

**Das ifm forscht in verschiedenen Bereichen zu CMC und CFK.  
// The ifm conducts research into CMC and CFRP in various  
areas.**

The Institute for Materials Science at Hof University of Applied Sciences (ifm) is involved in the development of textile semi-finished products for the manufacture of highly specialized CMC components. In particular, circular needling technology offers the possibilities for developing multilayer, radially reinforced tubular structures from any combination of starting materials. Based on the relevant knowhow, which has been acquired during successfully completed research projects related to flat needling technology, the ifm occupies a special position regarding the development of z-reinforced, textile semi-finished products. The ifm offers potential project partners the chance to distinguish themselves clearly from the state of the art by CMC tube structures with significantly improved mechanical and thermal properties.

In addition to load-oriented special solutions, the ifm can produce almost any kind of textile sheet structures, from inorganic fibers to further develop them in a customer-oriented manner, due to its modern and diverse equipment with machines. The Institute realizes

technology development for the industrial production of near-net-shape textile 3D fabric preforms from oxide ceramic fibers to high-temperature OCMC components. Furthermore, it offers a huge range of surface functionalization and coating possibilities and research activities. The Institute sees itself as a highly committed companion for end users from the aerospace and automotive industries. From the precise selection of fibers to textile production and continuous validation of the development progress, through a broad and well-founded range of tests, to support with questions about various infiltration techniques, the Hof University of Applied Sciences stands by its partners with highly specialized personnel in the sense of joint value creation.