

## **Ceramic composites with designed reinforcement architectures for hot structures**

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The use of textile methods to optimize fiber architecture in ceramic composites has provided new opportunities for the design of aerospace structures and propulsion systems that require lightweight, strong, high temperature materials. The selection of materials for such structures will be discussed, along with material developments for application in turbine engine combustors, rocket engines and combined cycle engines. Material limitations and degradation mechanisms will be discussed, along with some challenges in simulating aggressive combustion environments in laboratory scale experiments.