LEMBAR
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU *PEER REVIEW*
KARYA ILMIAH : JURNAL ILMIAH

Judul Jurnal Ilmiah (Artikel)	:	The electrode model of corona plasma discharge theory for current-voltage characteristics case in air		
Nama/ Jumlah Penulis	:	7 Orang		
Status Pengusul	:	Penulis pertama/ ~~Penulis ke -~~/ Penulis Korespondesi **		
Identitas Jurnal Ilmiah	:	a. Nama Jurnal	:	The European Physical Journal Applied Physics
		b. Nomor ISSN	:	1286-0042, eISSN: 1286-0050
		c. Vol, No., Bln Thn	:	Vol 91 Artikel No 22, April 2022
		d. Penerbit	:	EDP Sciences
		e. DOI artikel (jika ada)	:	https://doi.org/10.1051/epjap/2022210252
		f. Alamat web jurnal	:	https://www.epjap.org/
		Alamat Artikel	:	https://www.epjap.org/articles/epjap/abs/2022/01/ap210252/ap210252.html
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Komponen Yang Dinilai	Nilai Reviewer		Nilai Rata-rata
	Reviewer I	Reviewer II	
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b. Ruang lingkup dan kedalaman pembahasan (30%)	11	11,5	11,25
c. Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	11	11,5	11,25
d. Kelengkapan unsur dan kualitas penerbit (30%)	10,5	11,8	11,15
Total = (100%)			37,5
Nilai untuk Pengusul : 60% x 37,5 = 22,5			

Semarang, 4 Februari 2022

Reviewer 1

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Bidang Ilmu: Fisika

Reviewer 2

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	Internasional ☑	Nasional Terakreditasi ☐	Nasional Tidak Terakreditasi ☐	
a. Kelengkapan unsur isi jurnal (10%)	4			4
b. Ruang lingkup dan kedalaman pembahasan (30%)	12			11
c. Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	12			11
d. Kelengkapan unsur dan kualitas terbitan/jurnal (30%)	12			10,5
Total = (100%)	**40**			**36,5**
Nilai Pengusul = 60% x 36,5 = 21,9				

Catatan Penilaian artikel oleh Reviewer :

1. **<u>Kesesuaian dan kelengkapan unsur isi jurnal:</u>**
   Artikel yang disusun telah sesuai dengan template jurnal. Bidang ilmu pengusul/anggota penulis sesuai dengan artikel yang dibahas. Isi jurnal sesuai, lengkap dan tepat dengan komponen-komponennya: abstrak, pendahuluan, Metode bahan: model matematika dan teknik eksperimen, hasil, pembahasan dan kesimpulan, dan daftar pustaka.
2. **<u>Ruang lingkup dan kedalaman pembahasan:</u>**
   Pembahasan yang dilakukan pada paper ini tentang perbandingan diantara model matematis dan hasil eksperimen dari karakteristik arus tegangan pada kasus lucutan plasma korona dari model electrode garis setengah ellips terhadap bidang. Tingkat kesesuaian yang dihasilkan antara model matematis dan hasil eksperimen sebesar 80,00% berdasarkan pada nilai kesalahan grafik yang memenuhi tingkat standar kelayakan dari program Python Graphical User Interface.
3. **<u>Kecukupan dan kemutakhiran data/informasi dan metodologi:</u>**
   Metodologi yang digunakan baik dan mendukung riset ini. Penelitian ini menggunakan pendekatan geometris electroda untuk mendapatkan nilai I-V. Referensi yang digunakan pada artikel ini sebanyak 31 dengan angka Turnitin similarity index = 5%.
4. **<u>Kelengkapan unsur dan kualitas terbitan:</u>**
   Karya ini diterbitkan dalam jurnal berkualitas Q4 dengan SJR 2021 0,23 oleh EDP Sciences dengan kualitas terbitan yang lengkap dan baik.

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Bidang Ilmu: Fakultas Sains dan Matematika

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Hasil Penilaian *Peer Review* :

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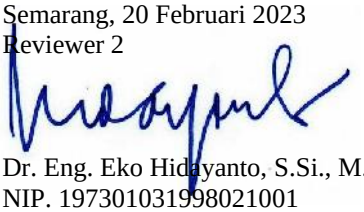
	Internasional [√]	Nasional Terakreditasi [ ]	Nasional Tidak Terakreditasi [ ]	
a. Kelengkapan unsur isi jurnal (10%)	4			3,7
b. Ruang lingkup dan kedalaman pembahasan (30%)	12			11,5
c. Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	12			11,5
d. Kelengkapan unsur dan kualitas terbitan/jurnal (30%)	12			11,8
Total = (100%)	**40**			**38,5**
Nilai Pengusul = 60% x 38,5 = 23,1				

Catatan Penilaian artikel oleh Reviewer :

1. **<u>Kesesuaian dan kelengkapan unsur isi jurnal:</u>**
   Isi jurnal sesuai, lengkap dan tepat dengan komponen-komponennya: abstrak, pendahuluan, model-model matematika, teknik eksperimen, hasil, pembahasan, kesimpulan, Pernyataan kontribusi penulis dan daftar pustaka.
2. **<u>Ruang lingkup dan kedalaman pembahasan:</u>**
   Paper ini membahas tentang perbandingan diantara model matematis dan hasil eksperimen dari karakteristik arus tegangan pada kasus lucutan plasma korona dari model electrode garis setengah ellips terhadap bidang. Diperoleh tingkat kesesuain diantara model matematis dan hasil eksperimen dengan nilai maksimal sebesar 80,00%, dengan nilai kesalahan grafik yang memenuhi tingkat standar kelayakan dari program Python Graphical User Interface.
3. **<u>Kecukupan dan kemutakhiran data/informasi dan metodologi:</u>**
   Data-data serta metodologi yang digunakan baik dan mendukung riset ini. Penelitian ini menggunakan metode baru dengan tingkat originalitas yang tinggi (pendekatan geometris electrode bukan pendekatan fisis seperti persamaan Maxwell dengan indeks kemiripan turnitin hanya 5%).
4. **<u>Kelengkapan unsur dan kualitas terbitan:</u>**
   Karya ini diterbitkan dalam jurnal berkualitas Q4 dengan SJR 2021 0,23 oleh EDP Sciences dengan unsur-unsur yang lengkap serta kualitas yang sangat baik.

Semarang, 20 Februari 2023
Reviewer 2



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The electrode model of corona plasma discharge theory for currenta' voltage characteristics case in air

Wardaya, Asep Yoyo ; Muhlisin, Zaenul; Suseno, Jatmiko Endro; Soesanto, Qidir Maulana Binu; Azam, Muchamad; Setiawati, Evi; Hadi, Susilo
Save all to author list

[a] Department of Physics, Faculty of Science and Mathematics, Diponegoro University, Semarang, Indonesia

Abstract

The calculation of the electrode model in the corona plasma discharge case has been carried out using the semi-ellipse line to plane (S-ELTP) configuration model in the air. The final focus of this research is to calculate the (Ia' V) currenta' voltage characteristics of the plasmas discharge. Part of the work in the (Ia' V) characteristics includes computational calculations and carrying out experimental activities. Experimental data include current vs voltage variations that occur at the time of plasma discharge. All the discharge processes are generated by a positive DC voltage source. The arrangement of the

geometric configuration of the electrodes consists of two plates in the form of a half ellipse (active electrode) and a rectangular plate (passive electrode) in a mutually perpendicular position. The size variation of the active electrode includes variations of the small and large size plates with each plate having two variations in the distance between the two electrodes. The calculation concept of the electrode model is to insert the certain shape sharpness factor of k in the numerical calculation in the sharp electrode capacitance part. The k factor value is obtained by calculating the fitting between numerical simulation and research data. The research results prove that there is a fairly high level of conformity between numerical simulation and the research data. Simulation calculation for the (Ia' V) characteristic curve and its level of accuracy used Python GUI Programming. © EDP Sciences, 2022.

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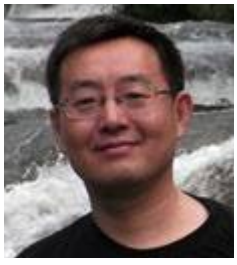

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Badreddine Hatimi, Jihan Mouldar, Abdelwahed Loudiki, Meryem Bensemlali, Layla El Gaini, Abdelowahed Hajjaji, Moulay Abderrahim El Mhammedi and Mina Bakasse

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Special Issue on 'Nanoalloys: Kinetic and Environmental Behaviour', edited by Pascal Andreazza, Riccardo Ferrando and Liu Xiaoxuan

harvest energy from disc brake pads for wireless sensors in electric vehicles

Yassine Tabbai[1*], Aboubakr Sarah[1], Abdelkader Rjafallah[1], Amine Alaoui-Belghiti[1], Abdelowahed Hajjaji[1], Reddad El Moznine[2], Fouad Belhora[1] and Abdessamad El Ballouti[1]

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Abstract

There is a large amount of thermal energy wasted during the driving cycle of all kinds of vehicles. In this paper, a pyroelectric harvester system, based on temperature change, is designed for low-powered sensors for the reliable electronic/electric architecture development of autonomous vehicles. In fact, this harvester was designed, specifically, in order to capture the temperature of the braking system and convert the wasted heat energy during the contact process to electrical energy. This conversion process occurs due to the temperature variation through the pyroelectric material, given the cooling phenomena of the ambient air. The

energy potentially available in the form of heat produced by the friction involved in braking was evaluated using finite element analysis in the multiphysics software environment. Therefore, we present simulations of disc heating and cooling during the braking process at different speeds. Moreover, the potential for energy harvesting in multiple rolling conditions is discussed, such as the braking cycles and the effect of the material thickness used in the conversion module. The proposed system has undergone simulation analysis, which shows that the system can generate a voltage of 10.8 V and a power of 7.0 mW for a cycle of one braking process and around 9.5 mW for a cycle containing two successive braking's. The results of the simulation study verify the feasibility of the system and demonstrate its pertinence, especially for low-power sensors for new vehicle generations.

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Regular Article

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Regular Article

PVDF–HFP/PZT

nanocomposite thin films: preparation, structure and piezoelectric properties

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Abstract

Piezoelectric nanocomposites have attracted considerable attention from researchers during these last years for their wide use in the development of electromechanical microsystems (MEMS). In this paper, piezoelectric lead titanate zirconate (PZT) are used with poly(vinylidene fluoride-hexafuoropropylene) (PVdF-HFP) polymer matrix to prepare the piezo thin nanocomposite film. An improvement in the β phase in PVdF-HFP was created by the reaction between the PZT nanoparticles and PVdF-HFP. The process used for the preparation of the film results in the enhancement of the ferroelectric and piezoelectric properties of PVdF-HFP. These polymer nanocomposite films were made by the solvent casting method under ultra-sonication using THF as a solvent, with different percentages of PZT. The results confirm that incorporating PZT nanoparticles in the PVDF-HFP matrix increases the β-phase fraction, enhancing the efficiency of energy harvesting.

Improvement of the piezoelectric, thermal, structural properties of PMMA/PVdF-HFP blend composite films using PZT
Salesabil Labihi et al., EPJ Applied Physics, 2023

Improving dielectric properties of composites thin films with polylactic acid and PZT microparticles induced by interfacial polarization
El Mahdi Bouiri et al., EPJ

Effects of cyclic tensile stress on biological function and degeneration of nucleus pulposus cells
Wang Dandan et al., Chinese Medical Journals Publishing House Co., Ltd., 2021

Wnt3a-induced ST2 decellularized matrix ornamented PCL scaffold for bone tissue engineering