Kuang-Ting Hsiao, PhD.

Professor of Mechanical Engineering
National Academy of Inventors, Senior Member

25 H-Index | 20 Invented Patents | 3038 Citations

Research Interests

Carbon Nanofiber Composites
Carbon Fiber Reinforced Polymer
3D-Printed Carbon Fiber
AI-Enabled Materials Manufacturing
Liquid Composite Molding
Sustainable Energy

Technological Capabilities

Nanofiber Dispersion & Alignment
Porous Medium Flow & Heat Transfer
Resin Curing Control
Rheology
Robotic Freeform 3D Printing
Process Modeling
AI-Enhanced Manufacturing
Carbon Fiber Composites
Multifunctional Materials

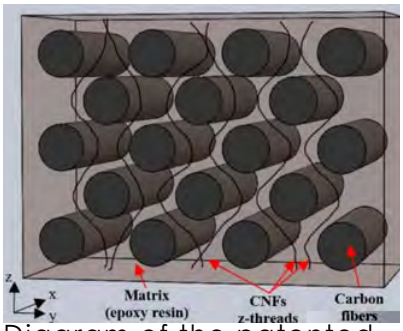
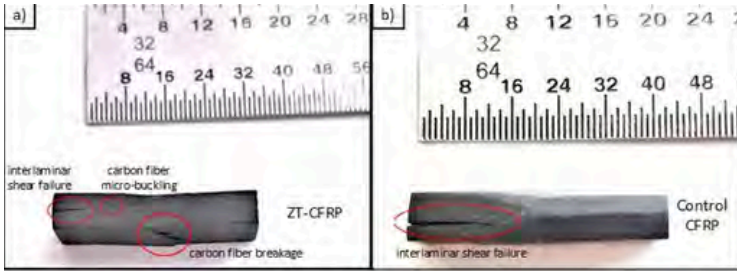


Diagram of the patented ZT-CFRP, which inserts carbon nanofibers in the z-direction of the traditional carbon fiber epoxy structure.



Improved intralaminar shear strength of patented carbon-fiber reinforced polymer due to the addition of carbon nanofibers (CNFs).

Self-extinguishing capabilities of the ZT-CFRP.

2016
"Porous Nanocomposite & Related Method"
Patented in US, EP, CN, & JP

2018
"Method for Manufacturing Nano-structurally Aligned Multi-Scale Composites"
Patented in US, EP, CN, & JP

2015
"Apparatus & Method for Directional Alignment of Nanofibers in a Porous Medium
Patented in US, EP, CN, & JP

2018
"Method & Apparatus for 3D Printing"
Patented in US, EP, CN, & JP

2022
"Novel Liquid Matrix Impregnation Method and Apparatus for Composite Prepreg Production"
Patent Pending

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