Fraunhofer IFAM Branch Lab Dresden

News from Fraunhofer IFAM Dresden

Summer 2021

Events

Industry Workshop Additiver metallischer Filamentdruck für die Praxis ➡
Dresden, 23-9-2021

Industry Workshop Advanced Alkaline Electrolysis ➡
Dresden, 30-9-2021

Powder Analysis for AM – an Overview ➡
Webinar AM@IFAM,
5-10-2021

Early Morning Science mit Fraunhofer
Topic: Größer kann jeder – Feinste metallische Strukturen in 3D ➡
online, 12-10-2021

Hydrogen Technology Expo Europe 2021 ➡
Bremen, 20 - 21-10-2021

Understanding Debinding – The Secret to Success ➡
Webinar AM@IFAM,
9-11-2021

formnext 2021 ➡
Frankfurt/Main,
16 - 19-11-2021

MoldJet® - New Process In AM For Maximum Productivity ➡
Webinar AM@IFAM,
7-12-2021

Additive Manufacturing Forum Berlin 2022 ➡
Berlin, 14 - 15-3-2022

AM@IFAM...

...is now going into the second round. Since this spring, Fraunhofer IFAM has been presenting highlights of additive manufacturing in a webinar series.
On the first Tuesday of each month, you will get compact insights into current issues and developments in an one-hour knowledge package.
Learn more about the individual technologies and register here: ➡

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Of course, you can object to receiving information at any time. In this case, please hand in your deregistration here.

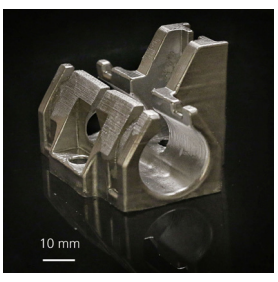
Ladies and gentlemen, dear partners, customers and companions,

The year 2021 has once again presented us with challenging tasks. And so, like all of you, we have faced up to the changed circumstances and are highly motivated in advancing new and innovative topics and ideas to shape and improve the future in key areas such as mobility, medicine and energy. Here are some examples of our activities in recent months.
Please feel free to contact us with your specific issues and we will be happy to support you in finding tailored solutions.

Kind regards
Dr. Thomas Weißgärber

Additive Manufacturing in the aerospace industry

With the project „EasyTitan“, Fraunhofer IFAM in Dresden has launched a project for the rapid and process-reliable manufacturing of light-metal components in aerospace. Together with the space management of the German Aerospace Center e.V. (DLR), a filament-based hybrid process for the production of Ti64 components is to be optimized. The aim is to develop additive manufacturing processes for application in space. ➡



Thermal inactivation of the corona virus

Controlling the spread of viruses (e.g. SARS-CoV-2) and other pathogens in a pandemic situation is one of the most pressing challenges. The project „Virus-Grill“, part of the Fraunhofer vs. Corona project „AVATOR“, aims at reducing the viral activity in the air in closed rooms by a novel apparatus. The temperature sensitivity of viruses is the key: by heating and holding at inactivation temperature, active shell components of the viruses are destroyed and the viruses inactivated. The apparatus to be developed is used to draw in and condition air contaminated with viruses.
➡

New approach to increasing range and comfort in fuel cell-powered rail transport

Hydrogen technology will also be used on rails in the future. In the future, regional trains will be equipped with fuel cells that convert oxygen and hydrogen into electrical energy. In the „Heat2Comfort“ project funded by the BMWi, Fraunhofer IFAM in Dresden is making its contribution to this type of emission-free and low-noise mode of transport. The central idea of the approach is an effective utilization of the fuel cell waste heat for the temperature control of the vehicle interior. ➡

New impetus for electromobility

With the project »RoSiLIB«, Fraunhofer IFAM in Dresden is making a decisive contribution towards a CO_2-neutral energy supply in mobility.
To this end, new high-energy anodes for lithium-ion batteries are being developed together with partners from the Institute of Ion Beam Physics and Materials Research at the Helmholtz-Zentrum Dresden Rossendorf e. V., E-Lyte Innovations GmbH, NANOVAL GmbH & Co. KG, VON ARDENNE GmbH and Custom Cells Itzehoe GmbH. ➡

Innovative matrix alloy for brake discs

In the project COM⊕TRANS, new materials are being developed which, despite their low weight, have less abrasion than conventional materials even at high temperatures. CCAs are novel multicomponent alloys capable of adapting various properties through composition and process optimization. The project results are mainly used in the automotive industry for small and heavy-duty vehicles.
Highlight: with newly developed brake discs based on CCA, harmful particulate emissions from vehicles can be significantly reduced compared with conventional systems.

4th Industry Workshop Advanced Alkaline Electrolysis

On 30 September, we invite you for the fourth time to the industry workshop „Advanced Alkaline Electrolysis“ in Dresden. Fraunhofer IFAM and its guests from Nel Hydrogen, H2Pro, Sunfire GmbH, Forschungszentrum Jülich, TFP Hydrogen Products Ltd, Ionomr Innovations Inc., Veco B.V., Nordex and AquaVentus will offer you up-to-date presentations on advanced catalysts and materials, manufacturing of parts and components, automated assembly as well as operation modes and discuss present and future markets. We are looking forward to discussions with experts from industry and applied research. Register now! ➡

Our latest technologies

With the commissioning of two new systems, Fraunhofer IFAM in Dresden has added two innovative technologies to its portfolio in additive manufacturing.
The MoldJet® process stands out due to its very flexible component sizes and high design freedom. This opens up new perspectives in sinter-based additive manufacturing. ➡
In addition, a new system for lithography-based metal manufacturing (LMM) was installed at the Innovation Center Additive Manufacturing ICAM®. LMM is a stereolithography process that is particularly suitable for filigree structures and is characterized by excellent surface properties. It opens up new areas of application that were previously not feasible with other additive technologies. ➡
Furthermore, with the acquisition of a hot isostatic press from Quintus, new possibilities for pressure-assisted heat treatment are available to you. The development of combined processes, i.e. heat treatment and hot isostatic pressing (HIP) for materials with complex heat treatment, e.g. nickel-based superalloys as well as intermetallic materials, is one of the main applications of the new facility. ➡
Also the thermo-technical laboratory at Fraunhofer IFAM in Dresden now offers a much broader portfolio of measurement techniques following modernization work.
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