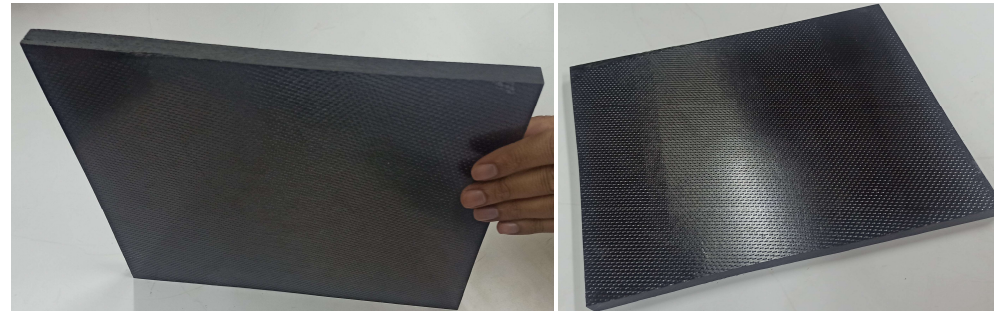




**Name of the Technology:** A know-how for the development of UD, 2-D Carbon Fiber Based Polymer Composites

**Summary:** Fiber reinforced composites are very important for light weight and high strength structural applications. CSIR-NPL has developed a process know how for the development of UD, 2D carbon fiber-polymer composites by using hand lay-up technique. This technology can be used for different kind of light weight carbon fiber based polymer composite materials in different shapes and sizes.



**Figure: 2D CFRP Based Composites**

**Applications:** Automobile sector, Aerospace, Sport Goods, Energy

**Novelty features:** Conventional structural materials are based on the metal which has high density. Herein a process know how has been developed by using 1-D, 2-D Carbon Fiber based light weight composites using hand lay-up technique. The specific mechanical properties are higher than the existing commonly used metal and alloys as structural materials.

**Advantages:** Know how based on carbon fiber based light weight high strength composite materials is very important as compared to conventional materials because of its light weight and high specific mechanical properties.



**Readiness level of the Technology:**

Idea	Concept Definition	Proof of Concept	Prototype	Lab Validation	Technology Development	Technology Demonstration	Technology Integrated	Market Launch

**Related Patents:** Patent No: Know-how; Patent Title: Not Applicable; Country(s): Not Applicable; Application Number and Date: Not Applicable; Publication Date: Not Applicable; Grant Date: Not Applicable; Year of Introduction: Not Applicable

**Broad Area/Category:** Carbon Products

**User Industries:** Aerospace, Automobile, Sports, Energy