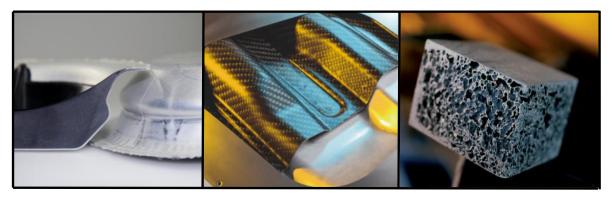


## **Tech Flash**



**Fraunhofer-Gesellschaft** is the leading organization for applied research in Europe. Its research activities are conducted by 69 institutes and research units at locations throughout Germany with an annual research budget totaling more than 2.1 billion euros. We have an International collaborations with excellent research partners and innovative companies around the world ensure direct access to regions of the greatest importance to present and future scientific progress and economic development. We have very strong technology capabilities

## Lightweight Construction:

## Lightweight material construction, structural lightweight and conditional lightweight design:

Lightweight construction offers a huge potential for resource-efficient mechatronic systems. Lightweight construction does not only imply lower weight of moved assembly groups, it is also a synonym for ideal load-oriented use of materials and design principles. The construction methods of nature are imitated such as cellular structures in metal foams or composite designs such as sandwich structures and fiber composites for bionic design of mechanical assembly groups.

- Development and calculation of lightweight structures
- Design/utilization of metal fiber composite hybrid components
- Metal foams
- Smart materials-Electrorheological and magnetorheological fluids
- Hybrid Materials-CFRP z-Slider, cross beam, injection molding, composite material

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