

## Heatwaves

The latest in thermal processing from Harper International



# New White Paper: Kinetic Model of Stabalized PAN Fiber Mass Loss during Carbonization

Harper's latest paper, which was presented at SAMPE 2017, details a continuous model for the carbonization process, including mass loss rate as a lumped kinetic using two-zone model for the fiber and pseudo-pure offgas. The kinetic coefficients used in the model have been estimated by reviewing existing literature data and extending it to real operating conditions.

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#### Hot off the Press: Harper and Ferrite form Relationship for Microwave Solutions

Harper and Ferrite Microwave Technologies, the premier global provider of 915 MHz industrial microwave systems, are excited to announce their forming of a strategic relationship. Harper will utilize FMT's high power microwave heating technology to complement its product portfolio of traditional gas and electric fired furnaces, enabling its customers with access to a broader range of options and the expertise of two recognized industry leaders.







#### Microwave Technology for Processing of Metals

Dr. Prasad Apte presented at Powdermet 2017 about the benefits and design considerations of Microwave processing technology and equipment for processing metals on a commercial scale.

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# Editorial Feature: Pusher Furnace Technology

Harper's article in Ceramic Forum International Magazine on "Versatility of Pusher Furnace Technology - an Ideal Solution for the Continuous Processing of Batch Materials" is now available. Describing specific design considerations for processes requiring exacting control of temperature and atmosphere, this article provides examples to convey the flexibility of Pusher furnace technology in providing the appropriate technological solution.

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#### **Upcoming Harper Happenings:**



September 11-14, 2017 Orlando, Florida Booth A35

Presenter - "Carbon Fiber Oxidation System Configuration, Technical Analysis for Key Decisions"



October 8-12, 2017 Pittsburgh, Pennsylvania

Booth 214

Presenter - "Microwave Technology for Commercial Scale Processing of Ceramic Materials"



October 10-12, 2017 Munich, Germany

Presenter - "Distinguising Features of a Carbonization Line Designed for Heavy Tows"

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