

Plasma Enhanced MOCVD 법에 의해 Pt/Ti/SiO<sub>2</sub>/Si 위에 제조된 Ba<sub>x</sub>Sr<sub>1-x</sub>TiO<sub>3</sub>  
박막의 전기적 특성에 관한 연구.

(Electrical properties of Ba<sub>x</sub>Sr<sub>1-x</sub>TiO<sub>3</sub> thin films prepared  
on Pt/Ti/SiO<sub>2</sub>/Si by Plasma Enhanced MOCVD techniques)

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Ba<sub>x</sub>Sr<sub>1-x</sub>TiO<sub>3</sub>(BST) is a leading candidate as a new dielectric material for capacitors because of large capacitance, low dielectric constant and low leakage current in the future generations of ultra-large scale integrated dynamic random access memories .

However, for MOCVD processes, the deposition temperatures of BST thin films are on the range of 800°C and the deposition rate is still low.

It is also difficult to deposit high quality thin films for MOCVD processes.

In an effort to solve these problems, Plasma Enhanced MOCVD techniques have been used for deposition of nanoscale BST thin films.

And Ba(hfa)<sub>2</sub>tet, Sr(hfa)<sub>2</sub>tet, Ti(O-iC<sub>3</sub>H<sub>7</sub>) were used as starting materials, argon was used as the process carrier gas.

Composition, X-ray pattern, morphology, and electrical properties of BST thin films prepared on Pt/Ti/SiO<sub>2</sub>/Si substrates were also investigated.