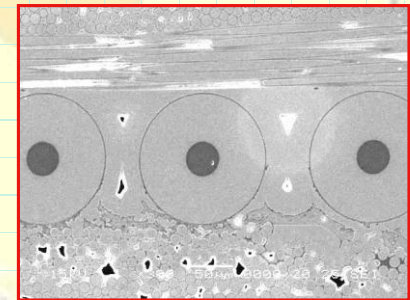
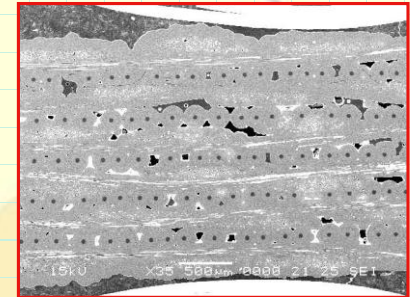
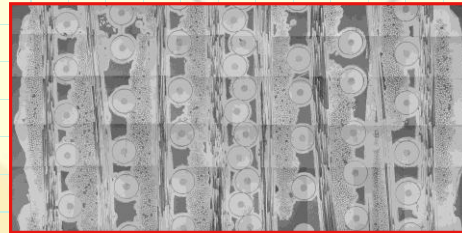


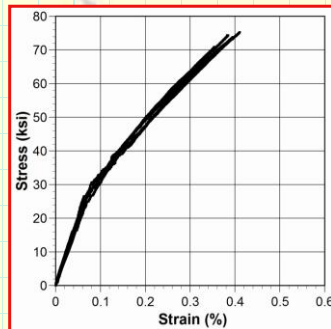
# Microstructures

## SCS-Ultra+Sylramic iBN/CVI SiC Composites

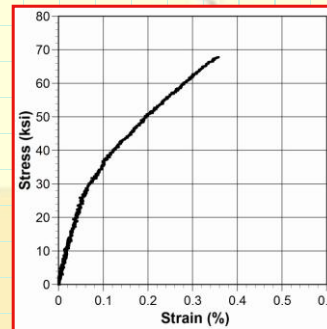


## As-Fabricated Tensile Properties

0° SCS-Ultra+ 0°/ 90° Sylramic iBN/CVI SiC



Lower areal wt standard SCS-Ultra:  
vf0 =Sylramic iBN=12% + SCS-Ultra=15%  
vf90=Sylramic iBN=12%



Higher areal wt "single-pass" SCS-Ultra:  
vf0 =Sylramic iBN=11% + SCS-Ultra=16%  
vf90=Sylramic iBN=11%

**Initial Hyper-Therm\* Fabrication & Testing Results of Hybrid Fiber CMC Specimens Show ~ 27 ksi Proportional Limit**

\*

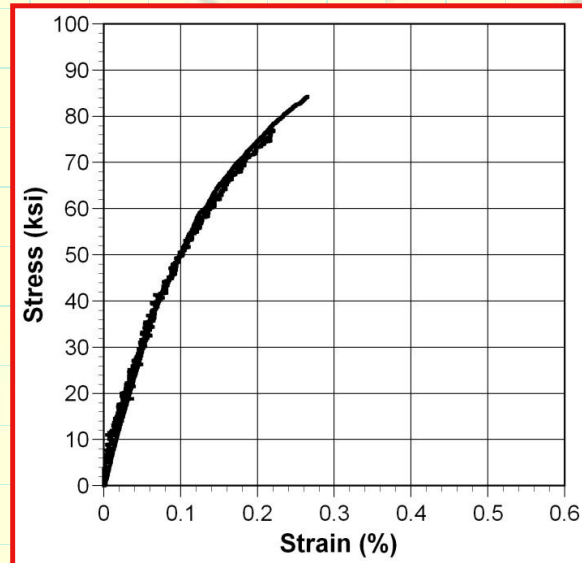
**SiC/SiC Composites  
with SCS-Ultra for 2700°F+ Service**

**R.J. Shinavski\***  
Hyper-Therm HTC  
Huntington Beach, CA  
714-375-4085

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# As-Fabricated Tensile Properties

## 0/+/-10° SCS-Ultra/CVI SiC



Ultimate Strength	80.6+/-5.2 ksi
Failure Strain	0.239+/-0.038%
Elastic Modulus	57.8+/-1.3 Msi
P.L. Strength	41.8+/-1.4 ksi

**Near-unidirectional SCS-Ultra/CVI SiC Has Shown  
40+ ksi Proportional Limit Capability**

\*

**SiC/SiC Composites  
with SCS-Ultra for 2700°F+ Service**

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