



POWDER SPREADER

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The Invention

UW researchers have developed a novel design for the spreader component of powder bed-based additive manufacturing techniques, using a core-shell concept with low friction materials. The spreader is cylindrical in shape, composed of an outer shell made of thin graphite flexible foil and an inner core of a heat resistant polymeric material (silicone rubber). The new design reduces the dragging action on the powder from the spreader. It is rigid enough to keep its shape as it spreads the powder, but flexible enough so that it deforms elastically to prevent irregularities in the printed layers. It can also endure high temperatures without burning, changing its morphology or degradation of its mechanical properties. The shell thickness can be adjusted for higher temperature applications. The high electrical conductivity ensures the absence of static accumulated electrical charges which might otherwise add instabilities to the spreading process.

Additional Information

For More Information About the Inventors

- [Lianyi Chen](#)

Tech Fields

- [Engineering : Additive manufacturing](#)

For current licensing status, please contact Michael Carey at mcarey@warf.org or 608-960-9867