CLAIMS:

1. A composite material having thermoplastic properties and comprising organic matter and plastic matter, said composite material being characterized by:

having at least 25% organic matter that comprises organic fibers comprising cellulose, hemicelluloses and/or lignin;

having up to 40% plastic; and

a surface energy above ~~35~~ 40 dyne/cm,

wherein the composite material being in a form of a solid extrudate of substantially unsorted waste comprising at least said organic fibers comprising at least one of cellulose, hemicellulose~~s~~ and lignin.

2. The composite material of claim 1, characterized by one or more of the following:

a phase transition from a solid to a flowable state at a temperature less than ~~120ºC~~130ºC,

having no gaps between different components of the material when viewed at a magnification revealing structures above 0.1 µm,

a density above 1.2 g/cm^3,

having a potassium content above 1 mg potassium per 1 gm of composite material (mg/g),

a tensile strength of above 4 MPa, having tensile modulus of above 600MPa,

a flexural modulus above 800 MPa, having flexural strength above 7MPa,

a notched Izod impact above 12 J/m~~.~~,

having a Charpy impact of above 1.5 KJ/m^2, 1.6 KJ/m^2, 1.7 KJ/m^2, or l.8 KJ/m^2,

releasing volatile compounds comprising one or more of butanone, acetic acid, butanoic acid, furfural, and phenol,

comprising DNA, and

comprising chlorophyll.

3. The composite material of claim 1, comprising organic material in the range of 25% to 90%.

4. The composite material of claim 1, comprising inorganic matter comprising potassium.

5. The composite material of claim 1, comprising plastic material in the range of ~~0~~1-30%, organic material in the range of 25-70%, and inorganic material in the range of 0-70%.

6. A method of processing substantially unsorted waste material, comprising:

drying and particulating substantially unsorted waste that comprises at least 25% organic matter that comprises organic fibers comprising at least one of cellulose, hemicellulose~~s~~ and lignin; and up to 40% plastics to obtain dry particulate waste material; and

heating while mixing the dry particulate waste material to a temperature of at least 100ºC under shear forces to thereby obtain a composite material being in the form of a solid extrudate of substantially unsorted waste material,

wherein the composite material is characterized by:

having thermoplastic properties; and

having a surface energy above ~~35~~ 40 dyne/cm.

7. The method of claim 6, wherein the temperature is in the range of 140ºC and 230ºC.

8. A method for manufacturing an article comprising:

molding the composite material obtained according to the method of claim 6 to form the article.

9. The method of claim 8, wherein the temperature is in the range of 140ºC and 230ºC.

10. The method of claim 8, wherein the heating under shear forces is carried out in a reactor extruder.

11. An article comprising two or more materials adhered to or blended with one another, wherein at least one of said materials is the composite material of any one of claims 1 to 6.

12. The article of claim 11, wherein at least one of said two or more materials is a plastic material.

13. The article of claim 12, wherein the plastic material is polyethylene, polyvinylchloride, polypropylene, unsorted plastic waste or a mixture thereof.

14. Use of substantially unsorted waste for the production of articles as defined in any one of claims 11 to 13.