A Novel Approach for Sensing Seismic Events: Applications of Graphene Nanoflake Powder Composites, Part Two

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The goal of this project was to refine and create sensors that are more sensitive and more repeatable than the year before. This was done by combining graphene Nanoflake powder and silicon. By changing the known variables such as the thickness of the sensor and varying the duration and voltage applied to the sensors while curing the sensors were made more sensitive. A mold was designed, 3D printed and used to enable uniformly formed batches of sensors and to accurately control the thickness. This made the sensors more repeatable and allowed to have more control over the variable. The new sensors now have a smaller footprint which allows for the sensor to be used in a wider variety of fields. By making the new sensors about 50% the mass of the original sensors means the cost of production is less than the previous sensors. The new sensors also have sheets of aluminum foil on both sides of the sensor with copper tape attached to the aluminum. This allows for the sensor to be used in more fields because the testing or operating system doesn't have to be conductive because that is now built into the sensor.

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