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*Abstracting and Indexing:*

			
			
			
			

**SPEKTRA: Jurnal Fisika dan Aplikasinya**

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**ANALYSIS OF STRUCTURE AND ANTIMICROBIAL ACTIVITY OF CeO<sub>2</sub> AND Nd<sub>2</sub>O<sub>3</sub> NANOPARTICLES***Hanif Yuliani, Rina Dewi Mayasari, Eryanti Kalembang, Yelvia Deni, Defi Rahma Santi, Putri Widya Pangestika, Setyo Purwanto, Bambang Sugeng, Suyanti Suyanti, Moch. Setyadji***UTILIZATION OF COAL BOTTOM ASH AS BRIQUETTE MATERIAL***Ninis Hadi Haryanti, Suryajaya Suryajaya, Henry Wardhana, Rijali Noor***INTERNET OF THINGS OF ELECTRONIC SEAL BASE ON GPRS SHORT MESSAGE SERVICE AND THINGSPEAK***Irawati Dewi Syahwir, Agus Samsi, Vera Firmansyah, Prasetyo Wibowo Yunanto, Renanda Maheswara, Navieda Putri Anggraeni***BURIED WAVEGUIDE POLYMETHYLMETHACRYLATE MODELING FOR REFRACTIVE INDEX SENSOR APPLICATION USING FINITE ELEMENT METHOD***Ian Yulianti, Jauhar Azka, Ngurah Made Darma Putra, Budi Astuti***THE APPLICATION OF SHIFT METHOD USING MOVING LASER ON CANCER CASES IN HEAD AREA USING 3DCRT AND VMAT TECHNOLOGY***Samsun Samsun, Nursama Heru Apriantoro, Rudi Kurniawan, Agnes Dwika Septiti*



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## EDITORIAL FOREWORD

SPEKTRA: Jurnal Fisika dan Aplikasinya is dedicated to all physics practitioners. The coverage of SPEKTRA includes: Instrumentation and Computational Physics, Material Physics, Medical Physics and Biophysics, Astrophysics, Theoretical Physics, Particle and Nuclear Physics, Environment Physics, Renewable Energy, and other fields related to the application of physics.

SPEKTRA Volume 4 issue 3 contains 5 papers: 1) Analysis of Structure and Antimicrobial Activity of CeO<sub>2</sub> and Nd<sub>2</sub>O<sub>3</sub> Nanoparticles; 2) Utilization of Coal Bottom Ash as Briquette Material; 3) Internet of Things of Electronic Seal Base on GPRS Short Message Service and Thingspeak; 4) Buried Waveguide Polymethylmethacrylate Modeling for Refractive Index Sensor Application using Finite Element Method; 5) The Application of Shift Method using Moving Laser on Cancer Cases in Head Area using 3DCRT and VMAT Technology.

Hopefully, SPEKTRA can be a reference for readers and researchers in developing physics and its application.

Jakarta, 31 December 2019

Editor-in-Chief,

Widyaningrum Indrasari





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