We claim:

1. A thermochemical conversion process of a combination of non biodegradeable plastic waste, mixed with organic wastes for obtaining bio-plastic char (BPC), comprising

- mixing the plastic wastes, and organic wastes in predetermined ratio;
- adding the mixture in a fixed bed reactor and firing for about 5 minute; followed by carrying out the process in the limited oxygen already present in the reactor as air;
- continuing the process for 2 to 16 hours;
- filtering the liquids formed during the reaction through a mesh fitted within the reactor;
- collecting the liquids, condensate and char, the solid mass.

2. The process as claimed in claim 1, wherein the ratio at which plastic wastes and organic wastes are mixed can range as 3:1, 3:2, 4:1, 4.5:1. 5:1, 5:2, 5.5:1, 6:1, 7:1, 7:2 and 8:1.

3. The process as claimed in claim 1, wherein the plastic wastes is selected from the group comprising polythene, HDPE, LDPE, etc.

4. The process as claimed in claim 1, wherein the organic wastes is selected from dried algal mass, dried parthenium mass, dried camelina mass, pine needles or farm weeds, or any other plant biomass, agro-waste, forest waste, etc.

5. The process as claimed in claim 1, wherein the plastic wastes, and organic wastes were dried under the sun for 2-3 days prior to their utilization for thermochemical conversion.

6. The bio-plastic char (BPC), obtained by the process as claimed in claims 1 to 5 wherein the char is characterized by the following characteristics:

- Tap density of 0.667-0.699 kg/m^3;
- Fluorescence on excitation with 532 nm laser;
- Compressive Strength of 85.6 MPa;
- Dielectric Constant of 2.68 @ 1 KHz and 2.59 @ 1 MHz;
- Dielectric Strength of 6500 volts / 0.001" (255.9 MV/m) and

- Calorific value of 47-49 MJ/Kg by Combustion Thermochemistry and
- shelf life of 390 days.