

Pengaruh perlakuan panas dan doping Al pada struktur dan morfologi lapisan $\text{Ba}_{0.9}\text{Zr}_{0.03}\text{Ti}_{0.01}\text{Al}_{0.03}\text{O}_{3-x}$ dan $\text{Ba}_{0.9}\text{Zr}_{0.03}\text{Ti}_{0.01}\text{Al}_{0.03}\text{O}_{3-x}$ = Effects of heat treatment and doping of Al on structure and morphologies $\text{Ba}_{0.9}\text{Zr}_{0.03}\text{Ti}_{0.01}\text{Al}_{0.03}\text{O}_{3-x}$ and $\text{Ba}_{0.9}\text{Zr}_{0.03}\text{Ti}_{0.01}\text{Al}_{0.03}\text{O}_{3-x}$ films

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20421503&lokasi=lokal>

Abstrak

[Lapisan Barium Zirkonium Titanate akan disintesis menggunakan metode Chemical Solution Deposition kemudian dilanjutkan dengan proses Spin Coating. Pada tahap pertama, material lapisan Barium Zirkonium Titanate akan diberikan variasi perlakuan temperatur, yaitu 150°C, 400°C, 650°C dan 750°C. Kemudian pada tahap kedua, material lapisan Barium Zirkonium Titanate akan didoping dengan ion Aluminium sebanyak 1% dan 3% pada posisi ion Titanium.

Berdasarkan pengujian XRD, terlihat puncak intensitas Barium Zirkonium Titanate bertambah seiring bertambah besar perlakuan panas. Pada lapisan Barium Zirkonium Aluminium Titanate, puncak intensitas bergeser ketika doping ion Aluminium dilakukan. Lapisan Barium Zirkonium Titanate dan Barium Zirkonium Aluminium Titanate memiliki struktur kristal kubik perovskite.

Kata, Barium Zirkonium Titanate Film was synthesized using sol-gel method, followed by Spin coating method. Stage 1, Barium Zirkonium Titanate film was given various heat treatment 150°C, 400°C, 650°C, and 750°C. Stage 2, Barium Zirkonium Titanate film was doped by Aluminum ion with the content 1% and 3% to Titanium ion site. Peak intensity was observed in XRD pattern. The increase of intensity related with the increase of temperature. Along with the doping of Aluminum ion in BZT, the peak shifting were observed in some XRD pattern. Barium Zirkonium Titanate and Barium Zirkonium Aluminium Titanate film had crystal structure of Cubic perovskite.]