

Efficiency in the recycling system, basis for sustainability

In addition to creating new materials, you should think about the process for existing ones

Making materials that are friendly to the environment is one of the world's trends, since it has been discovered the need to stop using oil and sources that are not renewable; before this, research plays an important role in finding various ways on how to make materials that are accessible to all.

This was expressed by Professor Emeritus of the University of Minnesota, Dr. Chris Macosko, at the Neal R. Amundson Chair, held at the University Center of Exact Sciences and Engineering (CUCEI), University of Guadalajara (UdeG).

"It is important that universities link up with governments so that they begin to improve the standards that are used to reinforce the issue of recycling plastics. We are not yet reaching for the new materials. We want to make plastics recycling more timely and efficient, and universities have to convince the government that it is necessary. Before going to sustainable polymers we have to privilege the recycling of the plastics that are already in use," he said.

Recognized for his contributions to the rheology and adhesion of block copolymers, sustainable polymers and the creation of nanoparticles for drug administration, Macosko said it is important to understand that recycling remains the cornerstone, which needs to be well organized; besides that there must be incentives for those who participate in the collection and separation of plastic, especially in the non-developed countries.

He stressed that there is more awareness among the population about the use of these materials. "Another thing that can be done is that an extra tax is charged if a product is bought packed in a plastic that is not recycled, and that helps the community demand containers that come from recycled plastics. The tax is not so serious, because it is considered a deposit, if you return to the store the bottle, they will return part of that tax," he said.

He praised the work carried out in the UdeG, where the researchers of the polymer processing group are working with agave fibers to combine them with polymeric material, recycled and obtain new products.

"In addition to recycling is the matter of making materials from natural sources. I am pleased to see how Chemical Engineering researchers are working hard to obtain new sustainable materials," he added.

Regarding the State Environmental Standard Project (NAE), which establishes criteria and specifications regarding sustainable production, recycling, reuse and reduction of single-use plastic bags and straws, the researcher of the Department of Chemical Engineering, professor Pedro Ortega Gudiño said that they have had contact with the government to review it, since they need technical data and strategies of the materials that will replace these materials, whose production has been cheapened by the great demand.

"When consumption is reduced there will be new customs or new materials to replace them, which have characteristics that had not been considered before. The most important challenge will always be that we bear in mind the consequences of day-to-day actions. Many people do not analyze that the products they use have a minimum useful life and environmental consequences of hundreds of years, and it has to do with environmental education," he said.

He argued that in the State there is little progress in the sense of developing alternatives, and "bio" materials have been presented that sometimes are not, because they are mixtures of some recycled material; so they seek to establish work strategies aimed at proposing new materials to replace conventional ones.

"It is necessary to be grateful that the government of the State considers us so that technical decisions of this type of strategies are taken. There are preliminary results, the norm is already being reviewed by two members of the academic body, and very soon they will issue a resolution on this," he concluded.

A tenta me nte
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Text: Laura Sepúlveda
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