10. The nanocomposite material of claim **1** wherein said graphene layer has a thickness from 0.5 to 50 nm.

11. The nanocomposite material of claim **1** wherein the graphene layer has a thickness from 2 to 10 nm.

12. The nanocomposite material of claim **6** wherein said titania is in a mesoporous form.

13. The nanocomposite material of claim **12** wherein said mesoporous titania is in a rutile crystalline structure.

14. The nanocomposite material of claim **12** wherein said mesoporous titania is in a anatase crystalline structure.

15. An energy storage device comprising an air calcined nanocomposite material having a metal oxide bonded directly to a graphene layer, wherein the graphene layer has a carbon to oxygen ratio of 10-500:1 and wherein said nanocomposite material has a specific capacity at least twice that of the metal oxide without the graphene layer at a charge/discharge rate greater than about 10 C.

16. The nanocomposite material of claim **15** wherein the graphene layer has a carbon to oxygen ratio of between 20 to 1 and 500 to 1.

17. The nanocomposite material of claim **16** wherein the graphene layer has a surface area of between 400 and 2630 m^2/g.

18. The nanocomposite material of claim **16** wherein the graphene layer has a surface area of between 600 and 2630 m^2/g.

19. The energy storage device of claim **17**, wherein said nanocomposite material has a specific capacity at least twice that of a titania material without graphene at a charge/discharge rate greater than about 10 C.

20. The energy storage device of claim **19** wherein said graphene layer and said metal oxide are generally uniformly distributed throughout said nanoarchitecture.

21. The energy storage device as claimed in claim **20** and wherein the energy storage device is an electrochemical device having an anode, a cathode, an electrolyte, and a current collector.

22. The energy storage device as claimed in claim **21**, and wherein at least one of the anode, cathode, electrolyte, and current collector is fabricated from, at least in part, the nanocomposite material.

23. The energy storage device as claimed in claim **21**, and wherein the anode is fabricated from, at least in part, the nanocomposite material, and wherein the anode contains less than 10% graphene material by weight.

24. The energy storage device as claimed in claim **21** and wherein the anode is fabricated from, at least in part, the nanocomposite material, and wherein the anode contains less than 5% graphene material by weight.

25. The energy storage device as claimed in claim **21**, and wherein the cathode is fabricated from, at least in part, the nanocomposite material, and wherein the cathode contains less than 5% graphene material by weight.

26. The energy storage device as claimed in claim **21**, and wherein the cathode is fabricated from, at least in part, the nanocomposite material, and wherein the cathode contains less than 2.5% graphene material by weight.

27. The energy storage device as claimed in claim **21**, and wherein the electrochemical device is a lithium ion battery.

28. A lithium ion battery electrode comprising at least one graphene layer bonded directly to titania to form a nanocomposite material, and wherein the graphene layer has a carbon to oxygen ration of between 10 to 1 and 500 to 1 and a surface area of between 400 and 2630 m^2/g, and wherein said nanocomposite material is air calcined and has a specific capacity at least twice that of a titania material without graphene material at a charge/discharge rate greater than about 10 C.

29. The lithium ion battery electrode as claimed in claim **28**, and further comprising multiple nanocomposite material layers uniformly distributed throughout the electrode.

30. An air calcined nanocomposite material comprising a metal oxide chemically bonded directly to a graphene layer wherein the graphene layer is a single graphene sheet having a thickness of 2 to 10 nm, a carbon to oxygen ratio of 15 -500:1 and a surface area of 400 to 2630 m2/g as measured by BET nitrogen adsorption at 77K.

31. The nanocomposite material of claim **30** wherein said metal oxide is M_xO_y, and where M is selected from the group consisting of Ti, Sn, Ni, Mn, V, Si, Co and combinations thereof.

32. The nanocomposite material of claim **30** wherein said metal oxide is titania.

33. The nanocomposite material of claim **30** wherein said metal oxide is tin oxide.

34. The nanocomposite material of claim **30** wherein the metal oxide is mesoporous.

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