Solid-State Polymerization of High Temperature Nylon

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High temperature copolyamides were prepared by melt-polymerization (MP) process of polyamide salts. But, these have very low molecular weight and it is difficult to obtain high molecular weight copolyamides using MP process. These were synthesized to high molecular copolyamide by solid-state polymerization (SSP) as a function time and temperature in a gaseous nitrogen/steam flow of atmospheric pressure. The thermal properties and molecular weight were measured by differential scanning calorimetry (DSC), thermogravimetric analysis(TGA), titrater and ubbelohde viscometer.