Innovative Alternative Method for the Synthesis of Graphene

Delgado Webb, Roberto

Montero Montoya, Brandon

Historically, production of graphene has been done through the Chemical Vapor Deposition (CVD) process, which depends on expensive and large-sized machinery, and on different types of carbon-rich gases, producing reduced-area graphene sheets. The research conducted for this study allowed the synthesis of graphene through an alternative and novel method. The method consists of a laser system that allows fixing graphene sheets temporarily on a metal substrate. It is later removed from such surface by applying an electric arc that is generated by the newly designed machine. Later, the results obtained, through the characterization of AFM, SEM, FTIR, and Raman show that the product obtained corresponds to the one expected.

Awards Won:

Fourth Award of $500