40. An exfoliated/metal graphite, graphene/metal, exfoliated graphite/graphene oxide or metal/metal oxide composite obtained by the process described in one of claims 33 to 39.

41. A composite according to claim 40, wherein the metal is selected from gold, silver, platinum, palladium, rhodium, aluminum, tin, cobalt, iron, manganese, nickel, molybdenum, titanium, copper, cerium, ruthenium, zinc, chromium, vanadium, bismuth, silicon, indium, germanium, arsenic and mixtures thereof.

42. A composite material according to claim 40 selected from: a graphene/NiO composite a graphene/FesCU composite, a graphene/Au composite, one graphene/Ag composite, a graphene/Pt composite, a graphene/ Co_3O_4 composite, and graphene/ TiO_2 composite.

43. A polymeric composite material obtained by the method defined in claim 1 which is cellulose/exfoliated graphite.

44. Use of exfoliated graphite defined in claim 21, or graphene obtained, defined in claim 22, or polymer composite material defined in claim 30 or 43, or the composite material defined in claim 41 or 42, for manufacturing of electronic devices, energy storage devices, power converters, manufacturing of magnetic materials or manufacturing mechanically strong materials.

45. Mixture according to claim 23, wherein the graphite is exfoliated graphite.

46. Mixture according to claim 23 which is an homogenized mixture containing:

- exfoliated graphite in form of sheets of various thicknesses and sizes, wherein at least part of them are graphene
- and a deep eutectic solvent.