New nanocomposites for aerospace and automotive industries

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The Center for Research in Advanced Materials (CIMAV) has developed reinforced graphite nanoplatelets seeking to improve the performance of solar cell materials.

The work, done by Liliana Licea Jiménez, uses this material because it has a large power capacity. These polymer-based nanocomposites are reinforced with graphite nanoplatelets for use in industry.

Nanocomposites are formed by two or more phases, in this case by reinforced graphite nanoplatelets.

"The sectors focused on the use of these nanomaterials are diverse; nanoplatelets impart new properties to materials; this allows us to move into the automotive, construction, aerospace, textile and electronics sectors which are demanding and where the use of nanomaterials is an opportunity," explains Licea Jiménez.

According to the specialist at CIMAV, the research is already applied in some concept testing for mechanical and thermal modification in the construction industry. Additionally, nanocomposite materials are already used in fenders and panels in the automotive and textile industry.

The development of nanocomposites in this research center is an opportunity for different industry sectors; graphite nanoplatelets give added value to the product, as they improve its mechanical, thermal and electrical properties. And they have an impact on the industry because the business demands are increasing and the use of nanocomposites is an opportunity to improve the product.

"Even some of the companies we have worked with mentioned in several forums that they have had a good response in the use of these nanomaterials." She also affirms that the nanocomposites Laboratory in Monterey has achieved success, but recognizes that they need to engage

with sectors such as aeronautics, among other areas.

Jimenez Licea indicates that in addition to companies in the northern state of Nuevo Leon, there are companies in other states that have shown interest in polymer nanocomposites; "It is an advantage to work with research projects demanded by the industry, because they have a specific function for each company."

This is because each nanocomposite is a material that has two or more constituents, in this case the polymer and a nano-sized reinforcing material: the graphite nanoplatelets.

Provided by Investigación y Desarrollo

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