

Brief description of company

Name: TIWARI Scientific Instruments GmbH (www.tiwari-instruments.com)

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Company description:

TIWARI Scientific Instruments is a spin-off of the European Space Agency (ESA) and is hardware-oriented company specializing in Technology Transfer - identifying promising technologies developed for space missions for their benefit on Earth (Spin-off) and adopting emerging terrestrial technologies for the space missions of the future (Spin-in)

Core competences:

RAPTOR: RAPTOR is an Additive Manufacturing-based technology - developed by TIWARI Scientific Instruments - for the cost-effective production of ceramic and metal parts. The process uses specially fabricated filaments with ceramic/metal powder content >50% by volume, which are shaped into desired geometry using specially developed in-house FDM printers. These “green parts” are then heat treated to obtain binder-free parts consisting of only metal/ceramics. Currently, parts with relative density of over 99% have been produced both with metals and ceramics.

SHIEL3D: SHIEL3D is a thermal conductivity measurement instrument, based on a space technology, that can determine the thermal conductivity of thermal insulation materials in a matter of minutes and in an extended temperature range from -250°C (cryogenic materials) to 1000°C (fire-resistant materials).

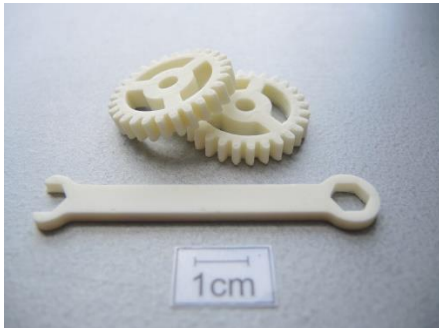


Figure: 3D-printed parts out of ceramics (left) & SHIEL3D Measurement instrument (right)

Company state of today (2020)

Having concluded our technical development activities and having launched both our service and products in the market, we are currently in search of engineering/scientific applications where our technology could be applied to improve the state-of-the-art or solve existing problems. We currently have an office in Darmstadt (Headquarter) and Berlin.

Envisaged state within two years (in 2022)

Addition of 3-5 members to our team and a fully-equipped lab in order to minimize outsourcing and be self-sufficient with regards to both design and production.

Cooperation or partnership requested or desired

- Working together with research institutes/companies in Adlershof (or in Berlin) to potentially use our technology for industrial/scientific applications.

- Potentially have students from Research universities perform their thesis/internships with us with a view to eventually hire them as employees for the company.
- Networking for tech companies related to materials/hardware.

Recruitment offers (qualification and skills)

- BSc/MSc. in Mechanical, Aerospace, Mechatronics or Materials Engineering (Currently only for internships/thesis)

Infrastructure demand (if applicable)

Sharing of lab space/small lab space (20-25 m²) suitable for use & operation of small furnaces.

Finance (VC/BA, funds) support need (if applicable):

We are open for discussions with potential partners or investors.