URN etd-0407109-183713-1046
Author I-Hua Lu
Author's Email Address No Public.
Statistics This thesis had been viewed 44 times. Download 17 times.
Department
Year 2005
Semester 2
Degree Master
Type of Document Master's Thesis
Language zh-TW.Big5 Chinese
Title The Study of MCAS Glass-doped AlN Ceramics on Sintering Properties
Date of Defense 0000-00-00
Page Count 70

Keyword
AlN
Sintering
MgO-CaO-Al2O3-SiO2

Abstract
AlN because it has high thermal conductivity, high resistivity , low dielectric constant, high mechanical strength and the thermal expansion coefficient that matches that of Si characteristics. Therefore AlN in the electric circuit foundation plate, the semiconductor package material, the electric component radiator, the high thermal conduction material application is regarded as extremely has the application potential of ceramic material.
At present, enhances the thermal conductivity and reduces the sintering temperature is the main target to engaged in research of AlN sintering. In the past, there are many researchs by doping lithium and the calcium as the sintering aid in the low sintering temperature. But the sintering temperature of it all to be higher than 1750oC. In this study, uses AlN is applies SHS Method (Seif-propagating High-Temperature Synthesis Method) develops the AlN synthesis technology to prepare. With specific doping quantity MgO-CaO-Al2O3-SiO2 (MCAS) glass as the sintering aid were investigated. Under different sintering temperature, we observe the relations between the best temperature of AlN ceramics, micro-structures and dielectric properties.
Advisory Committee Chien-Min Cheng - advisor

Files etd-0407109-183713-1046-001.pdf

indicate access worldwide
Date of Submission 2006-06-21