

# Fabrication Additive

Bulletin de Veille - 11 janvier 2019

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## A LA UNE

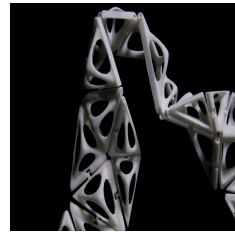
### Le marché mondial de la fabrication additive représente \$9,3 milliards en 2018

17/12/2018 - [www.3dnatives.com](http://www.3dnatives.com)

On observe une croissance sur tous les segments de marché de la fabrication additive. La deuxième tendance est de combiner ces technologies de fabrication additive avec les machines outils et process déjà existants, permettant ainsi de développer des applications plus complexes et variées, dans n'importe quel secteur. (marché fabrication additive) L'arrivée de HP sur le marché de la fabrication additive a contribué à la croissance du marché.

### Rapport Gartner : L'impression 4D débute son ascension, la fabrication additive continue de croître

08/01/2019 - [www.3dnatives.com](http://www.3dnatives.com)



Il classe les technologies d'impression 3D par sous-domaines et établit des prévisions pour cette nouvelle année qui commence. La courbe 2019, entre impression 4D et fabrication additive médicale Gartner met en avant une croissance accrue de l'impression 4D, une technique qui ajoute aux trois dimensions une quatrième, celle du temps. Une croissance de la fabrication additive métal Enfin, la courbe de Gartner 2019 met en évidence la progression et la hausse de l'utilisation de la fabrication additive métal dans les entreprises industrielles.

### 3D Printing Predictions for 2019

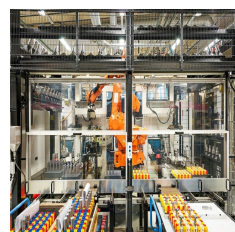
01/01/2019 - [www.engineering.com](http://www.engineering.com)

"In 2019, we'll see an increase in real-time supply chain traceability thanks to the integration of machine learning and 3D printing," said Paul Benning, HP Senior Fellow and Chief Technologist of 3D Printing at HP Inc. "Continued advancements in artificial intelligence deliver the capability for a team of engineers and designers to monitor a finished 3D-printed part in the field in order to determine how it performs over its lifespan. Each technology type, however, will have their own set of applications.

## GÉNÉRALITÉS - FABRICATION ADDITIVE

### This is What a Smart Factory Looks Like

11/01/2019 - [www.engineering.com](http://www.engineering.com)



Earlier work by the Forum determined that more than 70 percent of businesses investing in technologies—such as big data analytics, artificial intelligence (AI) or 3D printing—fail to move beyond the pilot phase. ) Foxconn (Shenzhen, China): "Lights off factory" – This factory, which specializes in components for smartphones and other electrical equipment, is characterized as having a fully automated manufacturing process with machine learning and AI driving auto optimization of equipment, smart self-maintenance and real-time status monitoring in smart production.

## MARKET / BUSINESS - FABRICATION ADDITIVE

- Les startups de l'impression 3D qu'il ne fallait pas manquer en 2018
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## What Is Project MAESTRO?

09/01/2019 - [www.engineering.com](http://www.engineering.com)

It brings together industry, government and academia to attempt development of a solution for long-term 3D printing technology growth. - EOS : Long-term metal 3D printer manufacturer. They've also produced weight-optimized sample parts that could be eventually produced in metal materials. ] If they can achieve this alone, the project could be quite worthwhile; standard metal 3D printers of today frequently require highly specialized fine metal powders that end up being quite expensive.

## Les avancées de la fabrication additive en 2018

26/12/2018 - [www.3dnatives.com](http://www.3dnatives.com)

Dans le reste de l'actualité qu'il ne fallait pas manquer, la société Rocket Lab réussissait le lancement d'une fusée équipée de composants imprimés en 3D alors que la firme hollandaise CEAD présentait un concept intéressant d'imprimante 3D très grand format pour la construction navale. Alors que le constructeur automobile BMW annonçait fièrement avoir atteint le cap du million de pièces imprimés en 3D, le véhicule électrique Solar Voyager faisait route vers l'Antarctique avec à son bord de nombreux composants créés par impression 3D.

## AÉROSPATIAL - FABRICATION ADDITIVE

### Spirit AeroSystems receives first Norsk titanium 3D printed part

03/01/2019 - [3dprintingindustry.com](http://3dprintingindustry.com)



(A bed of additive-manufactured titanium components for the Boeing 787 Dreamliner. Photo via Norsk Titanium) A bed of the first RPD produced titanium components for the Boeing 787 Dreamliner from 2017. "Integrating additive manufacturing capability into our production system to build end-use titanium parts expands Spirit's fabrication capabilities and puts us at the forefront of advanced manufacturing," commented Kevin Matthies, Spirit AeroSystems senior vice president of Global Fabrication.

### NASA JPL expresses interest in UK-made THREAD hybrid 3D printing process

02/01/2019 - [3dprintingindustry.com](http://3dprintingindustry.com)

Engineers at the NASA Jet Propulsion Laboratory (JPL) are set to contribute to the development of a hybrid 3D printing technology from the Advanced Manufacturing Research Centre (AMRC) in Sheffield, UK. At the NASA-JPL workshop, Cocking demonstrated how THREAD could be applied to make functional components for a space rover. " Now Schein has expressed interest "in the further development of the THREAD process for embedding fibres in 3D printed materials [...] especially if it can be adapted to metal printing. ...

## CONCEPTION - FABRICATION ADDITIVE

### MIT researchers automate reverse engineering of 3D models

03/01/2019 - [3dprintingindustry.com](http://3dprintingindustry.com)

As Tao Du, co-author of the research paper and PhD at MIT, explains, "At a high level, the problem is reverse engineering a triangle mesh into a simple tree [...] Ideally, if you want to customize an object, it would be best to have access to the original shapes – what their dimensions are and how they're combined. To test the algorithm, fifty 3D models were used, ranging from simple to complex in geometry. .

## TECHNOLOGIES - FABRICATION ADDITIVE

### UNIZ's new SLASH 2 SLA 3D printer offers build speed of 1200 mm/hr

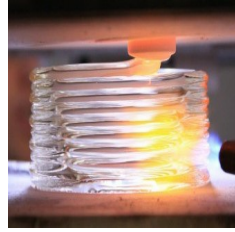
10/01/2019 - [www.3ders.org](http://www.3ders.org)

The SLASH 2 series stereolithography 3D printers have a high accuracy of 49.5 and 32.8

microns and are designed for dentistry, jewelry and custom manufacturing applications. As with other UNIZ products, the SLASH 2 3D printer comes equipped with the trademark cUDP technology, which broke record 3D print speeds of up to 1200 mm/hr. "UNIZ is proud to unveil the SLASH 2 series of 3D printers, an improvement on our first SLASH 3D printer that previously broke the record for highest 3D printing speed," said Jin Jiang Han, Marketing and Sales Director at UNIZ. Dimension/Weight. .

### [Le MIT dévoile les dernières améliorations de son imprimante 3D à verre](#)

07/01/2019 - [www.primante3d.com](http://www.primante3d.com)



Fondé par l'israélienne Neri Oxman, professeur en art et sciences des médias au MIT, ce groupe de designers et de scientifiques baptisé Mediated Matter, avait mis au point une imprimante 3D étonnante du nom de G3DP (pour Glass 3D Printing). Dans un article intitulé « Additive Manufacturing of Transparent Glass Structures », publié dans la dernière édition du magazine américain Mary Ann Liebert , Chikara Inamura, Michael Stern, Daniel Lizardo, Peter Houk et Neri Oxman ont évoqué les dernières évolutions de leur imprimante 3D

### [3D printing at the core of KCL electricity generating bricks](#)

02/01/2019 - [3dprintingindustry.com](http://3dprintingindustry.com)

KCL's bricks are a type of thermogalvanic cell and rely on an imbalance in temperature. 3D printing's use in power/electricity generation is incredibly varied. Recently, at the Stevens Institute of Technology , New Jersey, scientists applied a kind of direct write 3D printing method enabling mushrooms to produce electricity. Make your nominations now in the 2019 3D Printing Industry Awards now. Visit 3D Printing Jobs to get a head start. .

### [Rencontre avec HP : « la technologie HP Jet Fusion a véritablement ouvert les portes de la fabrication additive »](#)

17/12/2018 - [www.primante3d.com](http://www.primante3d.com)

Fort de sa technologie Multi Jet Fusion et la confiance de grands noms de l'industrie tels que Nike et BMW , HP a lancé cette année une nouvelle gamme d'imprimantes 3D pour la couleur. Notre technologie HP Metal Jet s'inscrit dans la continuité de notre procédé HP Multi Jet Fusion, avec le dépôt d'un lit de poudre métallique, puis celui d'un liant au travers de nos agents, suivi de la montée en température pour obtenir la « green part » et enfin le frittage pour obtenir les pièces finales.

## **MATÉRIAUX - FABRICATION ADDITIVE**

### [University of Pittsburgh and General Carbide awarded \\$57K to research 3D printing with tungsten](#)

08/01/2019 - [www.3ders.org](http://www.3ders.org)



"This research will enable General Carbide to expand our portfolio with more complex and versatile parts at a lower cost by partnering with the Swanson School and leveraging its expertise in binder jet 3D printing and additive manufacturing process optimization," stated Drew Elhassid, Chief Metallurgist and Manager of Lab, Pressing, and Powder Production at General Carbide. .

### [La lignine, nouveau matériau d'impression 3D?](#)

03/01/2019 - [www.3dnatives.com](http://www.3dnatives.com)



Une équipe de scientifiques du laboratoire national d'Oak Ridge (ORNL) a développé un matériau d'impression 3D renouvelable à partir de nylon et de lignine, un type de polymère organique qu'on retrouve beaucoup en tant que sous-produit de bioraffinerie. L'équipe aurait donc combiné de la lignine de bois dur qu'elle a fait fondre avec un nylon et une fibre de carbone. Pourquoi avoir combiné la lignine avec du nylon ?

## PyroGenesis signs exclusive additive manufacturing powder production deal with Aubert & Duval

08/01/2019 - [3dprintingindustry.com](http://3dprintingindustry.com)

According Jérôme Fabre, Eramet Group's Deputy CEO in charge of alloys, "With our metallurgical expertise for demanding markets such as aeronautics and energy, this partnership with PyroGenesis allows us to complete our offer of metal powders for additive manufacturing, including 3D printing, a growing market of the industry of the future. Photo via PyroGenesis Vote for your Materials Company of the Year and more in the 2019 3D Printing Industry Awards. Find 3D printing jobs near you now.

## 60% du marché des nanomatériaux imprimés en 3D proviendra de l'électronique

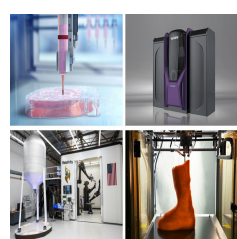
10/01/2019 - [www.primante3d.com](http://www.primante3d.com)

Exploité depuis les années 90, les nanomatériaux sont en fait les matériaux composés d'objets (particules, fibres ou tubes), dont la taille se situe entre 1 nm et 100 nm. Les imprimantes 3D de type FDM (dépôt de matière fondue) devraient aussi bénéficier de ces avancées et augmenter leur capacité, notamment grâce à l'utilisation de filaments chargés en nanotubes de carbone. Technologie d'impression 3D Optomec capable d'imprimer des encres conductrices de 100 nanomètres à 10 micromètres d'épaisseur.

## MARKET / BUSINESS - FABRICATION ADDITIVE

### Les startups de l'impression 3D qu'il ne fallait pas manquer en 2018

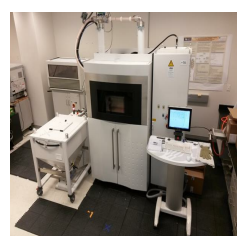
20/12/2018 - [www.3dnatives.com](http://www.3dnatives.com)



Cubicure, la startup 3D de juillet Cette jeune entreprise a déjà remporté des prix d'innovation grâce au développement de polymères haute performance pour la fabrication additive industrielle. Cubicure a été fondée en 2015 en tant que spin-off de l'Université de technologie de Vienne et s'est rapidement dédiée à la recherche sur les matériaux thermoplastiques.

### IDC forecasts worldwide spending on 3D printing to reach \$13.8bn in 2019

10/01/2019 - [www.3ders.org](http://www.3ders.org)



Many still think of 3D printing as a great method of prototyping, but more and more industries are 3D printing end-use products. Rapid increases in production speeds combined with major advances in 3D printing materials enabling the use of 3D printing in manufacturing across a wider range of applications," states Tim Greene, IDC Hardcopy Peripherals and 3D Printing Research Director.

### 40 3D printing experts give predictions for additive manufacturing in 2019

07/01/2019 - [3dprintingindustry.com](http://3dprintingindustry.com)

The key next step will be to move polymers beyond prototyping into more production-type applications. I predict that software supporting additive manufacturing will be given more weight in the process development to help create more holistic and integrated production solutions. Building long-term relationships between suppliers and manufacturers, standing purchasing agreements, and a focus on quality control processes will all become priorities. .

## EVÈNEMENTS / ÉTUDES - FABRICATION ADDITIVE

### 3D printing events for 2019

10/01/2019 - [3dprintingindustry.com](http://3dprintingindustry.com)

Furthermore, if you're looking to promote your additive manufacturing event, simply add it to the 3D Printing Industry Events Calendar. Some of the topics which will be discussed include 3D bioprinting ,3D Dental Scanning and Software , Legal and Regulatory issues regarding 3D Medical printing applications , and 3D Food (Medical) Printing. For the latest

3D printing news, subscribe to the 3D Printing Industry newsletter , follow us on Twitter and like us on Facebook.

## RÉGLEMENTATION / BREVETS - FABRICATION ADDITIVE

### [ASTM, Innovate UK, BSI & MTC to develop international additive manufacturing standards](#)

10/01/2019 - [www.3ders.org](http://www.3ders.org)

Global standards organization ASTM International is partnering with Innovate UK, BSI (British Standards Institution) and the Manufacturing Technology Centre (MTC) to create technical standards needed by the additive manufacturing industry. ASTM International's Additive Manufacturing Center of Excellence – in which the UK-based Manufacturing Technology Centre (the MTC) is a founding partner – identified three potential areas for standardization. ... plasma ... Electron ... energy ... 3D printing ... thermal ...

### [IBM files patent for hologram 3D printer](#)

03/01/2019 - [3dprintingindustry.com](http://3dprintingindustry.com)

3D printing a paperclip with a laser light hologram. “When a 3D-printing medium is applied to the surface of the hologram, the medium solidifies on the hologram’s surface to generate a hollow shell in the shape of the object to be printed. While it may be unlikely that the holographic 3D printer will ever become a viable IBM product, the patent is certainly an interesting thought experiment for future high speed 3D printing technologies.

### [Precision ADM receives certification for aerospace-grade additive manufacturing](#)

20/12/2018 - [3dprintingindustry.com](http://3dprintingindustry.com)

The specifically includes the additive manufacturing of aerospace-grade components, as Ian Klassen, Director of Aerospace Sales at Precision ADM, says “The additive manufacturing experience and expertise that of our team of engineers possess give us the ability to solve the many complex issues facing our aerospace clients today. Think Precision ADM, EOS or Additive Minds have earned a 3D Printing Industry Award? Keep up with additive manufacturing standards – subscribe to the 3D Printing Industry newsletter , follow us on Twitter , and like us on Facebook. .

### [UK Intellectual Property Office considers its position on 3D printing](#)

07/01/2019 - [3dprintingindustry.com](http://3dprintingindustry.com)



In each of the six countries considered in the report, between 5 and 15 professionals, from five participating industries (creative, medicine, law, industrial manufacturing and research) were asked questions to determine their perceptions and preconceptions on the role of IP in 3D printing. In China, for example, the government has implemented a National Additive Manufacturing Industry Development Plan , whereas the UK has its own Additive Manufacturing National Strategy.

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