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Microstructure, tribological response, and mechanical properties of fiber bonded silicon carbide ceramics

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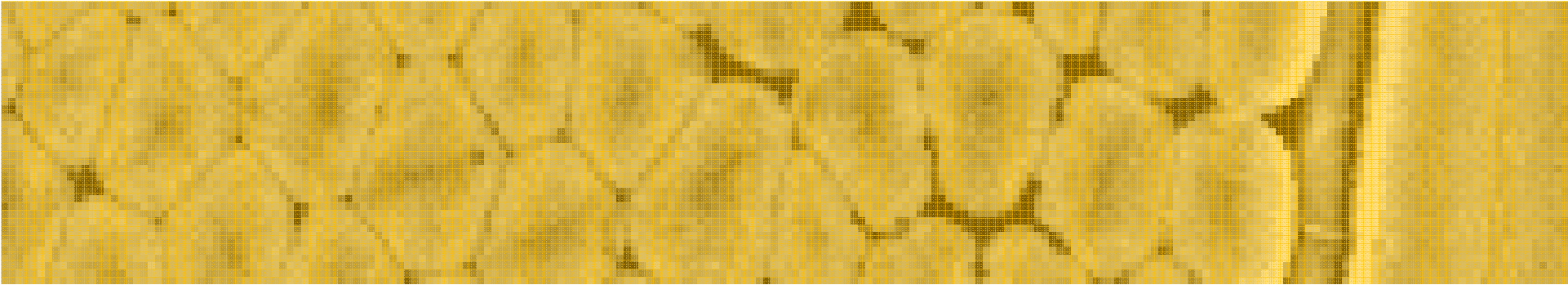
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MICROSTRUCTURE, TRIBOLOGICAL RESPONSE, AND MECHANICAL PROPERTIES OF FIBER BONDED SILICON CARBIDE CERAMICS

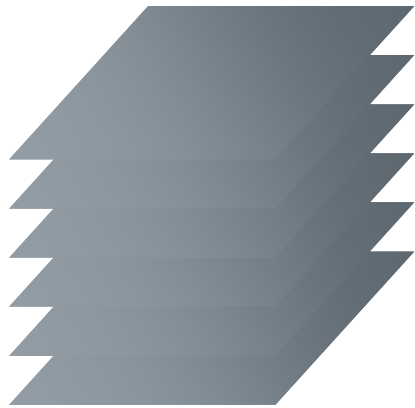
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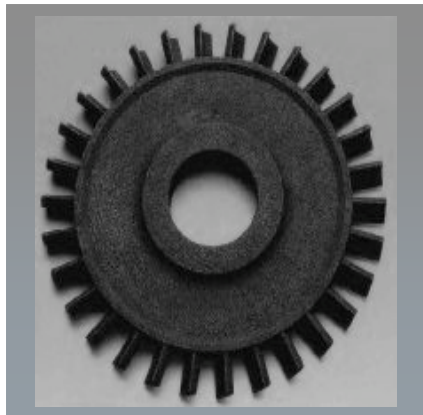
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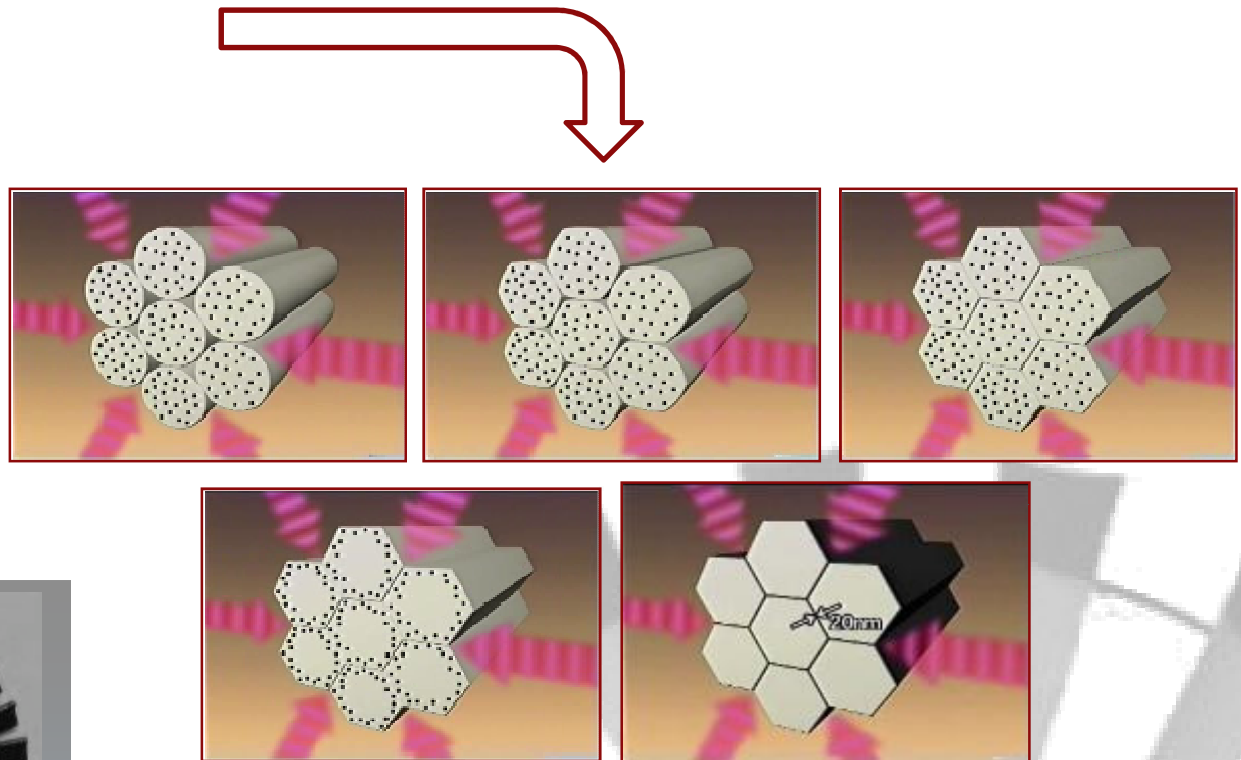
Fiber bonded Silicon carbide Ceramics



Sheets of Si-Al-C-O
amorphous fibers



SA-TyrannoHex™
(Ube Industries, Ltd.)

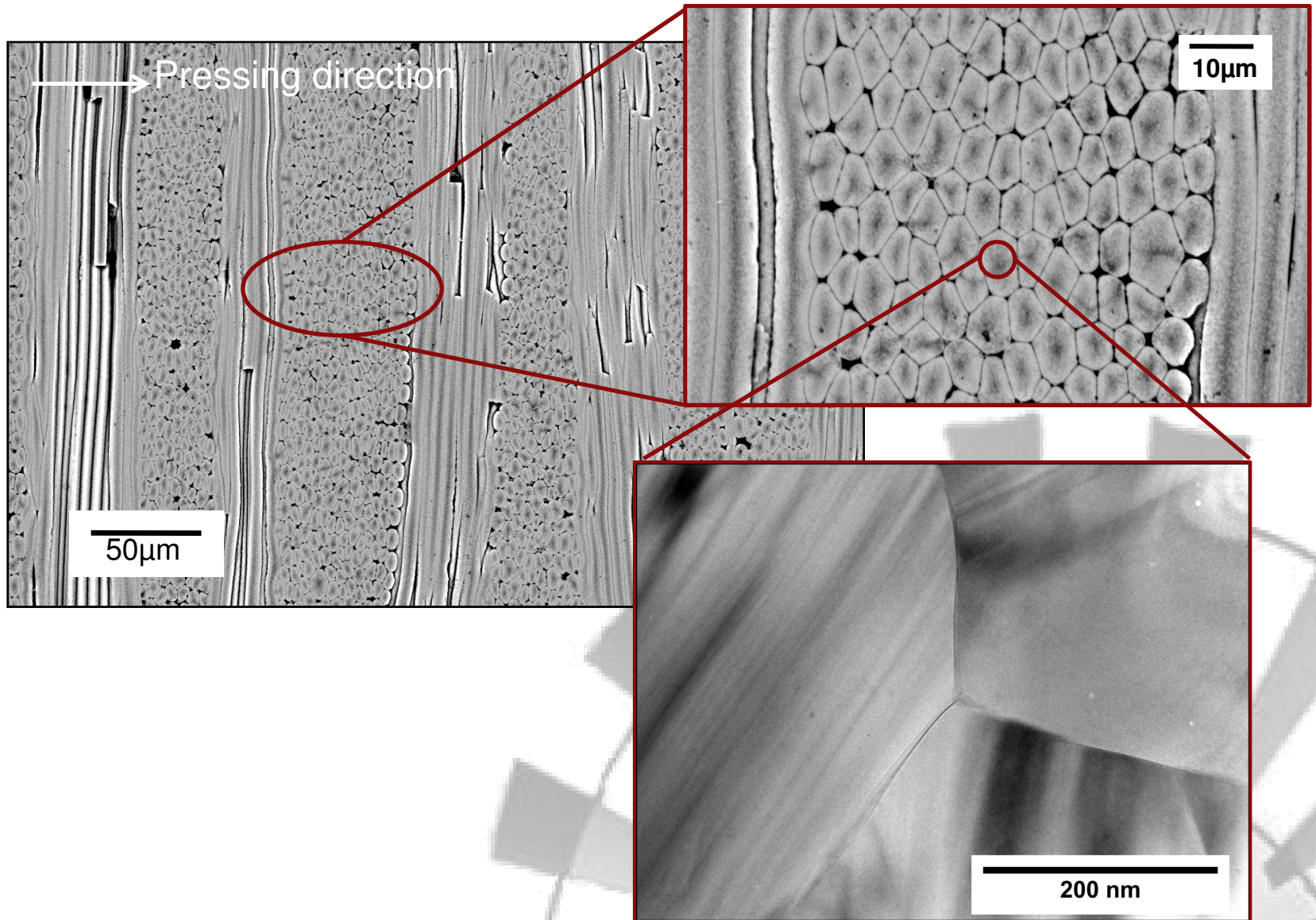


Hot-pressing

Fiber bonded SiC ceramics

14 May 2012_1

Microstructure



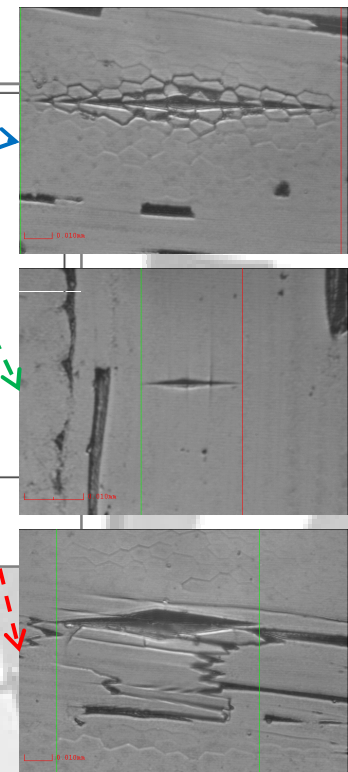
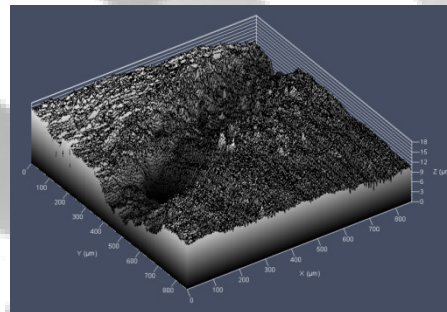
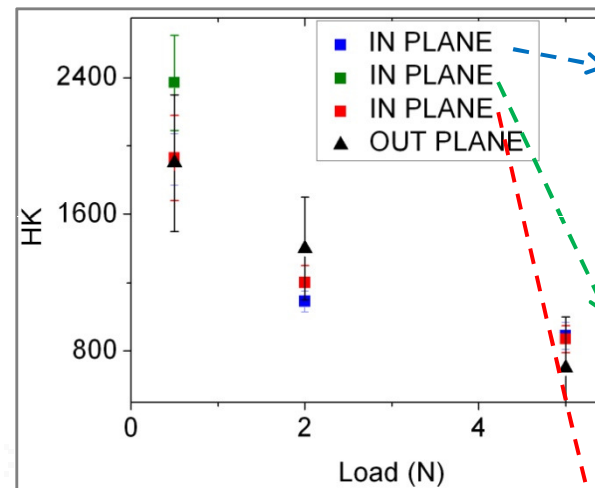
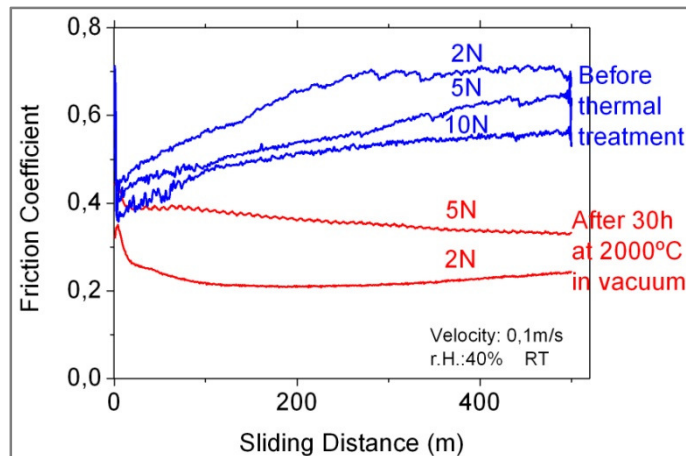
Main Results

Microstructural Stability:

- Thermal treatments in vacuum at temperatures ranging 1400-2000°C during 5-30 h

Mechanical Properties:

- Hardness
- Tribological response



Thanks

