

Lithoz announces strategic financial investment in AMAREA Technology, offering multi-material 3D printer for up to six different materials

- **Lithoz GmbH, global leader in ceramic 3D printing, announces the acquisition a strategic share in AMAREA Technology GmbH**
- **AMAREA Technology's 3D printers combine up to six different materials in a single print run, with the thermoplastic feedstock solidifying in a fraction of a second**
- **Other than existing multi-material 3D printing technologies, almost all materials can be processed in high density as well as with defined porosities at any selected position**
- **Lithoz CEO Dr. Johannes Homa: "With this financial engagement in AMAREA Technology, we are very proud to actively support their way to a completely new dimension of 3D-printed functionally graded components."**

21st November 2023: Vienna, Austria | Dresden, Germany. Multi-material 3D printing made a strong impact at this Formnext, with Lithoz also showcasing their flagship printer the CeraFab Multi 2M30 for the first time at a public event. After almost a decade of fruitful cooperation together with Dresden-based **Fraunhofer IKTS**, another key innovation driver in multi-material printing, **Lithoz has now officially announced the acquisition of a strategic share in their spin-off AMAREA Technology**, who gathered significant attention at Formnext.

As specialists in multi-material 3D printing, AMAREA Technology has developed a revolutionary **3D printing technology that processes up to 6 different materials in one single print run**. Their **Multi Material Jetting (MMJ) technology** therefore unlocks completely new multidimensional combinations of various ceramics, metals, polymers and composites in both individual parts and functionally graded components.

Inspired by LP injection moulding, the high-filled thermoplastic base material developed and supplied by AMAREA Technology is dispensed drop by drop. Due to the nanoliter volume, the drops solidify in a fraction of a second, considerably speeding up the entire printing process. Thanks to the selective droplet-based printing technology, parts achieve a considerably higher level of accuracy than material extrusion processes, for example. This allows a material change to take place every 200 µm so that highly functionalized components can be additively manufactured. 'We had a great response to our multi-material 3D-printed heaters and igniters for high temperatures above 1000 degrees, which enable applications in harsh environments, too.' summarizes CEO Steven Weingarten as a conclusion from Formnext 2023.

The resulting functionally graded components have a **far higher density and better surface quality than those printed using other material extrusion techniques, for instance**. Beyond that, it is also possible to **exactly define requested porosities at any selected position within the component**. **More than 25 different materials have already been introduced to the MMJ production technique**, with the portfolio continuously growing, while important parameters such as filling levels, porosity, gradient, layer height and density can be freely and specifically defined.

Dr. Johannes Homa, Lithoz CEO, states: ‘With our proud acquisition of a strategic share in AMAREA Technology, we can’t wait to see how our ultra-precise Lithoz LCM technology and AMAREA Technology’s MMJ system pointing on maximum material diversity **will work hand in hand to unlock previously unachievable potentials**. **This will create the next generation of multi-material 3D-printed applications** from the semiconductor to aerospace industry - as first inquiries have already proven.’

Steven Weingarten, AMAREA Technology CEO, adds: ‘The partnership with Lithoz and their belief in our technology inspire us. Lithoz’s global reputation and its successful path to becoming the market leader in ceramic 3D printing are a model for the mission we are now taking in the field of multi-material 3D printing. We would like to express our gratitude to Johannes Homa and Johannes Benedikt for their trust and look forward to the exciting journey together.’

About Lithoz

Lithoz is the world and technology leader for high-performance ceramic materials and 3D printers. Founded in 2011, *Lithoz* is committed to breaking the boundaries of ceramic production and supporting customers in expanding the manufacturing opportunities for the ceramic industry. The company has an export share of almost 100%, almost 150 employees and 4 different sites worldwide. Since 2016, *Lithoz* has also been ISO 9001-2015 certified.

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About AMAREA Technology

AMAREA Technology is a system manufacturer of high-performance printing material and multi-material 3D printers that can process multiple high-performance materials in one step to produce highly functional components. The company is a spin-off of Fraunhofer IKTS, the largest applied research institute for ceramics in Europe. AMAREA Technology’s Multi Material Jetting technology enables the production of components that are more functional than ever before. The technology is designed to shorten the process from sequential to direct manufacturing, resulting in reduced production times and costs. AMAREA Technology GmbH was founded in February 2023 and is headquartered in Dresden, Germany.

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Capture: Celebrating the formal signing of the acquisition at Formnext, from left to right: Robert Johnhe, Dr. Johannes Benedikt, Steven Weingarten, Dr. Johannes Homa and Lutz Gollmer.