

# News from Fraunhofer IFAM Dresden



# Branch Lab Dresden

#### **Events**

LithAM -Lithographische Additive Fertigung in der Praxis Dresden, 12-3-2024

Additive Manufacturing Forum Berlin, 20 - 21-3-2024

Industry Workshop Thermische Energiespeicher zur Abwärmenutzung Dresden, 9-4-2024

**1. Saxon Cooperation Day** Dresden, 18-4-2024

*Hannover Messe* Hannover, 22 - 26-4-2024

DGM training Einführung in metallische Hochtemperaturwerkstoffe Ladies and gentlemen, dear partners, customers and companions,

Hopefully, you have had a good and healthy start to the new year 2024 and have been able to recharge your batteries in the time "between the years" for all that lies ahead. Because one thing is certain: 2024 will once again present us with many exciting questions and challenges. And that's a good thing, as it is precisely our goal to answer and solve these with innovative ideas and forward-looking developments. In order to look to the future with optimism, it is always worth taking a brief look back, which we would like to do below at a few highlights from 2023. We are already looking forward to exciting projects and collaborations with you in 2024. Please feel free to approach me and my team with your ideas at any time. The upcoming conferences, trade fairs and events here at the institute will certainly provide a good opportunity for this.

Here's to continuing our great, trusting collaboration!

Yours sincerely, Prof. Dr. Thomas Weißgärber

### Nothing is better than personal contact

It is always a special pleasure for us to meet you in person to engage in an in-depth dialogue. We will be back at the relevant trade fairs and conferences in 2024.

And we would especially like to invite you to our events here in Dresden. In March, additive manufacturing with Lithography-based Metal Manufacturing (LMM) will be the focus during the workshop "LithAM - Lithographische Additive Fertigung in der Praxis". On 9 April, we invite you to our institute for the industry workshop "Thermische Energiespeicher zur Abwärmenutzung". As part of the DGM training course "Introduction to metallic high-temperature materials", you will once again have three days of intensive further training at your disposal. Finally, we are delighted to be organising the industrial workshop "Advanced Alkaline Electrolysis" for the 6th time at the Fraunhofer Institute Centre Dresden. After the event was once again fully booked with over 300 participants on site and online in 2023, we are again preparing a varied programme with renowned international speakers for this year. You will receive more information on all events soon.

Dresden, 14 - 16-5-2024

**ILA** Berlin, 5 - 7-6-2024

**Dresdner Lange Nacht der Wissenschaften** Dresden, 14-6-2024

6<sup>th</sup> Industry Workshop Advanced Alkaline Electrolysis Dresden, 26 - 27-9-2024

**Euro PM** Malmö, 29-9 - 2-10-2024

Hydrogen Technology Expo Hamburg, 23 - 24-10-2024

**Compamed** Düsseldorf, 11 - 15-11-2024

**formnext** Frankfurt, 19 - 22-11-2024

**Hagener Symposium** Hagen, 28 - 29-11-2024

The dates listed are as planned in January 2024.

# Understanding made easy

Funding from the eku Future Award 2022 enabled the creation of educational videos in the field of energy and thermal management. Learn more about the applications of heat storage systems, for example.

#### Contact

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## EMATec 2023 in Dresden

We look back with pride on the first "International Conference on Emerging Applications of PM & AM - Materials and Technologies", EMATec for short. In July 2023, we welcomed participants from 19 countries and 4 continents for three days.

The conference proved its worth as a platform for presenting and discussing the latest material and technology developments for future applications. There was a clear focus on energy technologies with the latest products, technologies and developments. The next edition of EMATec is planned for 2025 - we will send you more details soon.

We are already looking forward to welcoming you to EMATec 2025!

### **EPMA Master Award**

Florian Häslich received the EPMA Master Award at EuroPM 2023 in Lisbon. His thesis on additive manufacturing of pure copper impressed the jury. Florian Häslich is part of the Additive Manufacturing team and is currently

doing his PhD at Fraunhofer IFAM in Dresden and at the TU Dresden on the topic of "Alloy development of a refractory metal High Entropy Alloy (HEA) for high-temperature applications".



#### Powder Metallurgy Summer School

In the summer of 2023, 60 international participants immersed themselves in powder metallurgy for a week of lectures and practical exercises. With joint activities on all evenings, the social factor was not neglected in order to network the next generation of powder metallurgists at an early stage. The European Powder Metallurgy Association organises the PM Summer School at different locations in Europe every year. We were delighted that this format was once again hosted in Dresden. Interested in participating in Allessandria, Italy in 2024? You can find all further information here.

#### POWERPASTE: A beacon of Fraunhofer research

The Executive Board of the Fraunhofer-Gesellschaft honoured Dr Marcus Vogt with an excellence award for his outstanding achievements in the development of the "POWERPASTE", which enables the innovative and needs-based production of hydrogen as an energy source for various applications. Following the invention and patenting of the idea in 2013, Dr Vogt and his team devoted themselves with the utmost dedication to the further development of the product in creative and cross-competence R&D projects. And are driving the development further in 2024. 🟓

## eku Future Award 2023

Torsten Seidel received the "eku Future Award for Energy, Climate and Environment in Saxony" for the second time. In the "eku idee Wissenschaft" category, the project "Increasing efficiency in research operations by integrating a new type of latent heat storage system" is Fraunhofer IFAM's contribution to advancing the energy transition in the Free State of Saxony in 2024. As part of the project, a latent heat storage system is to be set up and used to store waste heat from a furnace system. The time-delayed utilisation of existing waste heat using thermal storage can reduce energy requirements and the associated environmental impact, climate emissions and costs. 🟓

# Science for breakfast

At "Early Morning Science with Fraunhofer" at Fraunhofer IZD Dresden on 19 September 2023, Dr Johannes Trapp presented a solution for sustainable, resource-saving and wear-free lightweight brake discs under the title "Pure deceleration - new materials for brake discs with (almost) no particulate emissions". Not only is the release of particulate matter reduced, but regular replacement of the brake discs is also unnecessary and brake pad changes are massively reduced. The new type of brake made of ceramic-reinforced light metal composites will be suitable for private transport as well as for selected applications in rail transport and for trucks. 🔿

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