We Claim:

1. A method for improving the bubble stability of a polyethylene composition suitable for blown film extrusion process comprising the steps of:

providing a polyethylene composition having a density in the range of 0.900 g/cm^3 to 0.970 g/cm^3 measured by ASTM D 792-03, and an relaxation spectrum index (RSI) value in the range of 10 to 100;

oxygen tailoring said polyethylene composition;

thereby forming an oxygen tailored polyethylene composition, wherein the RSI value of the said oxygen tailored polyethylene composition increases from 10% to 300% of its initial value, and wherein the polyethylene composition comprises long chain branched polyethylene polymers;

thereby improving the bubble stability of said polyethylene composition.

2. The method for improving the bubble stability of a polyethylene composition suitable for blown film extrusion process of Claim 1, wherein said oxygen tailoring step comprises contacting said polyethylene composition in the molten state with oxygen.

3. The method for improving the bubble stability of a polyethylene composition suitable for blown film extrusion process of Claim 2, wherein said oxygen tailoring step further comprises thermomechanical treatment of said polyethylene composition in an extruder.

4. The method for improving the bubble stability of a polyethylene composition suitable for blown film extrusion process of Claim 3, wherein said extruder provides a specific energy input in the range of 0.10 kWh per kilogram to 0.50 kWh per kilogram of said polyethylene composition.

~~5. A polyethylene composition having improved bubble stability, wherein said polyethylene composition is produced according to the process of Claim 1.~~