Publications Catalog

A reference of every peer-reviewed paper, conference proceeding, and thesis where Freemelt electron-beam powder bed fusion machines were used. Compiled from public sources and maintained by Freemelt AB.

AT A GLANCE

83

publications indexed

INSTITUTIONS

48

COUNTRIES

10

YEARS COVERED

2022–2026

BY PUBLICATION TYPE

Journal articles	54
Theses	18
Conference proceedings	10
Reviews & preprints	1

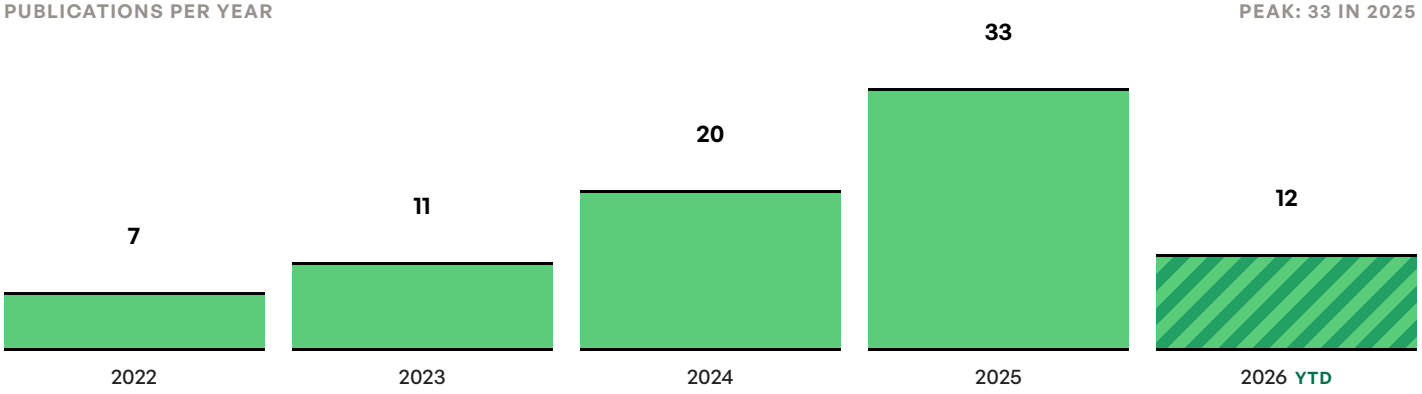
BY MACHINE

FREEMELT ONE	Freemelt ONE	77
MINIMELT	MiniMelt	6

83 publications · 2022–2026

PUBLICATIONS PER YEAR

PEAK: 33 IN 2025



BY PUBLICATION TYPE

Journal Article · 54 | Thesis (Master) · 13 | Thesis (PhD) · 5 | Conference Proceedings · 10 | Review Article · 1

MATERIAL FAMILIES

Nickel superalloys	15
Copper alloys	14
Steels	14
Refractory metals	13
Titanium alloys	13
Functional / Magnetic	11
Other	3
Aluminum alloys	3
Ceramics / Hardmetals	2

TOP COUNTRIES

01	Germany	37
02	Sweden	24
03	United States	17
04	Italy	8
05	France	5
06	United Kingdom	2
07	Brazil	1
08	Japan	1
09	Nigeria	1
10	Spain	1

MOST-ACTIVE INSTITUTIONS

01	FAU Erlangen-Nürnberg	27
02	Linköping University	9
03	KTH Royal Institute of Technology	9
04	Politecnico di Torino	8
05	Helmholtz-Zentrum Hereon	7
06	University of Wuppertal	6
07	Ruhr University Bochum	5
08	Univ. Grenoble Alpes	5
09	UT El Paso	5
10	Mid Sweden University	4

LEGEND

MATERIAL FAMILIES

Titanium alloys | Steels | Nickel superalloys | Copper alloys | Refractory metals | Functional / Magnetic | Aluminum alloys | Ceramics / Hardmetals | Other

MACHINES

FREEMELT ONE | MINIMELT | EMELT ID

2026

TITLE · AUTHORS · VENUE	INSTITUTION · COUNTRY	MACHINE · MATERIALS	DOI / LINK
Investigation of the in-situ formation of a Mo-Mo3Si alloy directly via EB-PBF process JOURNAL · Di Sturco, S. et al. · *International Journal of Refractory Metals and Hard Materials*	Politecnico di Torino Italy	FREEMELT ONE Mo-Si silicides	10.1016/j.ijrmhm.2026.107911
Geometry and Surface Feature Evaluation in E-PBF Process Using In-Operando Electron Emission Signal JOURNAL · Alfaifi, A. et al. · *Materials*	Texas A&M University United States	FREEMELT ONE Ti-6Al-4V	10.3390/ma19112362
Influence of the beam power on the density of pure copper samples in PBF-EB/M using a spot melting strategy JOURNAL · Oberkönig, H. et al. · *Progress in Additive Manufacturing*	Ruhr University Bochum Germany	FREEMELT ONE Pure Cu	10.1007/s40964-026-01739-z
High-power electron beam powder bed fusion manufacturing of pure tungsten JOURNAL · Abdul Baseer, R. et al. · *Progress in Additive Manufacturing*	FAU Erlangen-Nürnberg Germany	FREEMELT ONE W	10.1007/s40964-026-01673-0
Real-time tracking of the solidification of tool steel in electron beam powder bed fusion with high-energy X-rays JOURNAL · König, H.H. et al. · *Additive Manufacturing*	FAU Erlangen-Nürnberg Germany KTH Royal Institute of Technology; DESY; Helmholtz-Zentrum Hereon	MINIMELT Tool steel	10.1016/j.addma.2026.105159
Microstructure and Corrosion Characteristics of IN 625 Coating on Additively Manufactured 316L Stainless Steel in As-Fabricated Condition JOURNAL · Tarafder, P. et al. · *Materials*	Linköping University Sweden Kwara State University	FREEMELT ONE 316L	10.3390/ma19040812
High-temperature additive manufacturing of Nd-Fe-B by powder bed fusion using an electron beam JOURNAL · Wilms, M.B. et al. · *Progress in Additive Manufacturing*	University of Wuppertal Germany University of Duisburg-Essen; Karlstad University	FREEMELT ONE Nd-Fe-B	10.1007/s40964-026-01561-7
A comprehensive in-situ monitoring framework for pore and uneven surface detection in electron beam powder bed fusion via electron-optical imaging JOURNAL · Lee, K. et al. · *Journal of Manufacturing Processes*	Texas A&M University United States Prairie View A&M University	FREEMELT ONE Ti-6Al-4V	10.1016/j.jmapro.2025.11.071
Data-Driven Modeling and Real-time Monitoring for Quality Assurance in EB-PBF Metal Additive Manufacturing using Electron Emission Data PHD THESIS · Gbadamosi-Adeniyi, T.	NC State University United States	FREEMELT ONE —	www.proquest.com/openview/69ae822745706f4546ed278dea372e50
Time-resolved imaging of electron beam powder bed fusion using an X-ray microscope optimized for white beam radiation JOURNAL · Bidola, P.M. et al. · *Journal of Synchrotron Radiation*	Helmholtz-Zentrum Hereon Germany FAU Erlangen-Nürnberg; KTH Royal Institute of Technology	MINIMELT CMSX-4	10.1107/S1600577525010057
Development of the Electron Beam Powder Bed Fusion for the Production of Molybdenum and Intermetallic Materials PHD THESIS · Di Sturco, S.	Politecnico di Torino Italy	FREEMELT ONE Mo · γ-TiAl · Mo-Si silicides	tesidottorato.depositolegale.it/handle/20.500.14242/362514
Enhanced Productivity in Electron Beam-Based Powder Bed Fusion: A Study of Thick Layers in Ti-6Al-4V for Implant Manufacturing MASTER'S THESIS · Dillmann, A.	Uppsala University Sweden Mid Sweden University	FREEMELT ONE Ti-6Al-4V	uu.diva-portal.org/smash/record.jsf?pid=diva2:2032512

2025

TITLE · AUTHORS · VENUE	INSTITUTION · COUNTRY	MACHINE · MATERIALS	DOI / LINK
Operando electron optical monitoring in electron beam powder bed fusion: characteristic signatures as fault indicator JOURNAL · Ye, J. et al. · *Progress in Additive Manufacturing*	FAU Erlangen-Nürnberg Germany TU Dortmund University	FREEMELT ONE Ti-6Al-4V	10.1007/s40964-025-01459-w
In situ recrystallization of pure Cu during electron beam powder bed fusion JOURNAL · Margueret, A. et al. · *Additive Manufacturing Letters*	Univ. Grenoble Alpes France Institut Universitaire de France	FREEMELT ONE Pure Cu	10.1016/j.addlet.2025.100329
Evaluation of Different Dynamic Point Melt Scanning Strategies on Microstructure Evolution for IN718 Bulk Parts Fabricated by EB-PBF JOURNAL · Nabil, S.T. et al. · *Journal of Materials Research and Technology*	UT El Paso United States University of Arizona	FREEMELT ONE IN718	10.1016/j.jmrt.2025.11.074
Feasibility Study of the Electron Beam Powder Bed Fusion of Molybdenum MASTER'S THESIS · Ancaza, A.	Politecnico di Torino Italy	FREEMELT ONE Mo	webthesis.biblio.polito.it/38021/
Investigating the microstructure of additively manufactured tungsten parts produced by electron beam powder bed fusion process JOURNAL · Zavala-Arredondo, M. et al. · *Nuclear Materials and Energy*	UKAEA United Kingdom Freemelt AB; University of Sheffield; University of Southampton; Linköping University	FREEMELT ONE W	10.1016/j.nme.2025.102011
The effect of scanning strategy on grain development of MAR-M247 in electron beam powder bed fusion JOURNAL · Lu, R.-H. et al. · *Progress in Additive Manufacturing*	NC State University United States	FREEMELT ONE MAR-M247	10.1007/s40964-025-01376-y
Microstructure Coarsening of Additively Manufactured Mo-9Si-8B at Elevated Temperatures CONFERENCE · Schmidt, C. et al. · *Intermetallics 2025 Conference Proceedings*	Otto-von-Guericke University Magdeburg Germany FAU Erlangen-Nürnberg	FREEMELT ONE Mo-9Si-8B	www.ht-materials.ovgu.de/htmaterials_media/Aktuelles/Intermetallics2025/IM2025_Schmidt.pdf
Magnetocaloric Performance in Sustainable Ni-Mn-Sn-Based Heusler Alloys by Electron-Beam Additive Manufacturing CONFERENCE · Shokri, H. et al. · *Intermetallics 2025 Conference Proceedings*	University of Wuppertal Germany University of Duisburg-Essen; Technical University of Darmstadt	FREEMELT ONE Ni-Mn-Sn	d-nb.info/1379021009X/34#page=157
Microstructure and mechanical properties of Mo-Si-B alloy processed using electron beam powder bed fusion CONFERENCE · Chen, Y. et al. · *Intermetallics 2025 Conference Proceedings*	FAU Erlangen-Nürnberg Germany	FREEMELT ONE Mo-9Si-8B	programme.conventus.de/en/im-2025/program/program-points/899e5752-5e53-4790-a4d7-407511cebe1a
Powder bed fusion of pure copper using an electron beam: a comparative study on the material properties obtained using vector- and spot-based exposure JOURNAL · Ortmann, R. et al. · *Progress in Additive Manufacturing*	Ruhr University Bochum Germany Freemelt AB	FREEMELT ONE Pure Cu	10.1007/s40964-025-01344-6
Microstructure and thermal stability of oxidized copper produced by electron beam powder bed fusion JOURNAL · Tarafder, P. et al. · *Journal of Materials Research and Technology*	Linköping University Sweden	FREEMELT ONE Pure Cu	10.1016/j.jmrt.2025.09.194

2025

TITLE · AUTHORS · VENUE	INSTITUTION · COUNTRY	MACHINE · MATERIALS	DOI / LINK
PBF-EB process development of chemically reduced tungsten via a dual-gradient parameter approach utilizing the backscatter signal JOURNAL · Sjöström, W. et al. · *Progress in Additive Manufacturing*	Mid Sweden University Sweden Universitat Politècnica de Catalunya; Freemelt AB; Linköping University	FREEMELT ONE W	10.1007/s40964-025-01312-0
In-situ synchrotron imaging of powder consolidation and melt pool dynamics in electron beam powder bed fusion JOURNAL · Semjatov, N. et al. · *Additive Manufacturing*	FAU Erlangen-Nürnberg Germany KTH Royal Institute of Technology; Helmholtz-Zentrum Hereon	MINIMELT CMSX-4	10.1016/j.addma.2025.104943
Development of Molybdenum-Silicon systems produced via Electron Beam Powder Bed Fusion Original: *Sviluppo di sistemi Molibdeno-Silicio prodotti tramite Electron Beam Powder Bed Fusion* MASTER'S THESIS · Politi, G.	Politecnico di Torino Italy	FREEMELT ONE Mo-Si silicides	webthesis.biblio.polito.it/36834/
Simulation-driven development of in-situ alloying Cu-25Cr by electron beam powder bed fusion JOURNAL · Scherr, R. et al. · *Additive Manufacturing*	FAU Erlangen-Nürnberg Germany	FREEMELT ONE Cu-25Cr	10.1016/j.addma.2025.104874
Trajectory Optimization for Spatial Microstructure Control in Electron Beam Metal Additive Manufacturing CONFERENCE · Khrenov, M. et al. · *Proceedings of the American Control Conference (ACC 2025)*	Carnegie Mellon University United States	FREEMELT ONE Steel	10.23919/acc63710.2025.11107816
Cu-25Cr composites processed by in situ alloying in electron beam powder bed fusion JOURNAL · Varoto, L. et al. · *Additive Manufacturing*	Schneider Electric France Univ. Grenoble Alpes; Univ. Bretagne Sud	FREEMELT ONE Cu-25Cr	10.1016/j.addma.2025.104869
Electron beam powder bed fusion process monitoring by in-melt electron analysis JOURNAL · Xu, J. et al. · *Additive Manufacturing*	Linköping University Sweden	FREEMELT ONE 316L	10.1016/j.addma.2025.104858
Segmentation of Electron Beam Powder Bed Fusion Defects in Backscattered Electron Images MASTER'S THESIS · Palm, Z. · *Mid Sweden University (Student Thesis)*	Mid Sweden University Sweden	FREEMELT ONE W	www.diva-portal.org/smash/record.jsf?pid=diva2:1980668
Development of a beam verification process for Electron Beam Powder Bed Fusion MASTER'S THESIS · Favier, C.	Mid Sweden University Sweden	FREEMELT ONE –	www.diva-portal.org/smash/record.jsf?pid=diva2:1980722
Single crystal twisting in additive manufacturing JOURNAL · Bäreis, J. et al. · *Progress in Additive Manufacturing*	FAU Erlangen-Nürnberg Germany	FREEMELT ONE CMSX-4	10.1007/s40964-025-01158-6
Real-time tracking of additive manufacturing with high-energy X-ray techniques PHD THESIS · König, H.H.	KTH Royal Institute of Technology Sweden	MINIMELT Tool steel · CMSX-4	kth.diva-portal.org/smash/record.jsf?pid=diva2:1957938
Assessing the effect of scan strategies on the structure-property relationship in electron beam powder bed fusion processed 316L stainless steel JOURNAL · Tarafder, P. et al. · *Materials & Design*	Linköping University Sweden	FREEMELT ONE 316L	10.1016/j.matdes.2025.113837

2025

TITLE · AUTHORS · VENUE	INSTITUTION · COUNTRY	MACHINE · MATERIALS	DOI / LINK
Rapid processing window development of Mo-Si-B alloy for electron beam powder bed fusion JOURNAL · Chen, Y. et al. · *Progress in Additive Manufacturing*	FAU Erlangen-Nürnberg Germany Otto-von-Guericke University Magdeburg	FREEMELT ONE Mo-9Si-8B	10.1007/s40964-025-01119-z
Microstructure formation of a new Al-4Mn-3Ni-2Cu-1Zr aluminium alloy during electron beam powder bed fusion JOURNAL · Varoto, L. et al. · *Materialia*	Univ. Grenoble Alpes France Constellium Technology Center	FREEMELT ONE Al-4Mn-3Ni-2Cu-1Zr	10.1016/j.mtla.2025.102344
Investigation and Control of Smoke Phenomenon in Electron Beam Powder Bed Fusion of a Novel γ-TiAl alloy JOURNAL · Jennings, R. et al. · *Journal of the Japan Society of Powder and Powder Metallurgy*	IHI Corporation United Kingdom Swansea University; Tohoku University	FREEMELT ONE γ-TiAl	10.2497/jjspm.14D-T20-02
Impact of Process Variables on Solidification and Microstructural Evolution of Pure Copper Processed via Electron Beam Powder Bed Fusion Original: *Impacto Das Variáveis de Processo Na Solidificação e Evolução Microestrutural de Cobre Puro Processado via Fusão em Leito de Pó por Feixe de Elétrons* MASTER'S THESIS · Carneiro, G.B.	Universidade Federal de São Carlos (UFSCar) Brazil	FREEMELT ONE Pure Cu	repositorio.ufscar.br/bitstreams/76622157-1c6c-49e2-b027-26d40704e06f/download
Understanding the processability, microstructure, and mechanical properties of molybdenum processed by electron beam powder bed fusion JOURNAL · Di Sturco, S. et al. · *International Journal of Refractory Metals and Hard Materials*	Politecnico di Torino Italy INSTM	FREEMELT ONE Mo	10.1016/j.ijrmhm.2025.107091
ADDOPT: An Additive Manufacturing Optimal Control Framework Demonstrated in Minimizing Layer-Level Thermal Variance in Electron Beam Powder Bed Fusion JOURNAL · Khrenov, M. et al. · *Journal of Manufacturing Science and Engineering*	Carnegie Mellon University United States	FREEMELT ONE 316L	10.1115/1.4067325
Powder Bed Fusion - Electron Beam of an oxygen-compatible β-TNTZ (Ti-35.5Nb-2Ta-3Zr) alloy: Feasibility and Material Evaluation JOURNAL · Rittinghaus, S.-K. et al. · *European Journal of Materials*	University of Wuppertal Germany Chalmers University of Technology; Helmholtz-Zentrum Hereon; GfE Metalle und Materialien GmbH; Forschungszentrum Jülich	FREEMELT ONE β-TNTZ	10.1080/26889277.2024.2448120
Low-Cost, High-Throughput Magnetic Characterization Tool for Irregular Soft Magnetic Specimens JOURNAL · Colton, S. et al. · *IEEE Transactions on Instrumentation and Measurement*	Georgia Institute of Technology United States Sandia National Laboratories	FREEMELT ONE Permalloy	10.1109/tim.2025.3644550
Additive Manufacturing Melt Pool Physics Understood Through the Lens of Two-Color Thermal Imaging PHD THESIS · Myers, A.J.	Carnegie Mellon University United States	FREEMELT ONE 316L	10.1184/R1/30288715
Rapid Process Parameter Development for SS316L on the Freemelt ONE Open Architecture Electron Beam Powder Bed Fusion Machine CONFERENCE · Bostan, B. et al. · *Conference Proceedings*	University of Pittsburgh United States Carnegie Mellon University	FREEMELT ONE 316L	www.researchgate.net/publication/387722860

2024

TITLE · AUTHORS · VENUE	INSTITUTION · COUNTRY	MACHINE · MATERIALS	DOI / LINK
Microstructure Evolutions Induced by Electron Beam Melting of a Sintered Cu-25Cr Composite JOURNAL · Varoto, L. et al. · *Materialia*	Univ. Grenoble Alpes France ESRF – The European Synchrotron; Schneider Electric	FREEMELT ONE Cu-25Cr	10.1016/j.mtla.2024.102262
CuCrZr alloy obtained via electron-beam powder bed fusion: Microstructural insights and precipitation behaviour JOURNAL · Felicioni, S. et al. · *Materials Characterization*	Politecnico di Torino Italy INSTM	FREEMELT ONE CuCrZr	10.1016/j.matchar.2024.114559
Thermo-mechanical Study on Auxetic Shape Memory Periodic Open Cellular Structures—Part II: Mechanical and Shape Memory Properties JOURNAL · Fink, A. et al. · *Advanced Engineering Materials*	FAU Erlangen-Nürnberg Germany TU Dortmund University	FREEMELT ONE NiTi · Ti-6Al-4V	10.1002/adem.202401310
Electron Beam Additive Manufacturing of SS316L with a Stochastic Scan Strategy: Microstructure, Texture Evolution, and Mechanical Properties JOURNAL · Chaithanya Kumar, K.N. et al. · *Metals*	University of North Texas United States	FREEMELT ONE 316L	10.3390/met14111278
Microstructure Refinement of Bulk Inconel 718 Parts During Fabrication with EB-PBF Using Scanning Strategies: Transition from Bidirectional-Raster to Stochastic Point-Based Melting JOURNAL · Nabil, S.T. et al. · *Journal of Manufacturing and Materials Processing*	UT El Paso United States University of Arizona	FREEMELT ONE IN718	10.3390/jmmp8060241
Rethinking Cu-Cr electrical contact microstructures: From manufacturing to properties CONFERENCE · Varoto, L. et al. · *2024 IEEE 69th Holm Conference on Electrical Contacts (HOLM)*	Schneider Electric France Univ. Grenoble Alpes	FREEMELT ONE Cu-Cr	10.1109/HOLM56222.2024.10768351
In-melt electron analysis to accelerate process exploration of ceramics: Electron beam melting of TiB2 JOURNAL · Xu, J. et al. · *Materialia*	Linköping University Sweden University of Wuppertal	FREEMELT ONE TiB2	10.1016/j.mtla.2024.102243
Effect of two different point-based melt scanning strategies on the microstructure of as-built IN718 parts fabricated via EB-PBF System CONFERENCE · Nabil, S.T. et al. · *Solid Freeform Fabrication Symposium Proceedings*	UT El Paso United States University of Arizona	FREEMELT ONE IN718	10.26153/tsw/58107
Correlating outgassing and smoke phenomenon in electron beam powder bed fusion of Ti6Al4V using a residual gas analyzer JOURNAL · Ye, J. et al. · *Progress in Additive Manufacturing*	FAU Erlangen-Nürnberg Germany	FREEMELT ONE Ti-6Al-4V	10.1007/s40964-024-00745-3
Comparative Study of Hydrogen Embrittlement on EBM Inconel 718 As-Built and HIPed Specimens MASTER'S THESIS · Diaz, J.C.	UT El Paso United States	FREEMELT ONE IN718	scholarworks.utep.edu/open_etd/4174
Multiple interaction electron beam powder bed fusion for controlling melt pool dynamics and improving surface quality JOURNAL · Semjatov, N. et al. · *Additive Manufacturing*	FAU Erlangen-Nürnberg Germany	FREEMELT ONE CMSX-4	10.1016/j.addma.2024.104316

2024

TITLE · AUTHORS · VENUE	INSTITUTION · COUNTRY	MACHINE · MATERIALS	DOI / LINK
Revealing the Mechanisms of Smoke during Electron Beam–Powder Bed Fusion by High-Speed Synchrotron Radiography JOURNAL · Ye, J. et al. · *Journal of Manufacturing and Materials Processing*	FAU Erlangen-Nürnberg Germany Helmholtz-Zentrum Hereon; KTH Royal Institute of Technology	FREEMELT ONE Ti-6Al-4V · CMSX-4	10.3390/jmmp8030103
Anisotropic Superelastic and Shape Memory Effect of Nitinol Manufactured by Electron Beam Powder Bed Fusion JOURNAL · Fink, A. et al. · *Advanced Materials & Sustainable Manufacturing*	FAU Erlangen-Nürnberg Germany	FREEMELT ONE NiTi	10.35534/amsm.2024.10004
Additive Manufacturing of TiC/Steel Composites Using Electron Beam Melting and In Situ Infiltration JOURNAL · Chen, Y. et al. · *Advanced Engineering Materials*	FAU Erlangen-Nürnberg Germany	FREEMELT ONE Steel	10.1002/adem.202301313
Feasibility of Melting NbC Using Electron Beam Powder Bed Fusion JOURNAL · Wennersten, K. et al. · *Advanced Engineering Materials*	Linköping University Sweden TekSiC AB	FREEMELT ONE NbC	10.1002/adem.202301388
Powder Bed Fusion of AlSi10Mg Using an Electron Beam: Processability, Microstructure and Mechanical Properties JOURNAL · Ortmann, R. et al. · *RTE Journal*	Ruhr University Bochum Germany	FREEMELT ONE AlSi10Mg	10.58134/fh-aachen-rte_2024_001
Study and characterization of a TiAl alloy processed via Electron Beam Powder Bed Fusion Original: *Studio e caratterizzazione di una lega TiAl processata tramite Electron Beam Powder Bed Fusion* MASTER'S THESIS · Moccia, M.	Politecnico di Torino Italy	FREEMELT ONE γ-TiAl	webthesis.biblio.polito.it/id/eprint/33293
A Characterization of Molybdenum Alloys for Electron Beam Powder Bed Fusion MASTER'S THESIS · Himelstein, V.R.	NC State University United States	FREEMELT ONE Mo · Mo-9Si-8B	www.proquest.com/openview/b481def90b1cc80e8082c2d696230fa9/1
Powder bed fusion of pure copper using an electron beam – achieving high conductivity by real-time process monitoring and control CONFERENCE · Ortmann, R. et al. · *MATEC Web of Conferences*	Ruhr University Bochum Germany University of Wuppertal	FREEMELT ONE Pure Cu	10.1051/matecconf/202440605001
Optimization of additive manufacturing processes for copper and its alloys PHD THESIS · Vanzetti, M.	Politecnico di Torino Italy	FREEMELT ONE Pure Cu	iris.polito.it/handle/11583/2990839

2023

TITLE · AUTHORS · VENUE	INSTITUTION · COUNTRY	MACHINE · MATERIALS	DOI / LINK
MiniMelt: An instrument for real-time tracking of electron beam additive manufacturing using synchrotron x-ray techniques JOURNAL · König, H.H. et al. · *Review of Scientific Instruments*	KTH Royal Institute of Technology Sweden FAU Erlangen-Nürnberg; Helmholtz-Zentrum Hereon; DESY; Freemelt AB	MINIMELT Tool steel · CMSX-4	10.1063/5.0177255
Correlation Between Structural Features and Magnetic Performance of Fe93.5Si6.5 (wt.%) Soft Magnetic Materials JOURNAL · Yang, J. et al. · *Advanced Functional Materials*	FAU Erlangen-Nürnberg Germany	FREEMELT ONE Fe-Si	10.1002/adfm.202308194

2023

TITLE · AUTHORS · VENUE	INSTITUTION · COUNTRY	MACHINE · MATERIALS	DOI / LINK
Development of a High-Throughput Magnetic Characterization Technique and its Application to Process Parameter Development for Electron Beam Powder Bed Fusion of Permalloy MASTER'S THESIS · Colton, S.; Stebner; A. (advisor)	Georgia Institute of Technology United States	FREEMELT ONE Permalloy	www.proquest.com/openview/24a40f8bcbbdf07251c6022b2e811400/1?pq-origsite=gscholar&cbl=18750&diss=y
A High-Speed X-Ray Radiography Setup for In-Situ Electron Beam Powder Bed Fusion at PETRA III CONFERENCE · Bidola, P.M. et al. · *Proceedings of SPIE*	Helmholtz-Zentrum Hereon Germany KTH Royal Institute of Technology; FAU Erlangen-Nürnberg	MINIMELT CMSX-4	10.1117/12.2678913
Exploring IN718 Alloy Production with Bi-Directional Raster and Stochastic Spot Melting Techniques Using an Open-Source Electron Beam Melting (EBM) System CONFERENCE · Nabil, S.T. et al. · *Proceedings of the 34th Annual International Solid Freeform Fabrication Symposium*	UT El Paso United States	FREEMELT ONE IN718	10.26153/tsw/50954
Effect of powder particle size distribution and contouring on build quality in electron beam powder bed fusion of a medium-C hot-work tool steel JOURNAL · Sullivan, E.M. et al. · *The International Journal of Advanced Manufacturing Technology*	KTH Royal Institute of Technology Sweden	FREEMELT ONE Tool steel	10.1007/s00170-023-11944-7
Comparative Insights into Microstructure and Magnetism of Ni-Mn-Sn Heusler Alloys Manufactured by Electron Beam and Laser Beam Powder Bed Fusion JOURNAL · Rittinghaus, S.K. et al. · *Additive Manufacturing Letters*	University of Wuppertal Germany University of Duisburg-Essen; Technical University of Darmstadt	FREEMELT ONE Ni-Mn-Sn	10.1016/j.addlet.2023.100159
Structure Design of Soft Magnetic Materials Using Electron-Beam-Based Additive Manufacturing JOURNAL · Yang, J. et al. · *Advanced Materials*	FAU Erlangen-Nürnberg Germany	FREEMELT ONE Fe-Si	10.1002/adma.202300837
Functional properties and shape memory effect of Nitinol manufactured via electron beam powder bed fusion JOURNAL · Fink, A. et al. · *Materialia*	FAU Erlangen-Nürnberg Germany	FREEMELT ONE NiTi	10.1016/j.mtla.2023.101823
Process Characterisation of an Additive Manufacturing Equipment: An Analysis of the Effect of Electron Beam Powder Bed Fusion Process Parameters on the Melt Pool Geometry and Microstructure of Ti-6Al-4V MASTER'S THESIS · Ljusell, I.	Linköping University Sweden	FREEMELT ONE Ti-6Al-4V	liu.diva-portal.org/smash/record.jsf?pid=diva2:1808699
Electron-optical observation of smoke evolution during electron beam powder bed fusion JOURNAL · Ye, J. et al. · *Additive Manufacturing*	FAU Erlangen-Nürnberg Germany	FREEMELT ONE Ti-6Al-4V	10.1016/j.addma.2023.103578

2022

TITLE · AUTHORS · VENUE	INSTITUTION · COUNTRY	MACHINE · MATERIALS	DOI / LINK
Additive Manufacturing with Metallic Powder Materials: Development of a Strategic Material Qualification Methodology for Electron Beam Powder Bed Fusion MASTER'S THESIS · Ugur, Ö.	Ruhr University Bochum Germany	FREEMELT ONE AlSi10Mg	tezara.org/theses/772709

2022

TITLE · AUTHORS · VENUE	INSTITUTION · COUNTRY	MACHINE · MATERIALS	DOI / LINK
Electron-optical in-situ crack monitoring during electron beam powder bed fusion of CMSX-4 JOURNAL · Bäreis, J. et al. · *Progress in Additive Manufacturing*	FAU Erlangen-Nürnberg Germany	FREEMELT ONE CMSX-4	10.1007/s40964-022-00357-9
3D-Printed Raney-Cu POCS as Promising New Catalysts for Methanol Synthesis JOURNAL · Poller, M.J. et al. · *Catalysts*	Universität Hamburg Germany FAU Erlangen-Nürnberg; Forschungszentrum Jülich	FREEMELT ONE Cu-Al	10.3390/catal12101288
A novel approach for powder bed-based additive manufacturing of compositionally graded composites JOURNAL · Fu, Z. et al. · *Additive Manufacturing*	FAU Erlangen-Nürnberg Germany Neue Materialien Fürth GmbH	FREEMELT ONE Cu-W	10.1016/j.addma.2022.102916
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