

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

Judul Karya Ilmiah (Prosiding) : Effect of laser repetition rate in the synthesis of colloidal zinc nanoparticles by pulse laser ablation method

Nama/ Jumlah Penulis : 4 orang

Status Pengusul : ~~Penulis pertama~~/ Penulis ke 4 / ~~Penulis Korespondensi~~ **

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a. Judul Prosiding : Journal of Physics: Conference Series

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c. Thn Terbit, Tempat Pelaks. : 2019, Semarang Indonesia

d. Penerbit/Organiser : IOP Publishing

e. Alamat Repository/Web : <https://iopscience.iop.org/journal/1742-6596>
Alamat Artikel : <https://iopscience.iop.org/article/10.1088/1742-6596/1153/1/012069/pdf>

f. Terindeks di (jika ada) : Scopus

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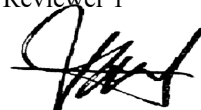
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Catatan Penilaian artikel oleh Reviewer :

- Kesesuaian dan kelengkapan unsur prosiding:**
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- Kecukupan dan kemutakhiran data/informasi dan metodologi:**
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Semarang, 20 April 2021
Reviewer 1



Prof. Dr. Suryono, S.Si., M.Si.
NIP. 197306301998021001
Unit Kerja : Fisika
Bidang Ilmu: Fakultas Sains dan Matematika

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

Judul Karya Ilmiah (Prosiding) : Effect of laser repetition rate in the synthesis of colloidal zinc nanoparticles by pulse laser ablation method

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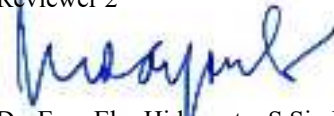
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	Internasional <input checked="" type="checkbox"/>	Nasional <input type="checkbox"/>	
a. Kelengkapan unsur isi prosiding (10%)	3		3
b. Ruang lingkup dan kedalaman pembahasan (30%)	9		8,9
c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	9		8,9
d. Kelengkapan unsur dan kualitas terbitan /prosiding (30%)	9		8,9
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Nilai Pengusul = 40% x (1/3 x 29,7) = 3,96			

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- Ruang lingkup dan kedalaman pembahasan:**
Paper ini membahas tentang sintesis nanopartikel Zinc (ZnNPs) menggunakan metode pulse laser ablation (Nd:YAG) yang didoping neodmium.
- Kecukupan dan kemutakhiran data/informasi dan metodologi:**
Data-data/informasi serta metodologi yang digunakan mutakhir.
- Kelengkapan unsur dan kualitas terbitan:**
Karya ini diterbitkan dalam prosiding internasional dengan unsur-unsur yang lengkap serta kualitas yang baik.

Semarang, 04 Juli 2021

Reviewer 2



Dr. Eng. Eko Hidayanto, S.Si., M.Si.

NIP. 197301031998021001

Unit Kerja : Fisika

Bidang Ilmu: Fakultas Sains dan Matematika

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

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	Reviewer I	Reviewer II	
a. Kelengkapan unsur isi jurnal (10%)	2,1	3	2,55
b. Ruang lingkup dan kedalaman pembahasan (30%)	7,8	8,9	8,35
c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	8,1	8,9	8,5
d. Kelengkapan unsur dan kualitas penerbit (30%)	8,2	8,9	8,55
Total = (100%)	26,2	29,7	27,95
Nilai untuk Pengusul : $(40\% \times 27,95)/3 = 3,73$			

Semarang, 24 Februari 2021

Reviewer 1



Prof. Dr. Suryono, S.Si., M.Si.
 NIP. 197306301998021001
 Bidang ilmu/Unit kerja : Fakultas Sains dan Matematika/Fisika

Reviewer 2



Dr. Eng. Eko Hidayanto, S.Si., M.Si.
 NIP. 197301031998021001
 Bidang ilmu/Unit kerja : Fakultas Sains dan Matematika/Fisika

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Effect of laser repetition rate in the synthesis of colloidal zinc nanoparticles by pulse laser ablation method

Sa'Adah F. , Miskiyah R.Z., Hikmantiyah N., Khumaeni A.

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Synthesis of Zinc nanoparticles (ZnNPs) has been carried out using pulse laser ablation method. In this method neodymium-doped yttrium aluminum garnet (Nd:YAG) laser pulse are used. Effect of laser repetition rate pulse was examined to produced ZnNPs. Spherical shapes of ZnNPs was produced when pulse laser beam (1064 nm, 7 ns) was bombarded onto a high purity (99.95%) zinc plate surface. The averaged diameters of ZnNPs produced in this research were 12.1 nm with standard deviation 4.4 nm for the laser repetition rate 10 Hz, the diameter of ZnNPs was 5.6 with standard deviation 4.7 nm. The spectrum of ZnNPs was obtained by ultraviolet visible (UV-Vis) spectroscopy shows that the surface plasma resonance (SPR) at the center of 300 nm wavelength, which certifies that te ZnNPs produced has the spherical shape. © Published under licence by IOP Publishing Ltd.

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doi: 10.1007/s13204-011-0006-3
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Effect of laser repetition rate in the synthesis of colloidal zinc nanoparticles by pulse laser ablation method

Fatkhiyatus Sa'adah¹, Rizka Zakiyatul Miskiyah¹, Nurul Hikmantiyah¹ and Ali Khumaeni¹

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Journal of Physics: Conference Series, Volume 1153, 9th International Conference on Physics and Its Applications (ICOPIA) 14 August 2018, Surakarta, Indonesia

Citation Fatkhiyatus Sa'adah *et al* 2019 *J. Phys.: Conf. Ser.* **1153** 012069fatkhiyatussaadah@st.fisika.undip.ac.id¹ Department of Physics, Faculty Science and Mathematics, Diponegoro University Jl. Prof. Soedharto, SH, Tembalang, Semarang 50275, Indonesia<https://doi.org/10.1088/1742-6596/1153/1/012069>

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Synthesis of Zinc nanoparticles (ZnNPs) has been carried out using pulse laser ablation method. In ^{Help} this method neodymium-doped yttrium aluminum garnet (Nd:YAG) laser pulse are used. Effect of laser repetition rate pulse was examined to produced ZnNPs. Spherical shapes of ZnNPs was produced when pulse laser beam (1064 nm, 7 ns) was bombarded onto a high purity (99.95%) zinc plate surface. The averaged diameters of ZnNPs produced in this research were 12.1 nm with standard deviation 4.4 nm for the laser repetition rate 10 Hz, the diameter of ZnNPs was 5.6 with standard deviation 4.7 nm. The spectrum of ZnNPs was obtained by ultraviolet visible (UV-Vis) spectroscopy shows that the surface plasma resonance (SPR) at the center of 300 nm wavelength, which certifies that the ZnNPs produced has the spherical shape.

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Preface

International Conference of Physics and Its Applications (ICOPIA) is a biannual conference, started in 2001, for presenting and discussing current research in Physics and Its Applications. This year of 2018, this conference is the ninth one. Studies about material physics, optics, geophysics, instrumentation, magnetics and theoretical physics are presented orally. This conference is mainly supported by Department of Physics, Universitas Sebelas Maret, Indonesia.

The keynote presentations are provided to talk the current research in Physics. The keynote speaker Profesor Osamu Nakatsuka from Nagoya University presents the study of thin film growth and characterization of Group-IV alloy semiconductors for future nanoelectronic applications. The keynote from Universiti Kebangsaan Malaysia, Assoc. Prof. Dr. Mohd. Yusri Abd Rahman, presents about Dye-Sensitized Solar Cell Utilizing Titanium Dioxide-Strontium and Titanium Dioxide-Sulphur Composite Films Photoanode. The speech of analysis of groundwater level is also provided.

This proceeding contains the papers presented in ICOPIA 2018. The papers are divided into sections: Acoustic, Geophysics, Instrumentation Physics, Magnetism and Magnetic Material, Material Physics and Characterization, Optical, Theoretical and Computation Physics and Other Related to Physics magnetism and magnetic material, material physics and characterization, acoustics, theoretical physics, instrumentation physics, optics and geophysics. This structure is made so that readers are easier to find an article in this proceeding.

We would like to thank to all of the participants attending this conference and also to committee for their contribution to this high level conference and its overall success. We also would like to thank to the reviewers for their positive contribution to maintain the quality of the articles presented in this conference. We also appreciate the contribution of our sponsor supporting the conference.



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Source details

Journal of Physics: Conference Series

Scopus coverage years: from 2005 to Present

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ISSN: 1742-6588 E-ISSN: 1742-6596

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