

# SAIP2014



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## **Studies of structural properties of Al and Y co-doped tin oxide**

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### **Abstract :**

Nanocrystalline Al/Y co-doped tin oxide powders were successfully synthesized using the sol-gel method. The samples were subjected to different temperatures ranging from 200 to 1000 degrees celsius. The effects of co-doping and temperature on the structural properties of Al/Y co-doped tin oxide nanoparticles were investigated. The characterization techniques used were X-ray powder diffraction (XRD) and Raman spectroscopy. The average particle sizes were found to be in the range between 2.5 – 8 nm in the temperature range studied while the strains were in the range between 2.76 – 0.53. Both the XRD and Raman spectroscopy confirm that at higher temperatures yttrium stannate is formed.

### **Award :**

No

### **Level :**

N/A

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### **Paper :**

YES

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