

ECCM15

COMPOSITES AT VENICE



Thematic Session: New Nanoscale and Nanostructured Reinforcement: Manufacturing and Mechanical Properties

Nanoscale and nanostructured fibers, such as CNT-reinforced filaments, are poised to produce the next revolution in composites science and technology. Significant advances have been made in the last decade on fabricating such fibers and fibers with superior mechanical properties have been demonstrated recently in several laboratories. However, formidable challenges still need to be addressed in order to reliably produce ultrastrong, stiff, and tough fibers useable in structural composites. This session will review the state-of-the-art on manufacturing and mechanical properties of advanced (high-performance) nanoreinforced and/or nanostructured fibers with special emphasis on continuous filaments. Mechanisms governing the observed mechanical performance will be discussed and the issues to be resolved to further improve their properties will be formulated. The organizers hope the session will attract an authoritative group of leading researchers in this rapidly developing area.

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