism affecting a non-weldable Ni-based superalloy produced by selective electron Beam Melting

作者:Chauvet, E (Chauvet, Edouard); Kontis, P (Kontis, Paraskevas); Jagle, EA (Jaegle, Eric A.) ; Gault, B (Gault, Baptiste); Raabe, D (Raabe, Dierk); Tassin, C (Tassin, Catherine) ; Blandin, JJ (Blandin, Jean-Jacques); Dendievel, R (Dendievel, Remy); Vayre, B (Vayre, Benjamin) ; Abed, S (Abed, Stephane) ;

来源：ACTA MATERIALIA 卷 142 页 82-94

出版时间：JAN 1 2018

文献类型：Article

全文链接：

https://reader.elsevier.com/reader/sd/pii/S1359645417308133?token=505A255F364797DEB427C66400EEC799BD2750C9769BA0429945D681C469D03D7CB32E3AC190B33540FF1C39F0DA5E97&originRegion=us-east-1&originCreation=20221124021223