Fabrication Additive

Bulletin de Veille - 07 février 2019

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A LA UNE

Swiss researchers 3D print funicular flooring systems to reduce concrete use

05/02/2019 - www.3ders.org

An arch is a great example: weight pressed onto the top of the arch gets distributed throughout the whole shape because it resolves forces into compressive stresses while eliminating tensile stresses. Instead, the compression dominant structural shape of the prototypes allowed for a simple interface design using only male–female interlocking features to guarantee alignment," the paper states.

GÉNÉRALITÉS - FABRICATION ADDITIVE

£832 million funding for UK engineering and research announced by EPSRC

04/02/2019 - 3dprintingindustry.com

As part of UK Research and Innovation (UKRI), the organization directing research and innovation funding in the UK, EPSRC has announced a funding package that will support PhD research and Centres for Doctoral Training (CDTs) across the UK – including research supporting the advance of additive manufacturing. Also, for all the latest 3D printing news, subscribe to the 3D Printing Industry newsletter , follow us on Twitter , and like us on Facebook.

Additive Manufacturing in the 21st Century

05/02/2019 - www.engineering.com

These are surprisingly strong and tough despite being made from relatively simple material building blocks. The focus and the hype was all on the consumer; more the entry level, everybody has-to-have it type of 3D printing. Of course, any time you're working against gravity, that's going to be the main metric: strength to weight. The only other way to get them down to the weight and strength value as we've been able to achieve would be with a conventional fiber composite lay up, which is very labor intensive.

AÉROSPATIAL - FABRICATION ADDITIVE

€500,000 available in Metalysis and ESA space exploration competition

21/01/2019 - 3dprintingindustry.com

These cells convert refined oxides and ores into metal alloy powders, including those used in 3D printing for aerospace, automotive and manufacturing industries. If electrochemical cells can harness off-world ores and turn them into 3D printing materials, astronauts could one-day 3D print whatever they need, in space, without the need for costly supply runs from Earth. Get all the latest 3D printing news with our free 3D Printing Industry newsletter , also follow us on Twitter and like us on Facebook.

l'impression 3D de silicone

- Filamentive announces 100% recycled 3D printer filament made from PET plastic bottles

MARKET / BUSINESS - FABRICATION ADDITIVE

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- 3D printing startups in UK and Ireland bag €4.2 million
- Carbon lance une nouvelle imprimante 3D pour les gros volumes
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EVÈNEMENTS / ÉTUDES - FABRICATION ADDITIVE

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- ASM International course 'Metallurgy for Additive Manufacturing' to run this month

RÉGLEMENTATION / BREVETS - FABRICATION ADDITIVE

- Sigma Labs' PrintRite3D metal AM quality assurance system granted a patent
- UL publishes ANSI/CAN/UL 2904 standard for assessing 3D printing chemical emissions

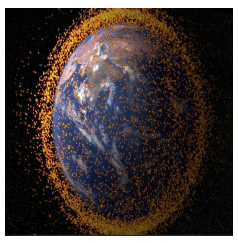
NASA awards Copper 3D grant for 3D printing antibacterial medical devices in space

04/02/2019 - 3dprintingindustry.com

Daniel Martinez, Copper3D's Director of Innovation and CMO, explained, "Basically, our idea is to introduce to the 3D printing industry the concept of Active Materials, that is, materials that are no longer inert and only support structures but now they are active components that play a specific role and adds great value to the final 3D printed object, in this case the attribute is that these objects are completely antimicrobial.

Clearing up space junk: 3D printed satellites will make space more equitable

05/02/2019 - www.3ders.org



In short, the lackadaisical approach of a couple early space exploring nations (namely the US and Russia) is now making it more difficult for everyone to get satellites and astronauts into space. 3D printing has already been field tested in zero-gravity environments , and 3D printing can handle electric circuits , so it's a foregone conclusion that a satellite will soon be 3D printed in space.

CONCEPTION - FABRICATION ADDITIVE

Applying integrated computational materials engineering to additive manufacturing

31/01/2019 - 3dprintingindustry.com

The particular areas of interest for PRISM2 are aerospace and the energy sector, and the group is currently in a long-term collaborative project with Rolls-Royce. Professor Attallah is the director of the university's Advanced Materials and Processing (AMPLab), and previously discussed the future of additive materials in an interview for 3D Printing Industry. Nominate PRISM2 and others for the 2019 3D Printing Industry Awards. For more 3D printing research updates subscribe to the 3D Printing Industry newsletter , like us on Facebook and follow us on Twitter.

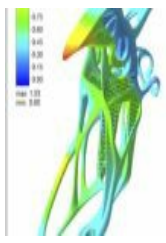
Solvay and e-Xstream engineering expand materials simulation for 3D printing

31/01/2019 - 3dprintingindustry.com

Belgian chemical company Solvay , has announced that it has added two new high-performance 3D printing polymers to e-Xstream engineering's Digimat-AM platform for material simulation. "Digimat-AM allows customers to simulate the printing process and successfully predict the thermomechanical behaviour of 3D printed designs to 'print right the first time. .

BAE Systems Air acquires Simufact Additive for metal 3D printing

01/02/2019 - 3dprintingindustry.com



BAE Systems has acquired Simufact Additive to reduce build trials for 3D printing metal components. Metal 3D printing can prove to be an expensive process, especially if fully functional parts are not produced in the lower number of print runs. Before the 3D printing process, Simufact Additive can be used to run a thermal and stress analysis. For more news on 3D software and simulation technologies subscribe to our 3D printing newsletter. ..

AutoForm Releases Upgraded Software for Digital Process Chain

06/02/2019 - www.engineering.com

AutoForm R8 users will be able to use the software to engineer a stamping process for patchwork blanks. The future of the automotive industry is expected to be largely driven by additive manufacturing. According to Forbes magazine, "some of the best-known benefits of additive manufacturing align precisely with what automotive OEMs are looking to deliver: faster development cycles, part consolidation, lightweighting, and new and custom geometries.

TECHNOLOGIES - FABRICATION ADDITIVE

Additec brings directed energy deposition metal 3D printing to the desktop

25/01/2019 - 3dprintingindustry.com

According to Additec, the machine is also tipped to be one of the “lowest cost metal 3D printers” on the market, retailing for prices starting around $90,000. In addition, the Additec team assembles custom metal 3D printers. Make your nominations now in the 2019 3D Printing Industry Awards. For more of the latest 3D printer releases and other news subscribe to the 3D Printing Industry newsletter , like us on Facebook , and follow us on Twitter. Find 3D Printing Jobs near you now.

3D printing microstructures that can be moved with temperature or light

31/01/2019 - www.3ders.org

We’ve covered 3D printed, stiffness-tunable actuators and 3D printed microstructure gradients , so it follows that researchers would 3D print movable microstructures using gradients. A team at Karlsruher Institut für Technologie (KIT) 3D printed microstructures that change shape under the influence of temperature or light. The chemical compound poly(N-isopropysycraymide) shrinks and expands with temperature changes, and by adding the compound to the resin, 3D prints come out with the same temperature-sensitive characteristics.

Novel 3D Printer Uses Light to Transform Liquids into Complex Solid Objects

01/02/2019 - www.azom.com

UC Berkeley researchers used a new light-based 3D-printing technique to add a handle onto a screwdriver shaft. 3D objects are built up layer by layer by a majority of 3D printers, including other light-based methods. Basically, you’ve got an off-the-shelf video projector, which I literally brought in from home, and then you plug it into a laptop and use it to project a series of computed images, while a motor turns a cylinder that has a 3D printing resin in it. The 3D-printing resin contains liquid polymers combined with dissolved oxygen and photosensitive molecules. .

The Importance Of Powder Flow In 3D Printing

04/02/2019 - www.azom.com

In a recent interview with AZo Materials, Andrew Klein, Director of Research and Development at ExOne, discusses the importance of powder flow in 3D printing. They provide 3D printers, printed products and related services to help companies exploit and integrate 3D printing in their existing manufacturing operations. n 1996, ExOne obtained the license for the 3DP (three-dimensional printing) process developed at MIT (Massachusetts Institute of Technology) for metal and sand parts. Printing with sand, ceramic and metal powders are our core areas of expertise. .

Fraunhofer ILT scientists to develop SLA Multi-Photon Polymerization 3D printer

06/02/2019 - 3dprintingindustry.com

Currently, the HoPro-3D project includes LightFab , an Aachen-based 3D printer manufacturer, Bartels Mikrotechnik , a specialist in microsystems technology, and Miltenyi Biotec , a manufacturer of biomedical research tools. Prior to this, scientists at the Fraunhofer Institute for Manufacturing Engineering and Automation (Fraunhofer IPA) developed a new hybrid 3D printing method with injection molding, known as Additive Freeform Casting (AFFC).

MATÉRIAUX - FABRICATION ADDITIVE

#Startup3D : Spectroplast et l’impression 3D de silicone

07/02/2019 - www.3dnatives.com

Spectroplast est une jeune pousse suisse qui s’est spécialisée dans l’impression 3D de

silicone, un matériau qui commence à faire son apparition sur le marché de la fabrication additive. Notre équipe jeune et dynamique, composée d'experts en technologie, en commerce et recherche, a pour objectif de commercialiser la technologie d'impression 3D silicone et permettre de produire des pièces silicone en grandes séries.

Filamentive announces 100% recycled 3D printer filament made from PET plastic bottles

06/02/2019 - www.3ders.org

UK 3D printing filament brand Filamentive announced the release of ONE PET, a 100% recycled plastic filament made from post-consumer PET plastic bottle waste, in partnership with Tridea. With a focus on sustainability, Filamentive is committed to greatly reduce the environmental impact of plastic in 3D printing. According to Filamentive, ONE PET has been extensively tested for 3D printing applications - it is stiff and tough with excellent interlayer adhesion. Posted in 3D Printing Materials. .

MARKET / BUSINESS - FABRICATION ADDITIVE

Prodways sells its second Rapid Additive Forging system

31/01/2019 - www.metal-am.com

Prodways Group, headquartered in Paris, France, has reported the sale of its second Rapid Additive Forging metal Additive Manufacturing system. The Rapid Additive Forging technology developed at Prodways is capable of producing large scale parts in various metals, including titanium and steel. Based on a type of Wire Arc Additive Manufacturing (WAAM) process, a blank is created in successive layers, very close to the finished dimensions, which is then machined to obtain the final part.

3D printing startups in UK and Ireland bag €4.2 million

31/01/2019 - 3dprintingindustry.com

In addition, the company has a software toolkit for optimizing 3D printable files, and an Additive Manufacturing Platform linking businesses to a network of 3D Printing Makers. One way in which this is achieved is through the company's Co-Fabrico platform – cloud software as a service (SaaS) that facilitates AR customization, and the on demand production of 3D printed car parts. In this new contract valued at €2.2 million, Connect 4.0 will white label its Co-Fabrico platform for Robotica 4.0's 3D printing services in Angola.

Carbon lance une nouvelle imprimante 3D pour les gros volumes

04/02/2019 - www.primante3d.com

La pépite montante de l'impression 3D Carbon poursuit son développement avec une annonce de taille pour sa technologie Digital Light Synthesis System. Après avoir annoncé en novembre dernier des réductions drastiques de prix pour ses résines les plus utilisées, la start-up californienne lance un nouveau système d'impression 3D grand format baptisé L1. L'imprimante a déjà permis la production de 100 000 paires de semelles intercalaires Futurecraft 4D en 2018. .

EOS acquires Vulcan Labs, puts pressure on US 3D printer manufacturers

06/02/2019 - 3dprintingindustry.com

The acquisition will see Vulcan Labs engineers lead "development and commercialization of the new Integra P 400 polymer 3D printer. David Leigh said on the acquisition of Vulcan Labs by EOS, "The time is perfect to join EOS and Vulcan Labs […] Industrial 3D printing is still relatively new, but it has moved from the theoretical to the practical. For more news on additive manufacturing, subscribe to our 3D printing newsletter. .

EVÈNEMENTS / ÉTUDES - FABRICATION ADDITIVE

New ceramitec conference on industrial use of ceramics

30/01/2019 - www.metal-am.com

The focus of the event will be on the industrial use of ceramic materials,

and it will also include sessions covering Powder Metallurgy and Additive Manufacturing. - Additive Manufacturing - Powder Metallurgy - Technical ceramics - Raw materials - Refractory metals. Businesses, research institutes and start-ups in Additive Manufacturing, Powder Metallurgy, technical ceramics, fine ceramics, raw materials and refractories are encouraged to submit their latest ceramic applications. .

APMA 2019: Conference schedule to cover all aspects of Powder Metallurgy

30/01/2019 - www.metal-am.com

The 5th International Conference on Powder Metallurgy in Asia will be held at the JW Marriot Hotel in Pune, India, from February 18-21, 2019. The event is this year being hosted by the Powder Metallurgy Association of India (PMAI) and will welcome delegates from Asia and around the world. APMA 2019 will be India's largest ever conference on Powder Metallurgy and particulate materials, and is expected to attract over 500 delegates. Pick up your free copy of PM Review, Metal AM and PIM International magazines!

ASM International course 'Metallurgy for Additive Manufacturing' to run this month

04/02/2019 - www.metal-am.com

The course is designed to help students learn the similarities between polymer and metal Additive Manufacturing, Powder Metallurgy basics, business aspects and industry trends, safety considerations, and more.

RÉGLEMENTATION / BREVETS - FABRICATION ADDITIVE

Sigma Labs' PrintRite3D metal AM quality assurance system granted a patent

06/02/2019 - 3dprintingindustry.com

Sigma Labs , a Santa Fe-based AM software and hardware company, has been granted a patent for its quality assurance system, PrintRite3D , made specifically for metal additive manufacturing. In our 'the future of 3D printing ' guest article, Sigma Labs' co-founder Mark J. Cola, talked about the need for in-process quality assurance in metal 3D printing. Please choose the metal 3D printer of the year. For more news on metal 3D printing subscribe to our 3D printing newsletters or visit us on Facebook and Twitter. Visit our 3D Printing Jobs page to learn more.

UL publishes ANSI/CAN/UL 2904 standard for assessing 3D printing chemical emissions

06/02/2019 - 3dprintingindustry.com

The UL and Georgia Tech team aimed to bring more information to 3D printer users so that they may choose safer options for 3D printing. Throughout their research, the team deduced that 3D printer nozzle temperature, filament type and color, as well as 3D printer brand, affect emissions. Also, visit 3D Printing Jobs to commence your career in additive manufacturing.