5. The method of claim 1 wherein the first mixture is an aqueous suspension.

6. The method of claim 1 wherein the surfactant is sodium dodecyl sulfate.

7. The method of claim 1 further comprising the step of heating the second mixture from 50 to 500° C. to condense the metal oxide such that the metal oxide is bonded directly to the surface of the graphene layer and remove the surfactant.

8. A method comprising:

providing graphene layers in a first mixture, the graphene layers having a first surface and a second surface, and consisting essentially of 1 to 147 functionalized graphene sheets;

dispersing the graphene layers with an anionic surfactant;

adding a metal oxide precursor to said dispersed graphene layers to form a second mixture; and

condensing the metal oxide from the second mixture on surfaces of the dispersed graphene layers and removing the surfactant to form a nanocomposite material comprising a metal oxide bonded directly to the first and second surfaces of the graphene layers with the metal oxide substantially uniformly distributed throughout the nanocomposite material.

9. The method of claim 1 wherein the graphene layers have thicknesses of 2 to 10 nm.

10. The method of claim 9 wherein the graphene layers consist essentially of functionalized graphene sheets.

11. The method of claim 1 wherein the surfactant is sodium dodecyl sulfate.

* * * * *