



Research Group



Material Physics



Dr. Siswanto, M.Si.

Material Physics Research Group Coordinator



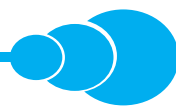
Drs. Djony Izak Rudyardjo, M.Si.

Jan Ady, S.Si, M.Si.

Ersyzario Edo Yunata, M.Si., Ph.D.

Dra. Dyah Hikmawati, M.Si.

Dr. Ir. Aminatun, M.Si.



Publication

- Fabrication and compatibility evaluation of polycaprolactone/hydroxyapatite/collagen-based fiber scaffold for anterior cruciate ligament injury
- Preparation and Characterization of Amorphous Silica Nano (SIO₂) Based on Lumajang Sand Using Precipitation Method for Biomaterial Composite Applications
- Nanofiber Scaffold Based on Polylactic Acid-Polycaprolactone for Anterior Cruciate Ligament Injury
- Biopolymer-based polycaprolactone-hydroxyapatite scaffolds for bone tissue engineering
- Fabrication and characterization of hydroxyapatite-polycaprolactone-collagen bone scaffold by electrospun nanofiber
- Characterization of crystal structure and mechanical properties of polycaprolactone-hydroxyapatite-collagen nanofiber for scaffold anterior cruciate ligament (ACL) applications

Photonics



Samian, S.Si, M.Si.

Photonics Research Group Coordinator



Supadi, S.Si, M.Si.



Drs. Pujiyanto, M.S.



Prof. Dr. Retna Apsari, M.Si.



Herri Trilaksana, S.Si, M.Si, Ph.D.

Publication

- Bottom-up self-assembly of macroporous ZnO nanostructures for photovoltaic applications
- O-band mode-locked praseodymium-doped fluoride fiber laser using nickel phosphorus trisulfide
- Switchable single/dual-wavelength Q-switched all-fiber laser utilizing thulium-doped fiber saturable absorber
- Generation of bright-dark pulses in a Q-switched thulium-doped fiber laser by using 8-HQCdCl₂H₂O
- Dark pulse generation in mode-locked Erbium-doped fiber laser with Molybdenum Aluminium Boride coated side-polished fiber
- kHz pulse generation with Brillouin erbium fiber laser
- Mode-locked operation in thulium-holmium doped fiber laser based on Cr₂AlC MAX phase SA coated arc-shaped fiber
- Ultrafast photoresponse in ultraviolet detectors based on zinc oxide nanorods: the effect of a graphene capping layer

Electronics and Instrumentation



Dr. Imam Sapuan, M.Si.

Electronics & Instrumentation Research Group Coordinator



Yhosep Gita Yhun Y, S.Si., M.



Septia K., S.Si., M.Sc.



Publication

- Detection of seismic wave signal using singlemode-multimode-singlemode fiber probe
- The development of the real-time Michelson interferometer for the measurement of thermal expansion coefficients of dental composites nanofiller
- QUANTITATIVE ANALYSIS OF ELECTRICAL CURRENT EFFECT ON MAGNETIC RESONANCE IMAGE TISSUE INTENSITY
- Detection of lung disease using relative reconstruction method in electrical impedance tomography system

Computational Physics



Dr. Ir. Soegianto S., M.Si.
Computational Physics Research Group Coordinator



Dr. Nuril Ukhrowiyah, S.Si, M.Si.

Dr. Khusnul Ain, S.T., M.Si.

Dr. Riries R., S.T., M.T.

Publication

- Detection of lung disease using relative reconstruction method in electrical impedance tomography system
- Cervical MRI Image Quality Optimization based on Repetition Time (TR) and Echo Train Length (ETL) Settings
- Visual Explanation of Maize Leaf Diseases Classification using Squeezenet and Gradient-Weighted Class Activation Map
- Enhanced image reconstruction of electrical impedance tomography using simultaneous algebraic reconstruction technique and K-means clustering

Theoretical Physics



Febdian Rusydi, S.T., M.Sc., P.hD.
Theoretical Physics Research Group Coordinator



Andi H. Zaidan, S.Si, M.Si., Ph.D.



Angga Dito Fauzi, S.Si., M.Si.



Publication

- Investigating the role of utilitarian and hedonic goals in characterizing customer loyalty in E-marketplaces
- Impact of Hydrogen Coverage Trend on Methyl Formate Adsorption on MoS₂ Surface: A First Principles Study
- Acetylcholine Conformational Flexibility and Its Neutral Hydrolysis in Aqueous Solution

Medical Physics and Biophysics



Prof. Dr. Suryani Dyah Astuti, M.Si.
Medical Physics & Biophysics Research Group Coordinator



Winarno, S.Si., M.T. **Nurul Fitriyah, S.Si., M.Sc.**

Publication

- Effect of 650 nm laser photobiomodulation therapy on the HT-7 (shenmen) acupoint in the *Mus musculus* model of Parkinson's disease
- Variational autoencoder analysis gas sensor array on the preservation process of contaminated mussel shells (*Mytilus edulis*)
- Effectiveness of ozone-laser photodynamic combination therapy for healing wounds infected with methicillin-resistant *Staphylococcus aureus* in mice
- Design and Application of Near Infrared LED and Solenoid Magnetic Field Instrument to Inactivate Pathogenic Bacteria
- EFFECTIVENESS OF PURPLE LED FOR INACTIVATION OF *BACILLUS SUBTILIS* AND *ESCHERICHIA COLI* BACTERIA IN IN VITRO STERILIZERS