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Fixed Angle Rotary Shear: A New Method for Tailoring Composite Materials

INVENTORS • Nicholas Heeder and Arun Shukla

ABSTRACT

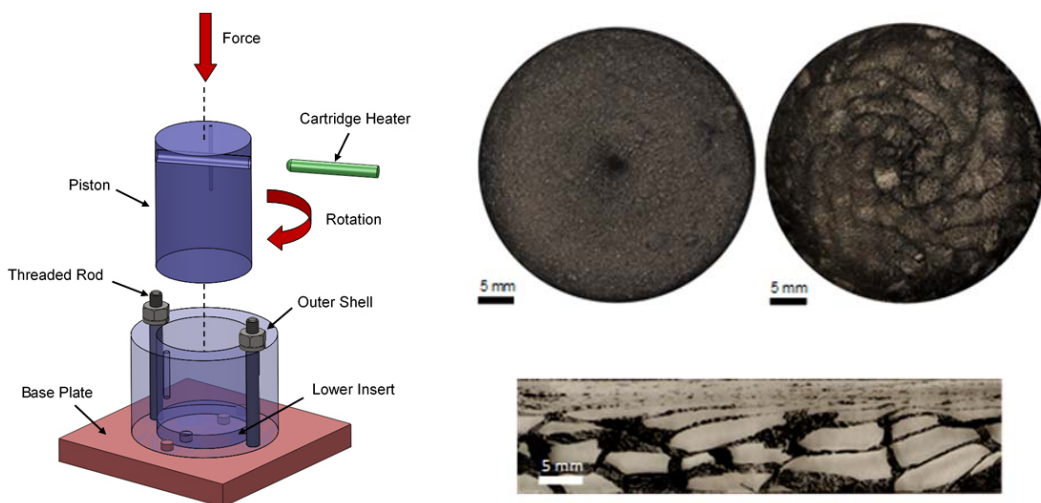
The Fixed-Angle Rotary Shear Technique is a simple, inexpensive method that can be used to distribute conductive filler materials into specially constructed architectures throughout polymers on either the micro/macro scale without the use of organic solvents.

APPLICATION

Application areas include electronics, energy storage, thermal management, shielding, smart coatings and sensors. Can be easily incorporated into already existing industrial processes without a large outlay of new equipment or expense.

FEATURES & BENEFITS

Efficiently distributes conductive particles throughout plastic materials. Flexible platform that can be easily adapted to many different polymer and filler materials. Enhances polymer functionality (i.e. thermal conductivity, electrical conductivity). Avoids dispersion of sheet-like conducting isotropically within the polymer, and can be scaled up easily. Composite materials can be intelligently optimized for a given application.



URIRF turns discoveries into deliverable products and services, creating jobs and economic growth.

- License URI inventions to industry partners
- Form new ventures
- Commercialize inventions
- Connect industry partners to University technology, facilities and people

CONTACT TO DISCUSS LICENSING OPTIONS

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PATENT STATUS

Non-provisional

AVAILABILITY

Technology is available for licensing.