## Microwave synthesis of nitride phosphors Breakthrough

Ningbo Institute of Material Technology and Engineering Institute, "Structure and Function Integration ceramics" R & D team, the successful implementation of low atmospheric pressure to prepare high quality nitride phosphors, and by fluorescence characteristics of the test material.

Nitride phosphor is LED (light emitting diode) indispensable material system. According to reports, the new technology will be the microwave power into heat, to achieve the overall heating. Compared to high temperature (1700 ℃ a 20000C) and high pressure ((1 - 10 atm) conditions, microwave synthesis method can achieve the same results in the synthesis of atmospheric pressure and below 1600 ℃. Low pressure synthesis of traditional synthetic methods to make the phosphor optical performance a substantial increase in industrial energy efficiency up to 80%.

In addition, under the same reaction temperature to obtain phosphor quantum efficiency, microwave, compared with the traditional method of pressure increase of 1.6 times. The yield on the phosphor, the general pressure furnace to produce only about 100 grams a day, while the microwave method can reach tens of kilograms of magnitude. The new technology can achieve zero gradient material large area uniform heating and heating speed, short synthesis time, help to obtain a uniform particle size distribution of powder.

Changsha Langfeng Metallic Material CO., Ltd professional manufacturer of the major products as following:
1)Metal Carbide powder(such as ZrC powder,NbC powder,Cr3C2 powder,VC powder,TaC powder,TiC powder,HfC powder,...), compound carbide powder,such as (Ta,Nb)C powder, Ti(C,N)powder,(W,Ti,Ta,Nb)C powder,etc.
2)Ti(C,N) cermet rods/strips and TiC cermet rods
3)Tile/glass cutting wheels