In this paper, we present two types of reduction of graphite oxide, previously synthesized using the modified method Hummers. First multi-layer graphene oxide (MGO) was worked on a substrate of SiO2 / Si, then a heat treatment is made. Then a heat treatment was made, while the second reduced graphite oxide in a furnace, then obtain multilayers reduced graphene oxide (MRGO); both they were reduced to 150 °C. We use Raman spectroscopy to study the optoelectronic properties in these systems, such as defect density, distance between defects, gap and size of the nanocrystals. Thus, we studied the influence of oxidation and thermal reduction on these parameters in multilayers graphenes. Then using the green laser Raman spectrometer (532 nm) to study the influence of the Raman power on the optoelectronic properties systematically in these systems. These studies allow to evaluate both cases as a comparative system and optimize, come to stability in MRGO. In addition to these studies, samples were characterized by: Optical Microscopy, Scanning Electron Microscopy (SEM), FTIR spectroscopy and X-ray diffraction. We demonstrated that the thermal treatment of these samples can be used to control the quality of the oxides of graphite and its final application that is related with this parameters, which is the biggest advantage because of the possibility of make it in large scale. It is worth mentioning that started from the commercial graphite matrix. Graphite matrices are of the “Empresa Nacional do Grafite” (Minas Gerais Brazil), called commercial graphite.


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