

**BULETIN**  
**FISIKA**

**SUSUNAN REDAKSI BULETIN FISIKA UDAYANA**

- Pengarah** : Dekan FMIPA Universitas Udayana  
Dra. Ni Luh Watiniasih, M.Sc. Ph.D
- Penanggung Jawab** : Koordinator Program Studi Fisika FMIPA UNUD  
Prof. Dr. Drs. A.A. Ngr. Gunawan, M.T.
- Dewan Redaksi:**  
**Ketua** : Prof. Ni Nyoman Rupiasih, S.Si, M.Si., Ph.D.  
**Sekretaris** : Drs. Made Sumadiyasa, S.Si, M.i.  
**Bendahara** : Nyoman Wendri, S.Si, M.Si.
- Dewan Penelaah:** Prof. Dr. Ir. Hery Suyanto, M.T  
Ir. S. Poniman, M.Si  
Ir. Windaryoto, M.Si  
Dr. Drs. Wayan Gede Suharta, M.Si  
Drs. Made Satriya Wibawa, M.Si  
Dra. I G. A. Ratnawati, M.Si  
Drs. Ida Bagus Alit Paramarta. M.Si  
Made Yuliara, S.Si, M.Si  
Ir. Putu Suardana, M.Si  
Dra. Ni Nyoman Ratini, M.Si  
I G. A. Widagda, S.Si, M.Kom  
Dr. I Gede Antha Kasmawan, S.Si, M.Si  
I G. A. Putra Adnyana, S.Si, M.Si  
I B. Made Suryatika, S.Si, M.Si  
I Wayan Supardi, S.Si, M.Si  
Dr. I Gusti Ngurah Sutapa, S.Si, M.Si  
Ni Luh Putu Trisnawati, S.Si, M.Si  
Dr. I Nengah Simpen, M.Si  
Ni Kadek Nova Anggarani, S.Si., M.Si
- Tata Usaha** : I Ketut Putra, S.Si, M.Si
- Alamat Redaksi** : Program Studi Fisika FMIPA Universitas Udayana, Kampus  
Bukit Jimbaran Badung Bali Program Studi Fisika FMIPA  
Indonesia
- Penerbit** : P.S. Fisika FMIPA Universitas Udayana
- Telp.** : (0361) 701954 Ext 246

Terbit setiap enam bulan sekali

## Kata Pengantar

Puji syukur kami panjatkan kehadapan Tuhan Yang Maha Esa atas terbitnya Buletin Fisika Program Studi Fisika Fakultas Matematika dan Ilmu Pengetahuan Alam Universitas Udayana, Volume 21, No. 2, Agustus 2020.

Dalam Buletin kali ini, kami memuat tujuh tulisan yang merupakan hasil penelitian dan studi *literature*, yaitu:

1. *Fingerprints Image Recognition by Using Perceptron Artificial Neural Network*, Muhammad Arif Budiman, I Gusti Agung Widagda
2. *Utilization of Gamma Co-60 Radiation for Chili Plant (Capsicum annuum L.) Breeding by Using a Physical Mutagen Method*, Ni Made Purmita Sari, Gusti Ngurah Sutapa, A.A. Ngurah Gunawan
3. *Analysis of Radiation Dose of Patients on CT Scan Examination using Si-INTAN Application*, Elshaday S.B Siregar, Gusti Ngurah Sutapa, I Wayan Balik Sudarsana
4. *Effect of the Ceramic Burning Temperature on the Characteristics of the Emission Spectrum (LIBS) of Al and Transmittance (FTIR) of Al-O on Ceramic Body of BL-1 Type*, Nyoman Wendri, Aprilion Krisandi, I Gusti Putu Yoyok Irawan
5. *Analysis of Superconductor of Nd1Ba2Cu3O7 and Nd3Ba5Cu8O18 Phases Using FTIR Spectrophotometer*, I Gusti Agung Putra Adnyana, Made Sumadiyasa, Nyoman Wendri
6. *Identification of Free Radical in Main Stream Cigarette Smoke in Cigarette with Clove mix (Kretek) and Cigarette without Clove mix (White)*, Ni Kadek Nova Anggarani, D.J. Djoko H.S., Unggul P. Juswono
7. *Effects of High g Values on Growth and Chlorophyll Content in Hydrated and Dehydrated Wheat Seeds*, Sagar S. Jagtap and P. B. Vidyasagar

Kami mengucapkan terimakasih kepada semua pihak terkait yang telah membantu terlaksananya penerbitan Buletin ini, dan kepada pembaca kami mohon kritik dan saran yang membangun untuk kesempurnaan Buletin Fisika ini.

**Redaksi**

## Daftar Isi

	Halaman
1. <i>Fingerprints Image Recognition by Using Perceptron Artificial Neural Network</i> , Muhammad Arif Budiman, I Gusti Agung Widagda	37 - 46
2. <i>Utilization of Gamma Co-60 Radiation for Chili Plant (Capsicum annuum L.) Breeding by Using a Physical Mutagen Method</i> , Ni Made Purmita Sari, Gusti Ngurah Sutapa, A.A. Ngurah Gunawan	47 - 52
3. <i>Analysis of Radiation Dose of Patients on CT Scan Examination using Si-INTAN Application</i> , Elshaday S.B Siregar, Gusti Ngurah Sutapa, I Wayan Balik Sudarsana	53 - 59
4. <i>Effect of the Ceramic Burning Temperature on the Characteristics of the Emission Spectrum (LIBS) of Al and Transmittance (FTIR) of Al-O on Ceramic Body of BL-1 Type</i> , Nyoman Wendri, Aprilion Krisandi, I Gusti Putu Yoyok Irawan	60 - 66
5. <i>Analysis of Superconductor of Nd1Ba2Cu3O7 and Nd3Ba5Cu8O18 Phases Using FTIR Spectrophotometer</i> , I Gusti Agung Putra Adnyana, Made Sumadiyasa, Nyoman Wendri	67 - 72
6. <i>Identification of Free Radical in Main Stream Cigarette Smoke in Cigarette with Clove mix (Kretek) and Cigarette without Clove mix (White)</i> , Ni Kadek Nova Anggarani, D.J. Djoko H.S., Unggul P. Juswono	73 - 81
7. <i>Effects of High g Values on Growth and Chlorophyll Content in Hydrated and Dehydrated Wheat Seeds</i> , Sagar S. Jagtap and P. B. Vidyasagar	82-88