

Composites based on UHTCs

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Considerable progress has been made in developing ultra high temperature ceramics (UHTCs) for aerospace applications. A serious issue hindering the eventual use of these materials is their fracture toughness. The formation of composites from these materials is being developed by various researchers. We have been using preceramic polymers to explore techniques to make composites form both 2 d and 3 dimensional woven fibers. The focus of this effort is on the development of microstructure rather than on the development of a robust composite.

This talk will discuss the issues with the materials and composite, and approaches to controlling microstructure and the development of matrices in UHTC composites.