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

Judul Jurnal Ilmiah (Paper)	:	Synthesis and characterization carboxyl functionalized Multi-Walled Carbon Nanotubes (MWCNT-COOH) and NH_2 functionalized MultiWalled Carbon Nanotubes ($MWCNTNH_2$)		
Penulis/Jumlah Penulis	:	S. A. Wulandari, Arifin, Hendri Widiyandari, Agus Subagio/ 4 orang		
Status Pengusul	:	Penulis Anggota		
Identitas Jurnal Ilmiah	:	a. Nama Prosiding	:	7th International Seminar on New Paradigm and Innovation on Natural Sciences and Its Application, ISNPINSA 2017 Institute of Physics Publishing
		b. ISBN/ISSN	:	1742-6588
		c. Tahun Terbit, Tempat Pelaksanaan	:	2018, Semarang, Indonesia
		d. Penerbit/Organizer	:	Institute of Physics Publishing
		e. Alamat Repository (PT)	:	https://iopscience.iop.org/article/10.1088/1742-6596/1025/1/012005/pdf
		f. Terindeks (jika ada)	:	Scopus
Kategori Publikasi Jurnal Ilmiah (beri ✓ pada kategori yang tepat)	:	☑Prosiding forum ilmiah Internasional ☐Prosiding forum ilmiah Nasional		

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a. Kelengkapan unsur isi prosiding (10%)	3	2	2,5
b. Ruang lingkup dan kedalaman pembahasan (30%)	8	8	8
c. Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	8	8	8
d. Kelengkapan unsur dan kualitas penerbit (30%)	8	7,5	7,75
Total = (100%)	27	25,5	26,25

$= 40\% \times 26,25$

$= 3,5$

Reviewer II

Prof. Dr. Heri Sutanto, S.Si, M.Si
NIP. 197502151998021001
Unit Kerja: Departemen Fisika, Fakultas Sains dan Matematika UNDIP Semarang

Reviewer I

Prof. Dr. Wahyu Setiabudi, M.S
NIP. 195806151985031002
Unit Kerja: Departemen Fisika, Fakultas Sains dan Matematika UNDIP Semarang

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		f. Terindeks (jika ada)	:	Scopus
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b. Ruang lingkup dan kedalaman pembahasan (30%)	9,00		8
c. Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	9,00		8
d. Kelengkapan unsur dan kualitas penerbit (30%)	9,00		8
Total = (100%)	**30,00**		27

$(30 \times 27)/3 = 3,6$

Catatan Penliaian Paper oleh Reviewer:

1. Isi cukup menarik, lengkap
2. Tambahkan hasil pada pembahasan, bila di dukung lebih banyak pustaka lebih baik
3. Ref dari 28 pustaka lebih 5 tahun, keterangan ini boleh bila lebih jelas lebih baik.
4. Penulisan pustaka perlu lebih konsisten. kualitas cetak cukup bik.

Reviewer 1

Prof. Dr. Wahyu Setiabudi, M.S
NIP. 195806151985031002
Unit Kerja: Departemen Fisika, Fakultas Sains dan Matematika UNDIP Semarang

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Hasil Penilaian *Peer Review*

Komponen yang Dinilai	Nilai Maksimal Prosiding		Nilai yang Diperoleh
	Internasional 30	Nasional ☐	
a. Kelengkapan unsur isi prosiding (10%)	3,00		2
b. Ruang lingkup dan kedalaman pembahasan (30%)	9,00		8
c. Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	9,00		8
d. Kelengkapan unsur dan kualitas penerbit (30%)	9,00		7,5
Total = (100%)	**30,00**		25,5

Catatan Penliaian Paper oleh Reviewer:

a. Artikel telah ditulis secara lengkap, ada beberapa kesalahan penulisan spt nama penulis yg tdk konsisten dlm penyingkatan nama.
b. Topik artikel sesuai dlm lingkup prosiding JCPS, Data telah dibahas secara baik dan telah di dukung
c. Data penelitian pd artikel relevan dan 28 referensi dan mutakhir. metodologi jelas.
d. Kualitas penerbit yang baik, spt penulis terdiri 1 nama ada ref. bhs. Indonesia. Konsistensi penulisan referensi tdk sama spt no. 26 - 28 tdk sama dg penulisan ref no. 1 - 25.

Reviewer II

Prof. Dr. Heri Sutanto, S.Si, M.Si
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Volume 1025, Issue 1, 30 May 2018, Article number 012005
7th International Seminar on New Paradigm and Innovation on Natural Sciences and Its Application, ISNPINSA 2017; Semarang; Indonesia; 17 October 2017 through 17 October 2017; Code 136783

Synthesis and characterization carboxyl functionalized Multi-Walled Carbon Nanotubes (MWCNT-COOH) and NH_2 functionalized Multi-Walled Carbon Nanotubes (MWCNTNH_2) (Conference Paper) (Open Access)

Wulandari, S.A.[a], Arifin[b], Widiyandari, H.[b], Subagio, A.[b]

[a]Electrical Engineering Department, Dian Nuswantoro University, Indonesia
[b]Physics Department, Diponegoro University, Indonesia

Abstract

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A making of MWCNTs-COOH has been conducted to improve the compatibility of carbon nanotubes and MWCNTs-NH_2, in order to have conductive properties. The MWCNTs- COOH study was performed, using the first reflux method using HNO_3 for 6 hours heated with 60° C (concentrated HNO_3 ratio with MWCNTs is 1: 5), followed by the second reflux using $SOCl_2$ for 5 hours heated to 70°C (concentrated HNO_3 ratio with MWCNTs is 1: 3). Meanwhile, the making of MWCNTs-NH_2 used homogenization process, used magnetic stirrer, with comparison between MWCNTs-COOH with Etanadiamine 1: 2000, for 8 hours at 40oC. Both products were analyzed using Fourier transform infrared (FTIR), Scanning Electron Microscopy (SEM) and Energy Dispersive X-Ray Spectroscopy (EDS). The C-O bond on MWCNTs-COOH is indicated by absorption at wavelength 1672.28 cm^{-1} and O-H bond at 3431.36 cm^{-1} N-H bond on MWCNTs-NH_2 shown at wavelength 1440.83. The SEM analysis indicates that both products have a tubular surface morphology.

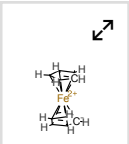
SciVal Topic Prominence

Topic: Gas detectors | Chemical sensors | Single-walled carbon

Prominence percentile: 96.219

Chemistry database information

Substances



Author keywords

MWCNTs | MWCNTs-COOH and MWCNTs-NH_2 | SEM

Indexed keywords

Engineering controlled terms: Chlorine compounds | Energy dispersive spectroscopy | Fourier transform infrared spectroscopy | Homogenization method | Scanning electron microscopy | Yarn

Engineering uncontrolled terms: Carboxyl-functionalized | Energy dispersive X ray spectroscopy | Fourier transform infrared | Functionalized multi-walled carbon nanotubes | Homogenization process | MWCNTs | MWCNTs-COOH and MWCNTs-NH2 | Synthesis and characterizations

Engineering main heading: Multiwalled carbon nanotubes (MWCN)

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Subject Area and Category	Physics and Astronomy Physics and Astronomy (miscellaneous)
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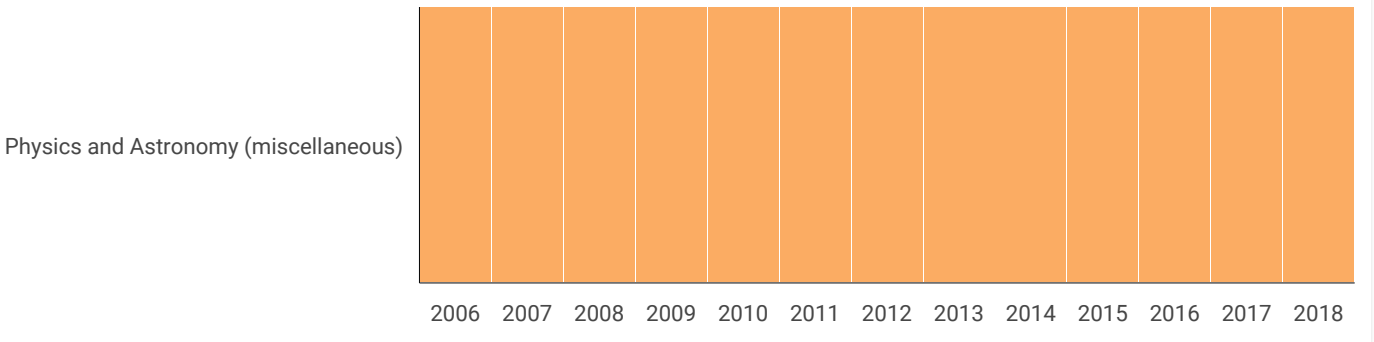

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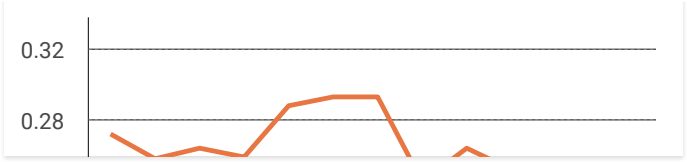

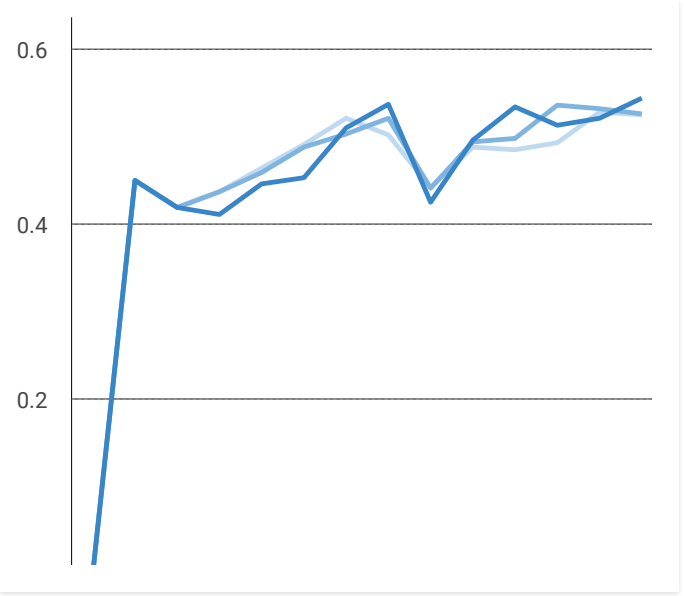

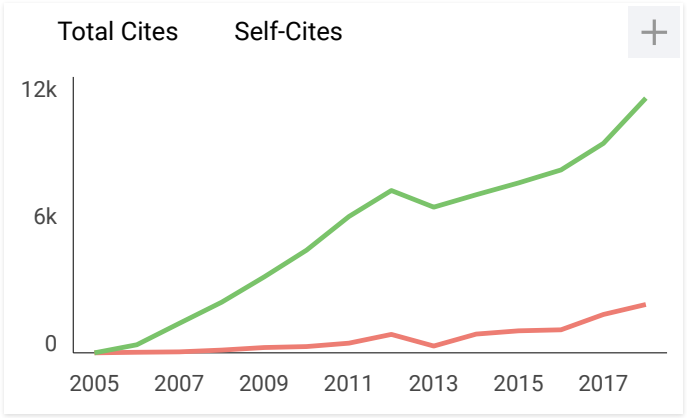

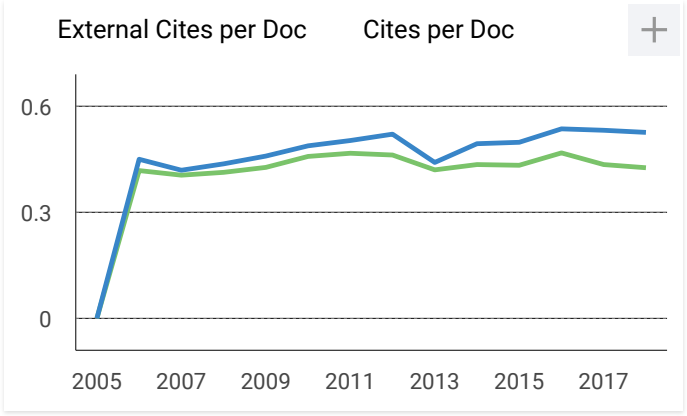

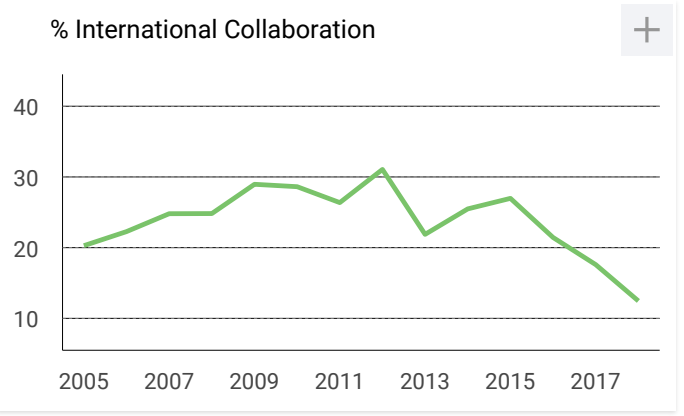

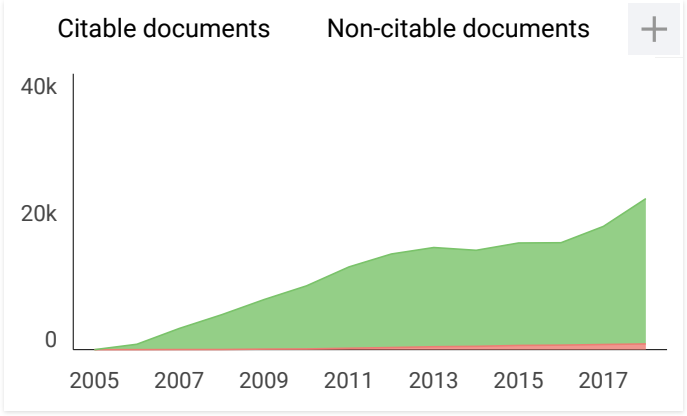

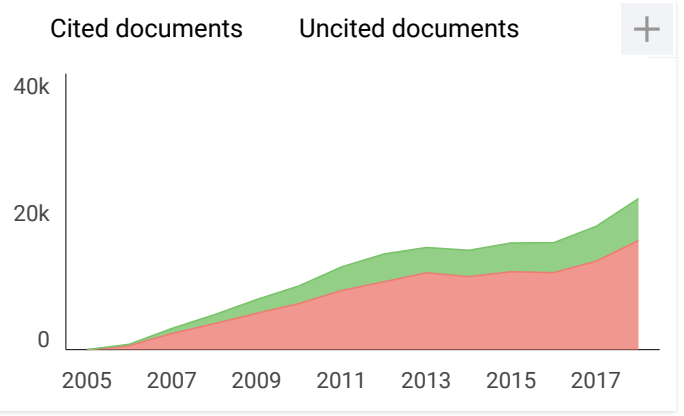

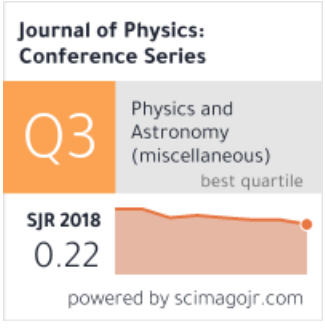

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