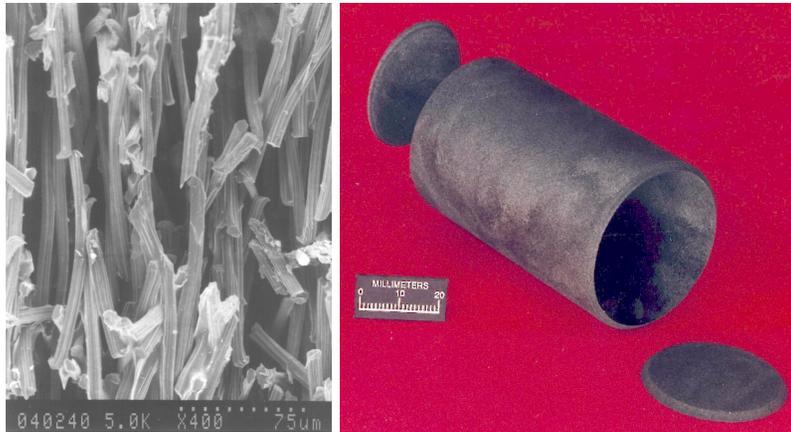


Carbon-BONDED CARBON-Fiber Composites

The CIMTech Group has developed a lightweight, high temperature, carbon composite insulation material. Originally developed for aerospace power systems insulation applications, the material is vacuum moldable from a water slurry to near-net shapes and is readily machinable by standard shop methods. The unique properties of the carbon permit the material to provide extremely good insulation properties at temperatures as high as 3000°C in non-oxidizing atmospheres. The material has also found application as a broad-spectrum optical absorber in optical instruments. The accompanying photographs depict the material in a 400X electron micrograph showing the open carbon-bonded structure of short carbon fibers and as a fabricated insulating sleeve and disc set.



Current CBCF Material

Density =	0.21 g/cm ³
Comp. Strength =	>0.67 MPa
Thermal Conductivity =	0.06 - 0.08 W/m·K
CTE @ 0°C =	~0
@ 1000°C =	3x10 ⁻³ ppm

Potential Applications:

High temperature insulation, high SA electrodes, impact energy absorption



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Carbon and Insulation
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