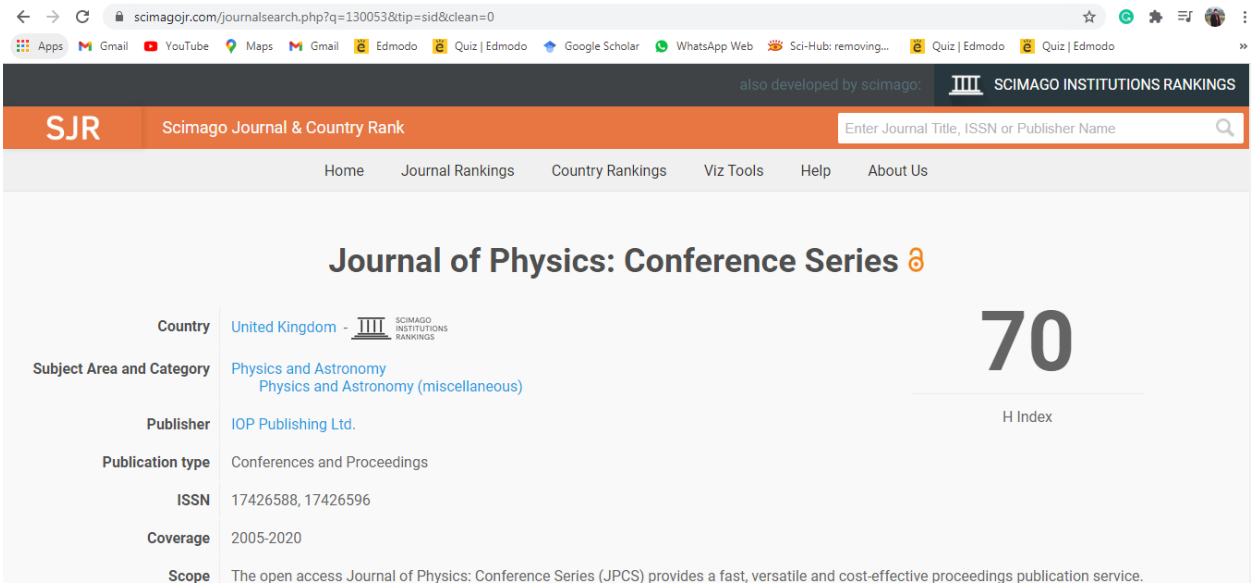
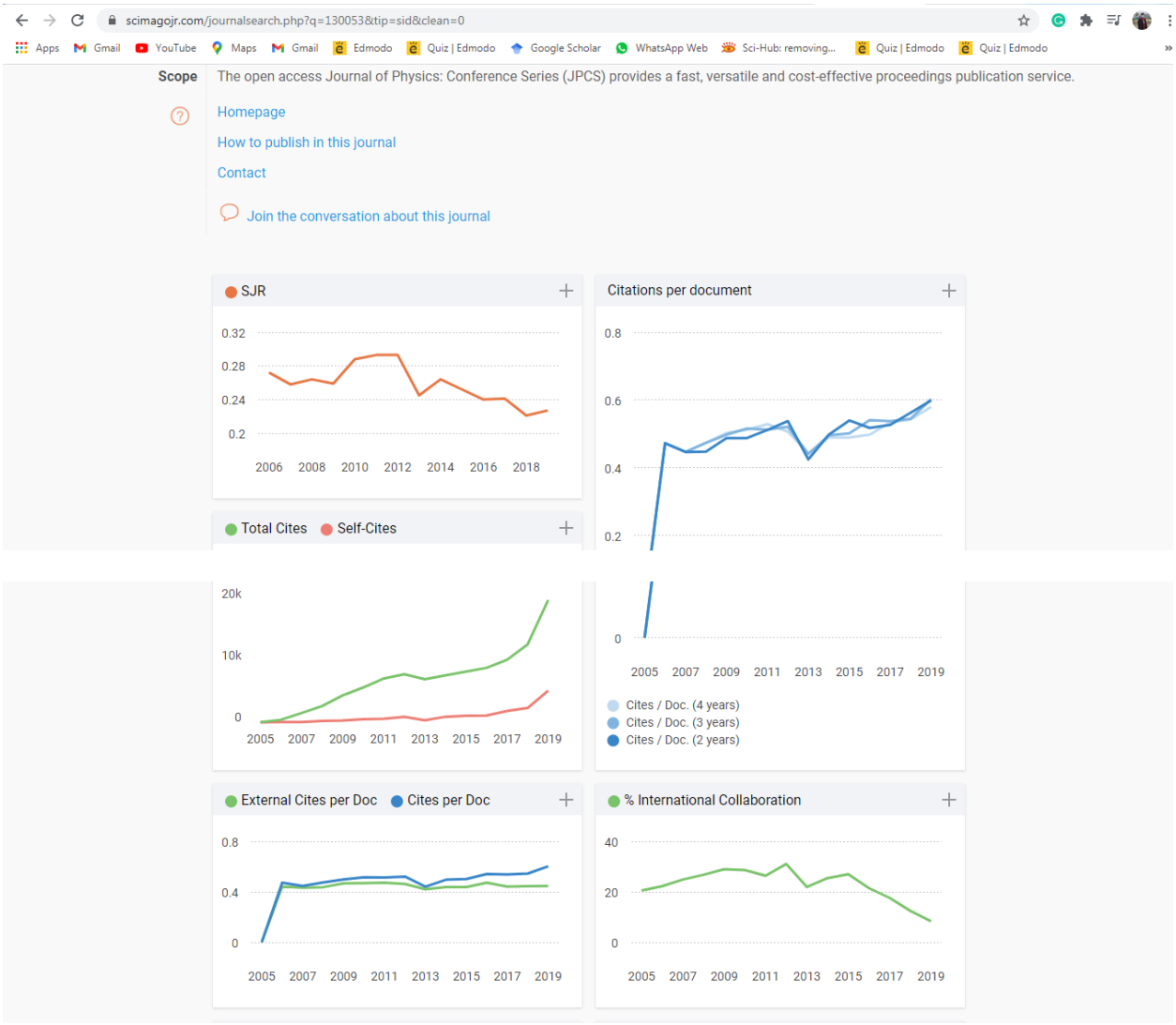
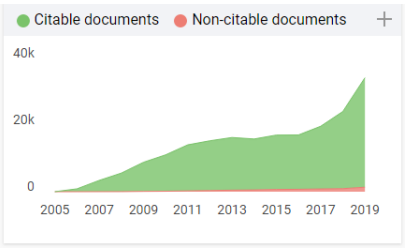
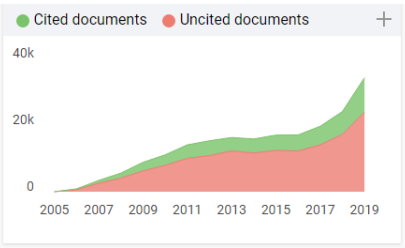
Judul Artikel	:	Characterization Thin Film Nano Particle of Aluminum Tin Oxide (AITO) as Touch Screen
Penulis	:	Aris Doyan, Susilawati, Y D Imawanti, E R Gunawan dan M Taufik
Nama Seminar/Konferensi/Simposium	:	Journal of Physics: Conference Series
Penyelenggara/Penerbit	:	IOP Publishing Ltd
Waktu/Tempat Pelaksanaan	:	7-8 May 2018/Yogyakarta, Indonesia
Halaman	:	012009-1 -012009-9
ISBN/ISSN	:	*ISSN: 1742-6596*
Web Prosiding	:	https://iopscience.iop.org/issue/1742-6596/1097/1
URL Dokumen	:	https://iopscience.iop.org/article/10.1088/1742-6596/1097/1/012009/pdf
DOI	:	http://doi.org/10.1088/1742-6596/1097/1/012009
LINK INDEX	:	https://www.scopus.com/authid/detail.uri?authorId=57205535848
Tanggal/Waktu	:	Semester Genap 2017/2018
Satuan	:	1 Makalah/tahun
Volume Kegiatan	:	1

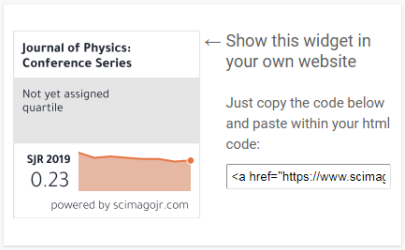
Profil Prosiding dan Publisher



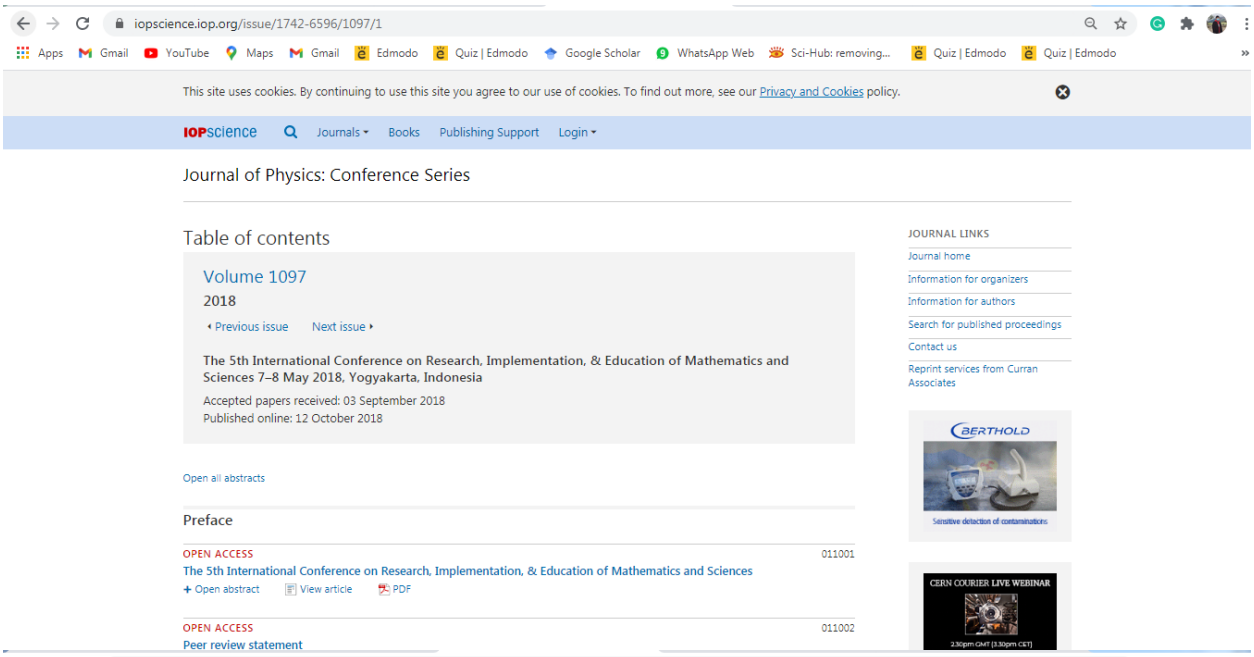


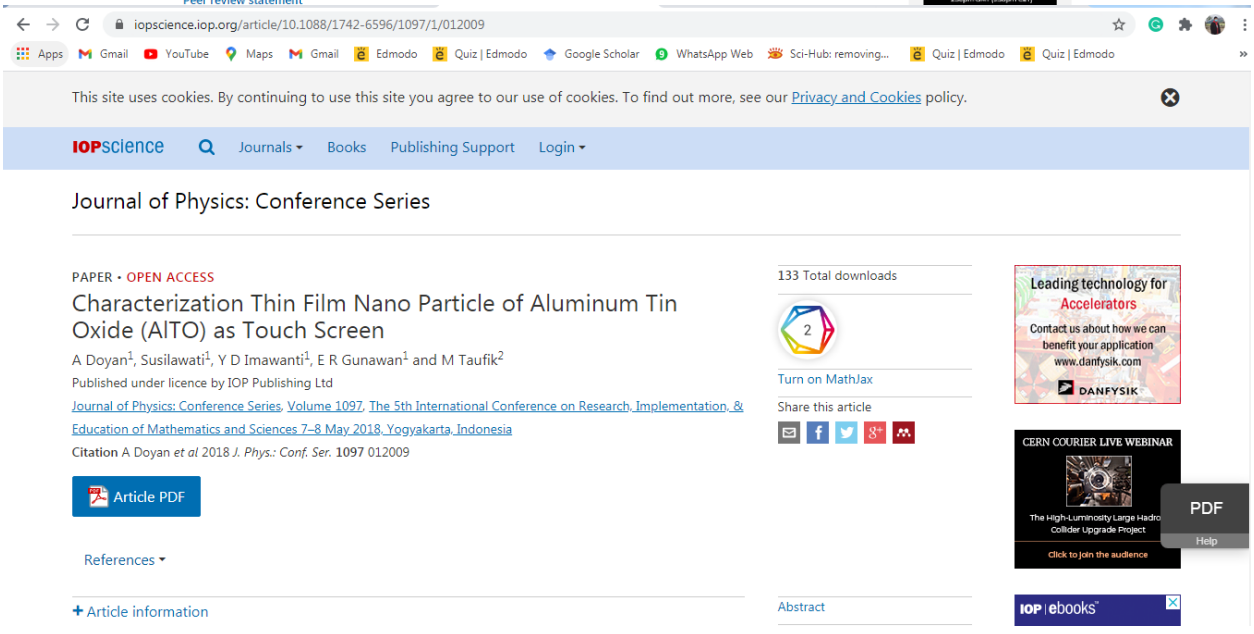

Citable documents
Non-citable documents
40k
20k
0
2005 2007 2009 2011 2013 2015 2017 2019


Cited documents
Uncited documents
40k
20k
0
2005 2007 2009 2011 2013 2015 2017 2019


Journal of Physics: Conference Series
Not yet assigned quartile
SJR 2019
0.23
powered by scimagojr.com
← Show this widget in your own website
Just copy the code below and paste within your html code:
<a href="https://www.scima

Artikel tulisan author yang terbit di Journal of Physics: Conference Series



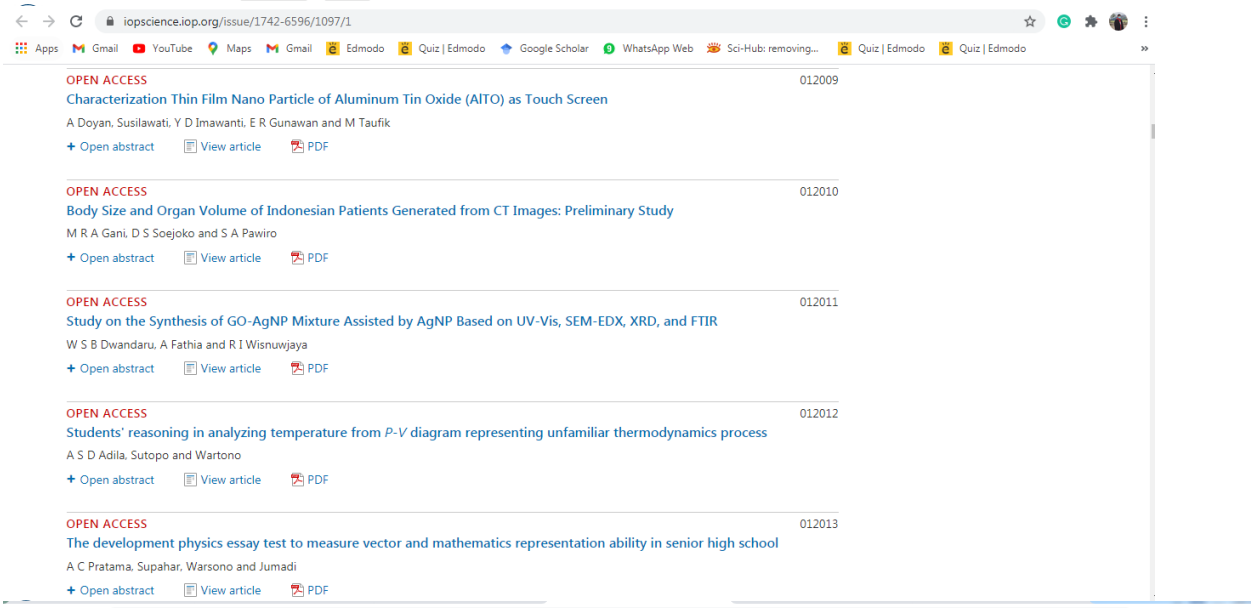


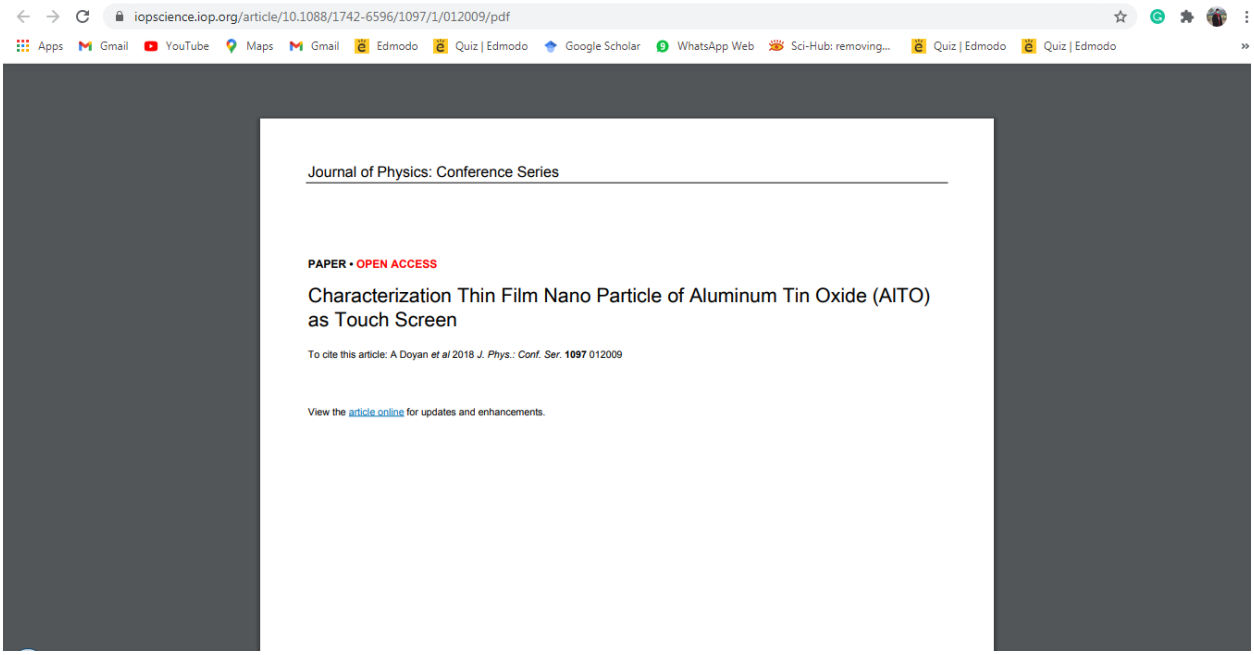
References

Abstract

The aims of this research are to synthesis Aluminum Tin Oxide (AITO) thin films have been deposited on glass substrates. The Tin (II) chloride dihydrate as precursor, ethanol as solvent, and $AlCl_3$ as dopant substance, the film was done by spin coating technique. Then to characterization the properties of the thin film as the Structural and morphological analysis was carried out by X-Ray Diffraction (XRD) measurement and Scanning Electron Microscope (SEM). The Optical characteristics were analyzed from the study of transmission and absorption spectrum data obtained by UV-Vis Spectrophotometer. The Result from XRD measurement, there were crystal system alterations. They were confirmed that SnO_2 and SnO_2 doped Aluminum have cubic structure (by material phase classification of Al_2O_4Sn) because of the substrate compositions contained Aluminum. The XRD pattern shows that grain size of thin film decreased just after the Aluminum dopant was added. EDX analysis confirms the presence of SnO_2. The Optical characteristics were analyzed from the study of transmission and absorption spectrum data obtained by UV-Vis Spectrophotometer. The Aluminum was added by various concentrations (5, 10, and 15)%. Transmissions of visible light were better on the little concentrations of Al, but absorptions were lower too. The range of band gap energy value (3.52 – 3.47) eV was decreased by increasing the Aluminum concentration. It show that semiconductor range used touch Screen.

Back to top





IOP Conf. Series: Journal of Physics: Conf. Series **1097** (2018) 012009 doi:10.1088/1742-6596/1097/1/012009

Characterization Thin Film Nano Particle of Aluminum Tin Oxide (AlTO) as Touch Screen

A Doyan[1)], Susilawati[2)], Y D Imawanti[3)], E R Gunawan[4)], M Taufik[5)]

Master of Science Education Program, University of Mataram, Lombok, West Nusa Tenggara, Indonesia[1,2,3,4)], Physics Education, FKIP, University of Mataram, Lombok, West Nusa Tenggara Indonesia[5)]

E-mail: aris_doyan@unram.ac.id, susilawatihambali@unram.ac.id

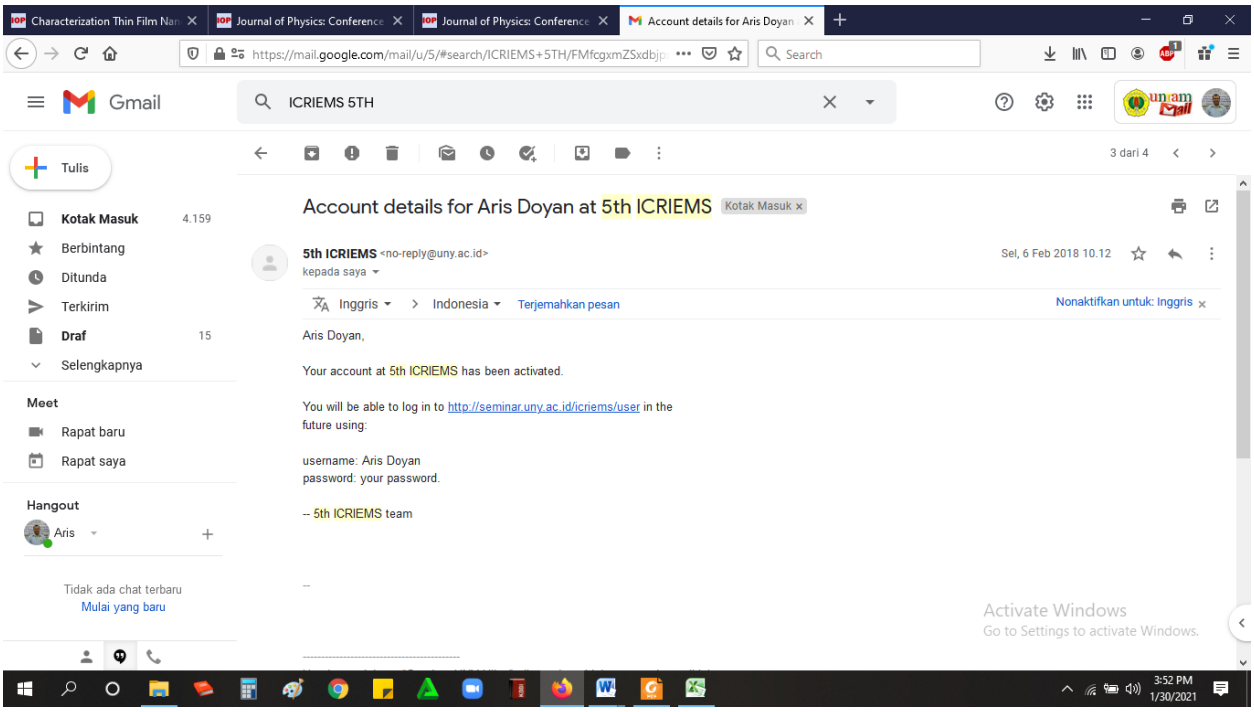
Abstract. The aims of this research are to synthesis Aluminum Tin Oxide (AlTO) thin films have been deposited on glass substrates. The Tin (II) chloride dihydrate as precursor, ethanol as solvent, and $AlCl_3$ as dopant substance, the film was done by spin coating technique. Then to characterization the properties of the thin film as the Structural and morphological analysis was carried out by X-Ray Diffraction (XRD) measurement and Scanning Electron Microscope (SEM). The Optical characteristics were analyzed from the study of transmission and absorption spectrum data obtained by UV-Vis Spectrophotometer. The Result from XRD measurement, there were crystal system alterations. They were confirmed that SnO_2 and SnO_2 doped Aluminum have cubic structure (by material phase classification of Al_2O_4Sn) because of the substrate compositions contained Aluminum. The XRD pattern shows that grain size of thin film decreased just after the Aluminum dopant was added. EDX analysis confirms the presence of SnO_2. The Optical characteristics were analyzed from the study of transmission and absorption spectrum data obtained by UV-Vis Spectrophotometer. The Aluminum was added by various concentrations (5, 10, and 15)%. Transmissions of visible light were better on the little concentrations of Al, but absorptions were lower too. The range of band gap energy value (3.52 – 3.47) eV was decreased by increasing the Aluminum concentration. It show that semiconductor range used touch Screen.

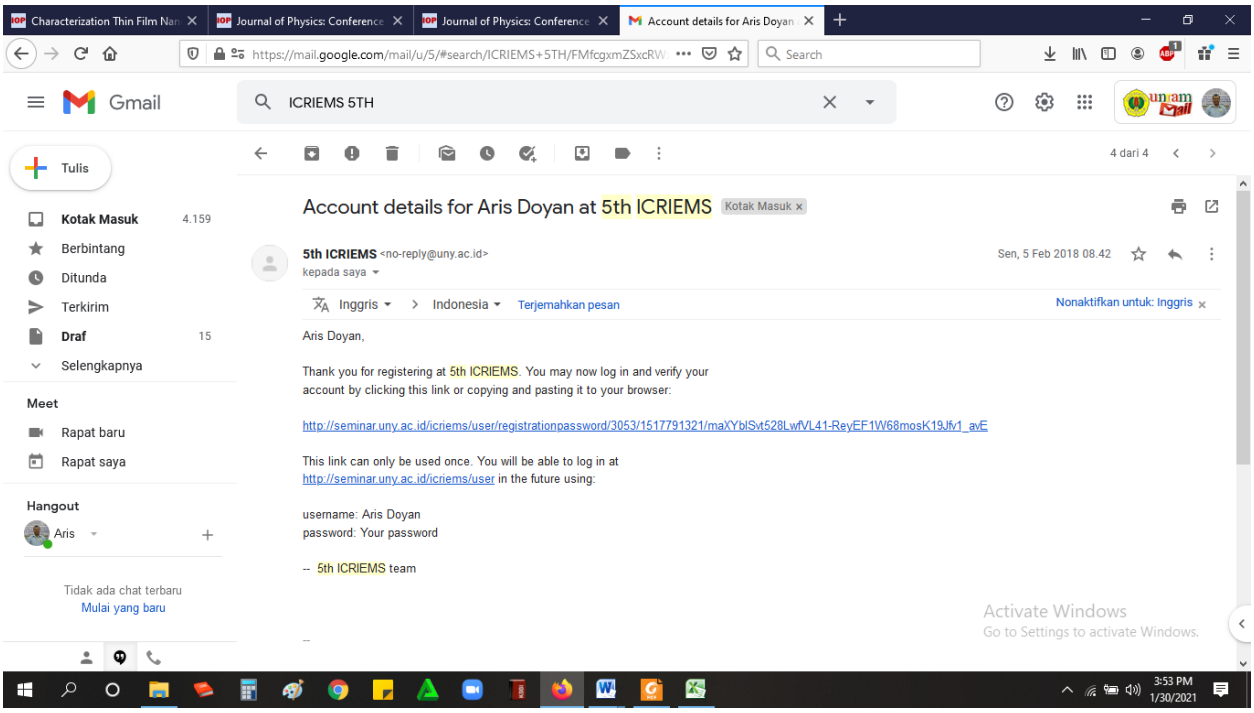
1. Introduction

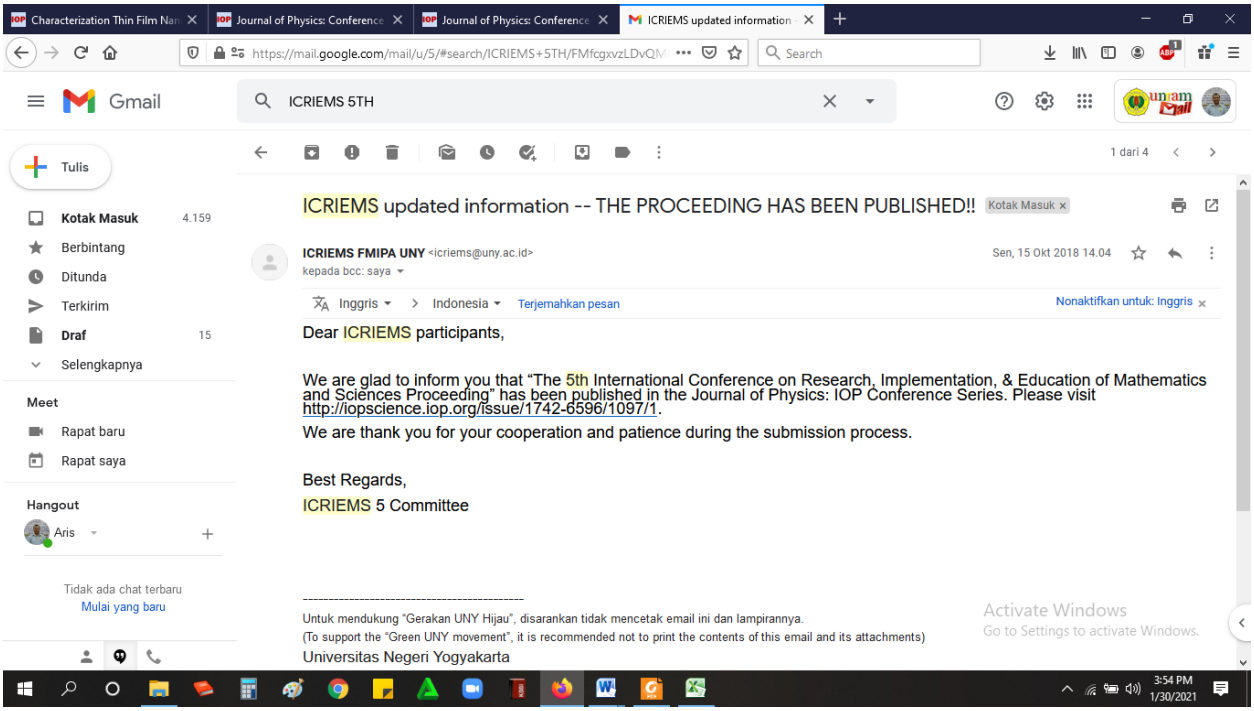
Nano technology continuous to be developed and prioritized in science and technology. Thin film is one form of this nanotechnology. A thin film is made of organic or inorganic material, metal or metal-organic mixture (thickness in the scale of nanometers to millimeters) and has the properties of a conductor, semiconductor, or insulator. Since 1850, this thin film technology has been introduced by M. Faraday, W.Grove, T.A. Edison and continues to experience growth in terms of the materials used, method of manufacture, and its application in life [1]. In material science, there are some metal oxide materials are often used in thin film technology, both pure and doped with other materials.

Studies on the synthesis and characterization of thin film has always attracted the attention of researchers for extensive application in everyday life, both in the field of decoration-construction and electronics. In the field of electronics, thin film was used to make semiconductors. The application of thin films for semiconductors are developed in the form of transparent conductive oxide (TCO), capacitors, diodes, transistors and sensors. Application of TCO develops rapidly and has been applied to electronic devices such as LCD TVs, Plasma TVs,

E-mail dengan 5TH ICRIEMS






Characterization Thin Film Nan
Journal of Physics: Conference
Journal of Physics: Conference
ICRIEMS updated information -
https://mail.google.com/mail/u/5/#search/ICRIEMS+5TH/FMfcgxvzLDvQM
Search
Gmail
ICRIEMS 5TH
Tulis
Kotak Masuk 4.159
Berbintang
Ditunda
Terkirim
Draf 15
Selengkapnya
Meet
Rapat baru
Rapat saya
Hangout
Aris
Tidak ada chat terbaru
Mulai yang baru
1 dari 4
ICRIEMS updated information -- THE PROCEEDING HAS BEEN PUBLISHED!!
Kotak Masuk
ICRIEMS FMIPA UNY <icriems@uny.ac.id>
kepada bcc: saya
Sen, 15 Okt 2018 14.04
Inggris
Indonesia
Terjemahkan pesan
Nonaktifkan untuk: Inggris
Dear ICRIEMS participants,
We are glad to inform you that "The 5th International Conference on Research, Implementation, & Education of Mathematics and Sciences Proceeding" has been published in the Journal of Physics: IOP Conference Series. Please visit http://iopscience.iop.org/issue/1742-6596/1097/1.
We are thank you for your cooperation and patience during the submission process.
Best Regards,
ICRIEMS 5 Committee
Untuk mendukung "Gerakan UNY Hijau", disarankan tidak mencetak email ini dan lampirannya.
(To support the "Green UNY movement", it is recommended not to print the contents of this email and its attachments)
Universitas Negeri Yogyakarta
Activate Windows
Go to Settings to activate Windows.
3:54 PM
1/30/2021