IOP Conference Series: Materials Science and Engineering

Discontinued in Scopus as of 2021

COUNTRY

United Kingdom

Universities and research institutions in United Kingdom

SUBJECT AREA AND CATEGORY

Engineering
Engineering (miscellaneous)

Materials Science
Materials Science (miscellaneous)

PUBLISHER

IOP Publishing Ltd.

PUBLICATION TYPE

Conferences and Proceedings

ISSN

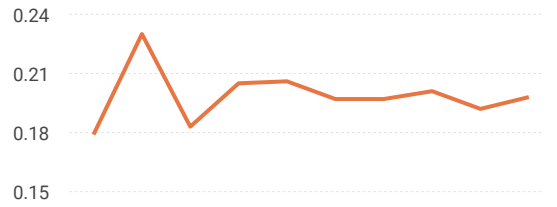
17578981, 1757899X

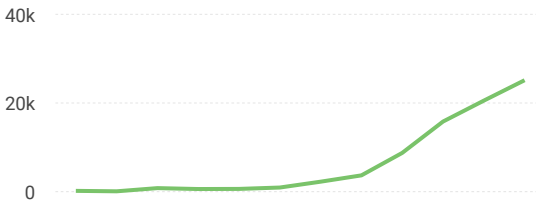
COVERAGE

2009-2020

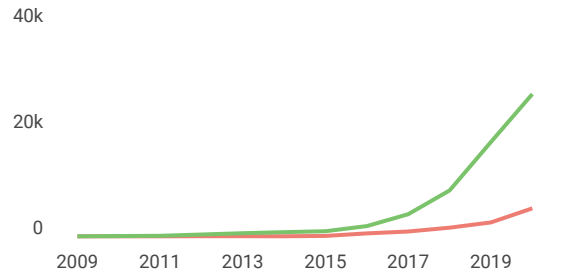
SCOPE

The open access IOP Conference Series provides a fast, versatile and cost-effective proceedings publication service for your conferen publishing subject areas include: physics, materials science, environmental science, bioscience, engineering, computational science ar mathematics.

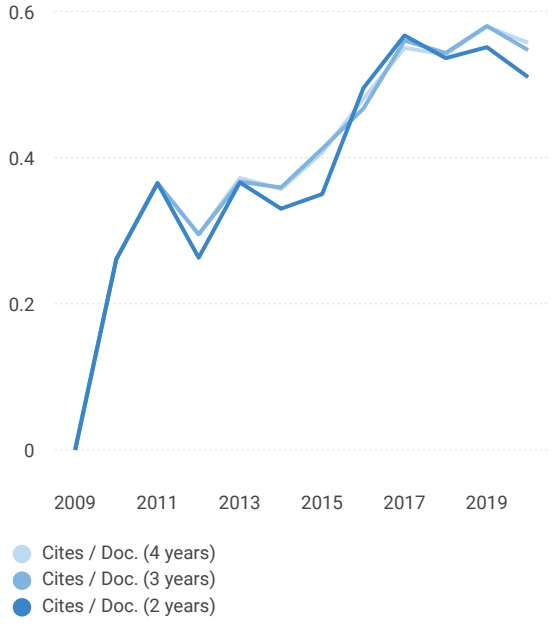




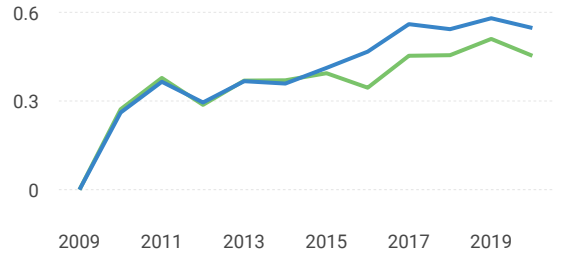
Total Cites Self-Cites



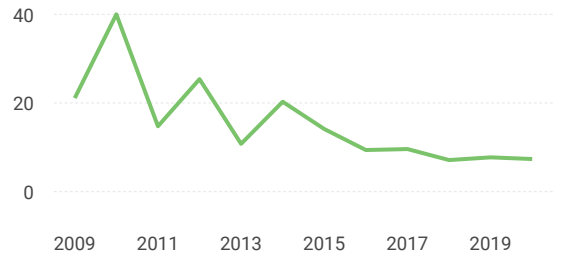
Citations per document



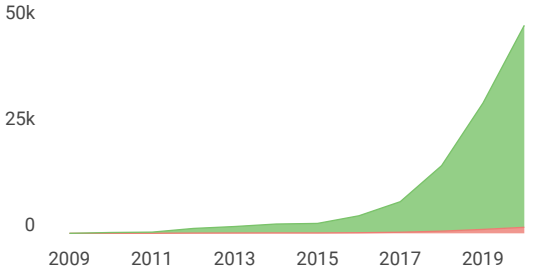
External Cites per Doc Cites per Doc



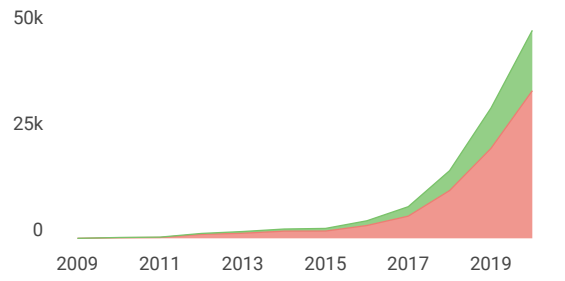
% International Collaboration



Citable documents Non-citable documents



Cited documents Uncited documents



IOP Conference Series: Materials Science and...

Not yet assigned quartile

SJR 2020
0

powered by scimagojr.com

← Show this widget in your own website

Just copy the code below and paste within your html code:

```
<a href="https://www.scimag
```

SCImago Graphica

Metrics based on Scopus® data as of April 2021

Vikas Magdum 3 months ago

Respected sir,
From which volume IOP conference Series material science and Engineering is discontinued from Scopus.
But after using following link it shown as indexed from 2007-present
https://www.scopus.com/sourceid/19700200831?origin=resultslist
Please clarify wheather it Scopus Indexed or not?

reply

SCImago Team

Melanie Ortiz 3 months ago

Dear Vikas,
Thank you very much for your comment.
All the metadata have been provided by Scopus /Elsevier in their last update sent to SCImago, including the Coverage's period data. The SJR for 2020 has been released on 17 May 2021. We suggest you consult the Scopus database directly to see the current index status as SJR is a static image of Scopus, which is changing every day.
For further information, please contact Scopus support:
https://service.elsevier.com/app/answers/detail/a_id/14883/kw/scimago/supporthub/scopus/
Best Regards, SCImago Team

reply

SCImago Team

Melanie Ortiz 3 months ago

Dear Vikas,
Thank you for contacting us.
SJR is a portal with scientometric indicators of journals indexed in Elsevier/Scopus. Unfortunately, we cannot help you with your request referring to the index status. We suggest you consult Scopus database (see the current status of the journal) or the mentioned database for further information.
Best Regards, SCImago Team

N **NITISH KUMAR SAINI** 4 months ago

It is again continued in Scopus, kindly recheck and verify by following link

https://www.scopus.com/sourceid/19700200831?origin=resultslist

Now kindly help me, wheather it is continued from same volume or some volumes are not covered in Scopus.
But it's good that, it's web of science indexing is continue.

reply

SCImago Team

Melanie Ortiz 4 months ago

Dear Nitish,
thank you very much for your comment, unfortunately we cannot help you with your request. We suggest you contact Scopus support:
https://service.elsevier.com/app/answers/detail/a_id/14883/kw/scimago/supporthub/scopus/
Best Regards, SCImago Team

G **Gaurang Patel** 4 months ago

The scopus coverage of this Journal shows continue on it's website but here there is no SJR value, Why?

reply

SCImago Team

Melanie Ortiz 4 months ago

its database as of 2021. Therefore, it seems that they did not send us any data to calculate the scientometric indicators related to 2020 for this journal.
Best Regards, SCImago Team

H **Hassan Obaid Abbas** 6 months ago

I would like to ask if the IOP conference series:Material science and Engineering is still or discontinued for Scopus.
With regards

reply

A **Ahmed A. Thabit** 5 months ago

Discontinued in Scopus as of 2021

G **GUNUPUDI RAJESH KUMAR** 5 months ago

It is discontinued from SCOPUS. But it still indexed in CPCI-S (WoS Core Group)

L **Lateef Assi** 6 months ago

discontinued for Scopus

SCImago Team

Melanie Ortiz 6 months ago

Dear Hassan,
Thank you very much for your comment.
All the metadata have been provided by Scopus /Elsevier in their last update sent to SCImago, including the Coverage's period data. The SJR for 2019 was released on 11 June 2020. We suggest you consult the Scopus database directly to see the current index status as SJR is a static image of Scopus, which is changing every day.
Best Regards, SCImago Team

F **Ferit Artkın** 7 months ago

Dear Scimango Team,

Which IOP conferences in Sci expanded indexing in Engineering in 2021? May IOP material science

Sincerely,
Ferit A., PhD

reply

SCImago Team

Melanie Ortiz 7 months ago

Dear Ferit,
Thank you for contacting us.
SJR is a portal with scientometric indicators of journals indexed in Elsevier/Scopus. Unfortunately, we cannot help you with your request. We suggest you contact the WoS team for that information.
Best Regards, SCImago Team

N **Nelly** 7 months ago

Dear friends!
Please explain why in Scopus conference collections IOP Conference Series: Earth and Environmental Science, etc. have a quartile in the Citescore index, and in SJR conference materials are not assigned a quartile. Thank you for the clarification

reply

SCImago Team

Melanie Ortiz 7 months ago

Dear Nelly,
Thank you for contacting us. We calculate the SJR data for all the publication's types, but the Quartile's data are only calculated for Journals and Book Series.
Best regards, SCImago Team

K **KOVENDAN** 12 months ago

Dose the IOP conference series covers in scopus database or not.

reply

SCImago Team

Melanie Ortiz 12 months ago

Dear Kovendan,
Thank you very much for your comment.

status as SJR is a static image of Scopus, which is changing every day.
For further information, please contact Scopus support:
https://service.elsevier.com/app/answers/detail/a_id/14883/kw/scimago/supporthub/scopus/
Best Regards, SCImago Team

R **Rafael** 12 months ago

No se visualiza el cuartil, cual es el motivo?

reply

SCImago Team

Melanie Ortiz 12 months ago

Dear Rafael,

Thank you for contacting us. Please see comments below.

Best Regards, SCImago Team

V **Vo Anh Tuan** 12 months ago

Dear Melanie , Elena and SCImago team

Can you please let me know Q1/ Q2:/ Q3 or Q4 Classiffication as the journal IOP Conference Series : Materials Science and Engineering , with the Volume published as the link below:

https://iopscience.iop.org/volume/1757-899X/869

Thank you so much for your Promp reply

Warmest regards

VÕ Anh Tuấn

University of Architecture of HO CHI MINH CITY, VIETNAM
Tel: 84908226165
196 Pasteur , District 3, HCMC, Vietnam

reply

SCImago Team

Melanie Ortiz 12 months ago

the Quartile's data are only calculated for Journals and Book Series.
Best regards, SCImago Team

P **ptnabeel** 1 year ago

I was looking for a template to publish my paper in IOP conference series: Material Science and Engineering.

reply

SCImago Team

Melanie Ortiz 1 year ago

Dear Sir/Madam,
thank you for contacting us.
We suggest you visit the journal's homepage (See submission/author guidelines) or contact the journal's editorial staff , so they could inform you more deeply.
Best Regards, SCImago Team

H **Haydar Al-Ethari** 1 year ago

I hope this message finds you very well
I have two papers published in the IOP Conference Series: Materials Science and Engineering, Volume 881, 3rd International Conference on Sustainable Engineering Techniques (ICSET 2020) 15 April 2020, Baghdad, Iraq, but I did not find them in my id author profile in scopus and could not add them manually. Is there any problem with this publication/conference/journal? (may be out of scopus). The online publication was at 1/7/2020.
Best Regards

reply

S **Saran** 12 months ago

Hi.is there any problem in adding to scopus author profile?

SCImago Team

Melanie Ortiz 12 months ago

Dear Saran,
thank you very much for your comment, unfortunately we cannot help you with your request. We suggest you contact Scopus support:
https://service.elsevier.com/app/answers/detail/a_id/14883/kw/scimago/supporthub/scopus/
Best Regards, SCImago Team

SCImago Team

Melanie Ortiz 1 year ago

Dear Haydar,
thank you very much for your comment, unfortunately we cannot help you with your request. We suggest you contact Scopus support:
https://service.elsevier.com/app/answers/detail/a_id/14883/kw/scimago/supporthub/scopus/
Best Regards, SCImago Team

A **AL-Kurdhani J. M. H.** 1 year ago

Hello
Dear Elena,
I want to know what is the value of impact factor of 2019 for useful all MSC. or/and pH.D. students by publishing in these journals and my students need the Q1 or Q2 in SJR with Scopus Q-ranking to graduation.
Thank you so much.

Best Regards,

reply

SCImago Team

Melanie Ortiz 1 year ago

Dear AL-Kurdhani,

Thank you for contacting us. Could you please tell us which particular journal you are referring to?

Best Regards, SCImago Team

V **Virat Khanna** 1 year ago

Can you please tell, how much time does IOP conference series take to publish the proceeding of the conference after the conference date.

reply

SCImago Team

Melanie Ortiz 1 year ago

Dear Virat,
thank you for contacting us.
Unfortunately, we cannot help you with your request, we suggest you contact the editorial staff , so they could inform you more deeply.

S **syafriyudin** 1 year ago

is The journal IOP Conference Series: Materials Science and Engineering in the scopus index

reply

SCImago Team

Melanie Ortiz 1 year ago

Dear Syafriyudin,
Thank you very much for your comment.
All the metadata have been provided by Scopus /Elsevier in their last update sent to SCImago, including the Coverage's period data. The SJR for 2019 was updated on June 2020, 11. We suggest you consult the Scopus database directly to see the current index status as SJR is a static image of Scopus, which is changing every day.
Best Regards, SCImago Team

F **Fouad Fadhil Al-Qaim** 1 year ago

Dear Sir/Madam
May I know this Journal whether Q1, Q2,Q3 or Q4? Actually, there is no any quarter reported here.
Thank you

reply

SCImago Team

Melanie Ortiz 1 year ago

Dear Fouad,
Thank you for contacting us. We calculate the SJR data for all the publication's types, but the Quartile's data are only calculated for Journals.
Best regards, SCImago Team

R **Raj kamal** 1 year ago

IOP is whether scopus indexed

reply

SCImago Team

Melanie Ortiz 1 year ago

Dear Raj,
Thank you very much for your comment.

status as SJR is a static image of Scopus, which is changing every day.
Best Regards, SCImago Team

R **ramanathan venkatachalam** 1 year ago

What is impact factor of IOP Conf. Series: Materials Science and Engineering

reply

SCImago Team

Melanie Ortiz 1 year ago

Dear Ramanathan, thank you very much for your comment.
SCImago Journal and Country Rank uses Scopus data, our impact indicator is the SJR. Check out our web to localize the journal. We suggest you consult the Journal Citation Report for other indicators (like Impact Factor) with a Web of Science data source. Best Regards, SCImago Team

A **Abbas Al-Hdabi** 1 year ago

Dear Elena
I hope that you are very well and will be safe within Corona virus crises.
Please let me know when you issue the new journal classification i.e. Q1, q2 ... and what is your strategy for your update.
My query is a general one not regarding IOP publications.

Kind regards and stay safe

Abbas

reply

SCImago Team

Melanie Ortiz 1 year ago

Dear Abbas,
Thank you for contacting us. Our data come from Scopus, they annually send us an update of the data. This update is sent to us around April / May every year. Thus, the indicators for 2019 will be available in June 2020. Best Regards, SCImago Team

B **Boumediene sadoun** 2 years ago

Hello

reply

SCImago Team

Melanie Ortiz 2 years ago

Dear Boumediene, thank you very much for your comment.
SCImago Journal and Country Rank uses Scopus data, our impact indicator is the SJR. Check out our web to localize the journal. We suggest you to consult the Journal Citation Report for other indicators (like Impact Factor) with a Web of Science data source. For further information about this journal, please visit the journal's website. Best Regards, SCImago Team

P **PARU** 2 years ago

IOP CONFERENCE SERIES A BOOK OR JOURNAL.

reply

SCImago Team

Melanie Ortiz 2 years ago

Dear Paru,
Thank you for contacting us.
SJR is a portal with scientometric indicators of journals indexed in Scopus. All the data have been provided By Scopus /Elsevier and SCImago doesn´t have the authority over this data which are property of Scopus/Elsevier. SCImago has a signed agreement that limits our performance to the generation of scientometric indicators derived from the metadata sent in the last update. Apparently, Scopus has categorized this publication in "Conference and Proceedings" section. We suggest you to contact with Scopus support regarding this request: https://service.elsevier.com/app/answers/detail/a_id/14883/kw/scimago/supporthub/scopus/. Best Regards, SCImago Team

Hebatalrahman Hebatalrahman 2 years ago

please what is value can express impact factor for IOP conference series material science and engineering

reply

SCImago Team

Melanie Ortiz 2 years ago

Dear Hebatalrahman, thank you very much for your comment.

Report for other indicators (like Impact Factor) with a Web of Science data source. Best Regards, SCImago Team

A **Andrei** 2 years ago

No me carga el cuartil, saben porqué se debe eso?

reply

SCImago Team

Melanie Ortiz 2 years ago

Dear Andrei,
Thank you for contacting us. We calculate the SJR data for all the publication types, but the Quartile data are only calculated for Journal type's publications. Best regards, SCImago Team

K **Kassim** 2 years ago

Hello
I want know that is Elsevier a publisher of this journal?

reply

M **MADHU LATA BHARTI** 2 years ago

please tell me if this journal is ugc listed, if it is, what is its ugc approval number?

reply

O **Ondrej** 2 years ago

Madhu means if the journal is approved and listed in University Grants Commission of India. It is possible to find it out here (after registration):
https://ugccare.unipune.ac.in/site/website/index.aspx
However, IOP Conference Series: Materials Science and Engineering, is not, in fact, journal, but it collects proceedings from conferences, not journal articles. Still, the good thing is that IOP CS is WOS, Scopus (SJR) indexed. Generally, IOP publishing house is fair and reilable institution.

SCImago Team

SCImago Team

Melanie Ortiz 2 years ago

Dear Madhu, could you please expand your comment? Best Regards, SCImago Team

O **osamah raad** 2 years ago

please how can I know the dates future conferences of IOP? are there any website for that purpose?
Regards

reply

K **Kabiru** 2 years ago

Dear Elena,
If IOP is a conference, then papers published in it are Scopus journal articles or just conference papers?
I was told that the papers published in IOP: material science and engineering are Scopus indexed journal papers with Scopus Q-ranking.
We need this for our Ph.D. graduation requirement.

THANK YOU

reply

SCImago Team

Elena Corera 2 years ago

Dear Kabiru, thank you very much for your comment, unfortunately we cannot help you with your request. We suggest you consult the Scopus database directly. Remember that the SJR is a static image of a database (Scopus) which is changing every day. Best regards, SCImago Team

A **Asha Rajiv** 3 years ago

Wanted to know whether the journal is scopus indexed?

reply

SCImago Team

Elena Corera 3 years ago

Dear Asha,

Best regards,
SCImago Team

a ridwan 3 years ago

if this conference and proceeding indexed by scopus how could i find my id author in scopus ?

reply

S **Salam Jabr** 2 years ago

https://www.eetc-pec19.org/?fbclid=IwAR2lOrbhvf6gtCwmddESpBVea7_p9MCW_bw3WUrzzZV1lB5BMgI6d5FA1mA

SCImago Team

Elena Corera 3 years ago

Dear A Ridwan,

thank you very much for your comment, unfortunately we cannot help you with your request. We suggest you contact Scopus https://service.elsevier.com/app/answers/detail/a_id/14883/kw/scimago/supporthub/scopus/

Best Regards,
SCImago Team

T **Thanikasalam** 3 years ago

Hi, is this Scopus indexed?

reply

SCImago Team

Elena Corera 3 years ago

Dear Thanikasalam,
thank you for your request, all the journals included in SJR are indexed in Scopus. Elsevier / Scopus is our data provider.
Best Regards,
SCImago Team

Dear Mam,
Just i want to ask you it is SCI,SCIE,OR EI or other journal?I know it is conference proceeding journal.
Thanks.

reply

SCImago Team

Elena Corera 3 years ago

Dear Dr Ellahi, SCImago Journal and Country Rank uses Scopus data, our impact indicator is the SJR. Check our page to locate the journal. We suggest you consult the Journal Citation Report for other indicators (like Impact Factor) with a Web of Science data source. Best Regards, SCImago Team

N **Nikhil jain** 3 years ago

Madam icame 2018 conference papers not published yet can you tell me status

reply

SCImago Team

Elena Corera 3 years ago

Dear Nikhil,

articles publicated in 2018 are not over yet (we are in September). 2018 indicators will not be available until June 2019. We can not see what will happen in the future with this journal. SCImago receives the data from Scopus / Elsevier annually and does not have the authority to include, exclude or modify the data provided by Scopus.

Best Regards,
SCImago Team

M **Moisés Toapanta** 3 years ago

The IOP Conference is considered a research journal or only remains in conference proceedings. What is the difference of the SJR impact between a conference journal and a scientific journal

reply

SCImago Team

Elena Corera 3 years ago

Best Regards,
SCImago Team

Vadym 3 years ago

Dears, colleagues!

The journal IOP Conference Series: Materials Science and Engineering is it Q3 or Q4?

Best Regards

reply

ahmad fauzi 1 year ago

why journal of physics (IOP conferences has Q3? but the journal don't have. Both of them are conferences

SCImago Team

Elena Corera 3 years ago

Dear friend,
It's a conference, it does not have a quartile.
https://www.scimagojr.com/journalsearch.php?q=19700200831&tip=sid&clean=0
Best Regards, SRG

Leave a comment

Name

Email
(will not be published)

Submit

The users of Scimago Journal & Country Rank have the possibility to dialogue through comments linked to a specific journal. The purpose is to have a forum in which general doubts about the processes of publication in the journal, experiences and other issues derived from the publication of papers are resolved. For topics on particular articles, maintain the dialogue through the usual channels with your editor.

Developed by: SCImago

Powered by: Scopus

Follow us on @ScimagoJR

EST MODUS IN REBUS
Horatio (Satire 1,1,106)

ISSN 1757-899X

IOP Conference Series

Materials Science and Engineering

2nd International Conference on Robotics and Mechantronics

517

VOLUME 517 – 2019

8– 11 November 2018
Singapore

EDITOR
Meng Joo Er

The open access journal for conference proceedings

iopscience.org/jpcs

IOP Publishing

Table of contents

Volume 740
2020

Previous issueNext issue

2019 2nd International Conference on Mechanical, Electrical and Material Application (MEMA) 2019 25–27 October 2019, Xi'an, China

Accepted papers received: 10 January 2020
Published online: 16 March 2020

Open all abstracts, in this issue

THE FOLLOWING ARTICLE ISOPEN ACCESS

Method for Decomposing Accuracy of Interferometer Based on Inertial Navigation Aid

Guansuo Tian, Jingjing Duan, Xiaosong Li, Guozhe Zhou, Xin Lv and Jun Zhou
Open abstractMethod for Decomposing Accuracy of Interferometer Based on Inertial Navigation Aid View article, Method for Decomposing Accuracy of Interferometer Based on Inertial Navigation Aid PDF, Method for Decomposing Accuracy of Interferometer Based on Inertial Navigation Aid

012003

THE FOLLOWING ARTICLE ISOPEN ACCESS

Design of Magnetic Circuit and Simulation of Magnetic Fluid Sealing with Three Magnetic Sources

Fuxiang Hao, Xiaolong Yang and Peng Sun
Open abstractDesign of Magnetic Circuit and Simulation of Magnetic Fluid Sealing with Three Magnetic Sources View article, Design of Magnetic Circuit and Simulation of Magnetic Fluid Sealing with Three Magnetic Sources PDF, Design of Magnetic Circuit and Simulation of Magnetic Fluid Sealing with Three Magnetic Sources

012004

THE FOLLOWING ARTICLE ISOPEN ACCESS

Magnetic Field Finite Element Analysis of a Novel Diverging Stepped Magnetic Fluid Seal

Peng Sun, Xiaolong Yang and Fuxiang Hao
Open abstractMagnetic Field Finite Element Analysis of a Novel Diverging Stepped Magnetic Fluid Seal View article, Magnetic Field Finite Element Analysis of a Novel Diverging Stepped Magnetic Fluid Seal PDF, Magnetic Field Finite Element Analysis of a Novel Diverging Stepped Magnetic Fluid Seal

012005

THE FOLLOWING ARTICLE ISOPEN ACCESS

Finite Element Analysis and Ultrasonic Evaluation of Stresses in Q345 Plates

Yuhong Zhu, Jidong Tan and Cheng Song
Open abstractFinite Element Analysis and Ultrasonic Evaluation of Stresses in Q345 Plates View article, Finite Element Analysis and Ultrasonic Evaluation of Stresses in Q345 Plates PDF, Finite Element Analysis and Ultrasonic Evaluation of Stresses in Q345 Plates

012006

THE FOLLOWING ARTICLE ISOPEN ACCESS

Development of Simulator for Mine Dust and Disturbing Environment

Yiming Fang, Qing Li, Zhemin Chen and Can Tu
Open abstractDevelopment of Simulator for Mine Dust and Disturbing Environment View article, Development of Simulator for Mine Dust and Disturbing Environment PDF, Development of Simulator for Mine Dust and Disturbing Environment

012007

THE FOLLOWING ARTICLE ISOPEN ACCESS

Fluent simulation and experimental analysis of polished surface topography of single crystal germanium

Zhiyi Leng and Xiaojing Yang
Open abstractFluent simulation and experimental analysis of polished surface topography of single crystal germanium View article, Fluent simulation and experimental analysis of polished surface topography of single crystal germanium PDF, Fluent simulation and experimental analysis of polished surface topography of single crystal germanium

012008

THE FOLLOWING ARTICLE ISOPEN ACCESS

Simulation Analysis of Experiment Vessel of Explosion-Proof Valve

Hong Liu, wen-Hao Hu and Shao-Xiang Shen
Open abstractSimulation Analysis of Experiment Vessel of Explosion-Proof Valve View article, Simulation Analysis of Experiment Vessel of Explosion-Proof Valve PDF, Simulation Analysis of Experiment Vessel of Explosion-Proof Valve

012009

THE FOLLOWING ARTICLE ISOPEN ACCESS

A Control System of Electric Wheelchair

Weidong Yang, Yijiang Tang, Qiang Wang, Zhi Lan and Honglun Su
Open abstractA Control System of Electric Wheelchair View article, A Control System of Electric Wheelchair PDF, A Control System of Electric Wheelchair

012010

THE FOLLOWING ARTICLE ISOPEN ACCESS

Mathematical and geometry model of a spherical gear with three degree of freedom

Demin Wang, Zhenquan Xu, Jun Wang, Xianting Lu, Baichao Wang, Junsheng Wang and Xuzhong Zhang
Open abstractMathematical and geometry model of a spherical gear with three degree of freedom View article, Mathematical and geometry model of a spherical gear with three degree of freedom PDF, Mathematical and geometry model of a spherical gear with three degree of freedom

012011

THE FOLLOWING ARTICLE ISOPEN ACCESS

Super-Resolution Reconstruction of Single Image based on Multiscale Recursive Residual Network

Mi Dong and Jian Huang
Open abstractSuper-Resolution Reconstruction of Single Image based on Multiscale Recursive Residual Network View article, Super-Resolution Reconstruction of Single Image based on Multiscale Recursive Residual Network PDF, Super-Resolution Reconstruction of Single Image based on Multiscale Recursive Residual Network

012012

THE FOLLOWING ARTICLE ISOPEN ACCESS

Rolling Bearing Fault Diagnosis Method Based on Principal Components Analysis and Probabilistic Neural Network

Yun Feng Ni and Dong Dong Ban
Open abstractRolling Bearing Fault Diagnosis Method Based on Principal Components Analysis and Probabilistic Neural Network View article, Rolling Bearing Fault Diagnosis Method Based on Principal Components Analysis and Probabilistic Neural Network PDF, Rolling Bearing Fault Diagnosis Method Based on Principal Components Analysis and Probabilistic Neural Network

012013

THE FOLLOWING ARTICLE ISOPEN ACCESS

Bus-Protection Device-Tank-type Vehicle System Collision Research

Guosheng Zhang, Haiyang Zheng, Ye Chen and Hongli Liu
Open abstractBus-Protection Device-Tank-type Vehicle System Collision Research View article, Bus-Protection Device-Tank-type Vehicle System Collision Research PDF, Bus-Protection Device-Tank-type Vehicle System Collision Research

012014

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on Energy Absorption Characteristics of Protective Devices with Different Wall Thickness Structures

Guosheng Zhang, Chunhui Wang, Ye Chen and Linsen Du
Open abstractResearch on Energy Absorption Characteristics of Protective Devices with Different Wall Thickness Structures View article, Research on Energy Absorption Characteristics of Protective Devices with Different Wall Thickness Structures PDF, Research on Energy Absorption Characteristics of Protective Devices with Different Wall Thickness Structures

012015

THE FOLLOWING ARTICLE ISOPEN ACCESS

Strength Analysis of Primary Pump Motor in Primary Reactor

Dongxin Wang
Open abstractStrength Analysis of Primary Pump Motor in Primary Reactor View article, Strength Analysis of Primary Pump Motor in Primary Reactor PDF, Strength Analysis of Primary Pump Motor in Primary Reactor

012016

THE FOLLOWING ARTICLE ISOPEN ACCESS

Parameter Optimization of Surface Roughness in Ultrasonic Vibration Cutting Process

Pengcheng Zhao, Junyuan Wang and Yiming Cao
Open abstractParameter Optimization of Surface Roughness in Ultrasonic Vibration Cutting Process View article, Parameter Optimization of Surface Roughness in Ultrasonic Vibration Cutting Process PDF, Parameter Optimization of Surface Roughness in Ultrasonic Vibration Cutting Process

012017

THE FOLLOWING ARTICLE ISOPEN ACCESS

A multi-sensor system and its error compensation for on-machine measurement

Zhenjiu Zhang, Mingjun Ren, Mingjun Liu, Linzhong Xia and Lijian Sun
Open abstractA multi-sensor system and its error compensation for on-machine measurement View article, A multi-sensor system and its error compensation for on-machine measurement PDF, A multi-sensor system and its error compensation for on-machine measurement

012018

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on Reverse Measuring Method of Screw Drill Rotor Based on Axis Section

Daqi Li, Xuetong Wei, Lingyi Yang, Yujie Song and Dalong Bi
Open abstractResearch on Reverse Measuring Method of Screw Drill Rotor Based on Axis Section View article, Research on Reverse Measuring Method of Screw Drill Rotor Based on Axis Section PDF, Research on Reverse Measuring Method of Screw Drill Rotor Based on Axis Section

012019

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on Performance of Artificial Bee Colony Algorithm Based on Benchmark Test Function

Ren Wang, Keke Shi and Shuqi Wang
Open abstractResearch on Performance of Artificial Bee Colony Algorithm Based on Benchmark Test Function View article, Research on Performance of Artificial Bee Colony Algorithm Based on Benchmark Test Function PDF, Research on Performance of Artificial Bee Colony Algorithm Based on Benchmark Test Function

012020

THE FOLLOWING ARTICLE ISOPEN ACCESS

Optimization of Coordinated Control System on Radial Basis Function Neural Network

Yunfeng Ni and Songlin Chen
Open abstractOptimization of Coordinated Control System on Radial Basis Function Neural Network View article, Optimization of Coordinated Control System on Radial Basis Function Neural Network PDF, Optimization of Coordinated Control System on Radial Basis Function Neural Network

012021

THE FOLLOWING ARTICLE ISOPEN ACCESS

Multi tool path managing and NC programming aided software based on UG

Zihan Gao, Yingduo Lan, Yidu Zhang, Qiong Wu and Sentang Zhang
Open abstractMulti tool path managing and NC programming aided software based on UG View article, Multi tool path managing and NC programming aided software based on UG PDF, Multi tool path managing and NC programming aided software based on UG

012022

THE FOLLOWING ARTICLE ISOPEN ACCESS

Model Identification and Internal Model Control for 3D Printer

Ruidong Xie, Yingmin Yi and Haichuan Yang
Open abstractModel Identification and Internal Model Control for 3D Printer View article, Model Identification and Internal Model Control for 3D Printer PDF, Model Identification and Internal Model Control for 3D Printer

012023

THE FOLLOWING ARTICLE ISOPEN ACCESS

The estimation of the laser point temperature based on CNN (Convolutional Neural Network)

Yingmin Yi, Ruidong Xie and Haichuan Yang
Open abstractThe estimation of the laser point temperature based on CNN (Convolutional Neural Network) View article, The estimation of the laser point temperature based on CNN (Convolutional Neural Network) PDF, The estimation of the laser point temperature based on CNN (Convolutional Neural Network)

012024

THE FOLLOWING ARTICLE ISOPEN ACCESS

Dynamic reliability analysis of a heat-roller based on finite element method

Guang Wen, Pingping Liu, Fangjun Zuo, Rui Su, Meiwei Jia, Gangjun Li and Zeyu Kang
Open abstractDynamic reliability analysis of a heat-roller based on finite element method View article, Dynamic reliability analysis of a heat-roller based on finite element method PDF, Dynamic reliability analysis of a heat-roller based on finite element method

012025

THE FOLLOWING ARTICLE ISOPEN ACCESS

Static optimization design of a printer heat-roller based on sensitivity analysis

Guang Wen, Pingping Liu, Fangjun Zuo, Rui Su, Meiwei Jia and Gangjun Li
Open abstractStatic optimization design of a printer heat-roller based on sensitivity analysis View article, Static optimization design of a printer heat-roller based on sensitivity analysis PDF, Static optimization design of a printer heat-roller based on sensitivity analysis

012026

THE FOLLOWING ARTICLE ISOPEN ACCESS

Design and Test of Double-pick Double-striped wheel Tooth-type Residual Film Picker

Yaxin Zhang, Hang Li, Shaohua Li and Hongze Zhang
Open abstractDesign and Test of Double-pick Double-striped wheel Tooth-type Residual Film Picker View article, Design and Test of Double-pick Double-striped wheel Tooth-type Residual Film Picker PDF, Design and Test of Double-pick Double-striped wheel Tooth-type Residual Film Picker

012027

THE FOLLOWING ARTICLE ISOPEN ACCESS

Design and Test of Wind Plate-type Residual Membrane Hybrid Separator

Yaxin Zhang, Hang Li, Shaohua Li and Hongze Zhang
Open abstractDesign and Test of Wind Plate-type Residual Membrane Hybrid Separator View article, Design and Test of Wind Plate-type Residual Membrane Hybrid Separator PDF, Design and Test of Wind Plate-type Residual Membrane Hybrid Separator

012028

THE FOLLOWING ARTICLE ISOPEN ACCESS

Design of A Dual-rotor Engine Driving by the Elliptic Gear

Yi Fan
Open abstractDesign of A Dual-rotor Engine Driving by the Elliptic Gear View article, Design of A Dual-rotor Engine Driving by the Elliptic Gear PDF, Design of A Dual-rotor Engine Driving by the Elliptic Gear

012029

THE FOLLOWING ARTICLE ISOPEN ACCESS

Simulation calculation of the effects of seal face width on mechanical seal performance

Long Wei, Guifang Fang and Penggao Zhang
Open abstractSimulation calculation of the effects of seal face width on mechanical seal performance View article, Simulation calculation of the effects of seal face width on mechanical seal performance PDF, Simulation calculation of the effects of seal face width on mechanical seal performance

012030

THE FOLLOWING ARTICLE ISOPEN ACCESS

Virtual Sample analysis of concomitance fork's stability and passing capacity

Jing-Tao Yue and Li Tang
Open abstractVirtual Sample analysis of concomitance fork’s stability and passing capacity View article, Virtual Sample analysis of concomitance fork's stability and passing capacity PDF, Virtual Sample analysis of concomitance fork's stability and passing capacity

012031

THE FOLLOWING ARTICLE ISOPEN ACCESS

Application of Augmented Reality in Thermal Control Implementation of Satellite Pipe

Wei Zhang, Changyu Chen, Fanwei Meng, Jun Hou and Haibao Qu
Open abstractApplication of Augmented Reality in Thermal Control Implementation of Satellite Pipe View article, Application of Augmented Reality in Thermal Control Implementation of Satellite Pipe PDF, Application of Augmented Reality in Thermal Control Implementation of Satellite Pipe

012032

THE FOLLOWING ARTICLE ISOPEN ACCESS

Influence of structural parameters of venturi on internal flow field changes

Chuanmao Lv, Puhao Wang, Xiaoguang Zhang and Haifeng Lv
Open abstractInfluence of structural parameters of venturi on internal flow field changes View article, Influence of structural parameters of venturi on internal flow field changes PDF, Influence of structural parameters of venturi on internal flow field changes

012033

THE FOLLOWING ARTICLE ISOPEN ACCESS

A study on auxiliary steam reducing device in marine nuclear power plants

Huijing Zhao, Guanhui Zhao and Rui Ma
Open abstractA study on auxiliary steam reducing device in marine nuclear power plants View article, A study on auxiliary steam reducing device in marine nuclear power plants PDF, A study on auxiliary steam reducing device in marine nuclear power plants

012034

THE FOLLOWING ARTICLE ISOPEN ACCESS

Simulation analysis and experiment research of stiffness variable shock isolator for large-scale marine equipment

Xiang Lu, Xiaojie Yan and Bo Wu
Open abstractSimulation analysis and experiment research of stiffness variable shock isolator for large-scale marine equipment View article, Simulation analysis and experiment research of stiffness variable shock isolator for large-scale marine equipment PDF, Simulation analysis and experiment research of stiffness variable shock isolator for large-scale marine equipment

012035

THE FOLLOWING ARTICLE ISOPEN ACCESS

The method of grid map construction of visual characteristics on rocket tank surface and robot automatic cleaning path planning

Xiaodong Liu, Haibo Xu, Li Wang, Li Liu and Rui Wang
Open abstractThe method of grid map construction of visual characteristics on rocket tank surface and robot automatic cleaning path planning View article, The method of grid map construction of visual characteristics on rocket tank surface and robot automatic cleaning path planning PDF, The method of grid map construction of visual characteristics on rocket tank surface and robot automatic cleaning path planning

012036

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on Classification Method of Vehicle Body Surface Defects Based on BP Neural Network

Xing Wang, Mingming Wu, Jinxia Zhou and Jianguo Wang
Open abstractResearch on Classification Method of Vehicle Body Surface Defects Based on BP Neural Network View article, Research on Classification Method of Vehicle Body Surface Defects Based on BP Neural Network PDF, Research on Classification Method of Vehicle Body Surface Defects Based on BP Neural Network

012037

THE FOLLOWING ARTICLE ISOPEN ACCESS

Thermohydrodynamic performance of water-lubricated thrust bearing of mine high speed rescue pump

Yuxing Bai, Bo Pan and Yong Shen
Open abstractThermohydrodynamic performance of water-lubricated thrust bearing of mine high speed rescue pump View article, Thermohydrodynamic performance of water-lubricated thrust bearing of mine high speed rescue pump PDF, Thermohydrodynamic performance of water-lubricated thrust bearing of mine high speed rescue pump

012038

THE FOLLOWING ARTICLE ISOPEN ACCESS

Comparative Study on Turbulence Models of High-Speed Centrifugal Pump with Low Specific Speed

Xiaoyu Li, Yunguang Ji, Hongbin Cui and Shuqi Xue
Open abstractComparative Study on Turbulence Models of High-Speed Centrifugal Pump with Low Specific Speed View article, Comparative Study on Turbulence Models of High-Speed Centrifugal Pump with Low Specific Speed PDF, Comparative Study on Turbulence Models of High-Speed Centrifugal Pump with Low Specific Speed

012039

THE FOLLOWING ARTICLE ISOPEN ACCESS

Bayesian Inference of Proportional Hazard Rate Model under Progressively Type-II Censored Sample

Min Hu and Haiping Ren
Open abstractBayesian Inference of Proportional Hazard Rate Model under Progressively Type-II Censored Sample View article, Bayesian Inference of Proportional Hazard Rate Model under Progressively Type-II Censored Sample PDF, Bayesian Inference of Proportional Hazard Rate Model under Progressively Type-II Censored Sample

012040

THE FOLLOWING ARTICLE ISOPEN ACCESS

Blind identification of network protocols based on improved Apriori algorithm

Yingchun Chen, Yuchen Dai, Jingliang Xue and Fang Dong
Open abstractBlind identification of network protocols based on improved Apriori algorithm View article, Blind identification of network protocols based on improved Apriori algorithm PDF, Blind identification of network protocols based on improved Apriori algorithm

012041

THE FOLLOWING ARTICLE ISOPEN ACCESS

Study on the influence of impeller area ratio parameter on performance and flow excitation of centrifugal pump

Changsheng Chen, Shan Li, Ben Lu, Zhen Lu and Yi Zhang

Open abstractStudy on the influence of impeller area ratio parameter on performance and flow excitation of centrifugal pump View article, Study on the influence of impeller area ratio parameter on performance and flow excitation of centrifugal pump PDF, Study on the influence of impeller area ratio parameter on performance and flow excitation of centrifugal pump

012042

THE FOLLOWING ARTICLE ISOPEN ACCESS

Design of a New Type of Hybrid Heavy Load Palletizing Robot

Yang Shu and Kaiming Li
Open abstractDesign of a New Type of Hybrid Heavy Load Palletizing Robot View article, Design of a New Type of Hybrid Heavy Load Palletizing Robot PDF, Design of a New Type of Hybrid Heavy Load Palletizing Robot

012043

THE FOLLOWING ARTICLE ISOPEN ACCESS

Major crop pests identification research based on Convolutional Neural Network

Lijun Luo, Yan Ren, Ling Gu, Tianjiao Wang, Fenglin Zhou, Wanyi Yang, Hongyan Zhang, Dongyu Li and Jingwen Xu
Open abstractMajor crop pests identification research based on Convolutional Neural Network View article, Major crop pests identification research based on Convolutional Neural Network PDF, Major crop pests identification research based on Convolutional Neural Network

012044

THE FOLLOWING ARTICLE ISOPEN ACCESS

Design of spraying robot end actuator and experimental study on motion trajectory simulation

Chen Zhang, Xuewu Xu, Guoping Wang and Jing Men
Open abstractDesign of spraying robot end actuator and experimental study on motion trajectory simulation View article, Design of spraying robot end actuator and experimental study on motion trajectory simulation PDF, Design of spraying robot end actuator and experimental study on motion trajectory simulation

012045

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on Four Stroke Diesel Engine Starting Unload Mechanism

Yongwen Hu and Ying Zhang
Open abstractResearch on Four Stroke Diesel Engine Starting Unload Mechanism View article, Research on Four Stroke Diesel Engine Starting Unload Mechanism PDF, Research on Four Stroke Diesel Engine Starting Unload Mechanism

012046

THE FOLLOWING ARTICLE ISOPEN ACCESS

Features of Mechanical Product Manual and Its Translation Strategies

Mingliang Wang and Zhihui Liu
Open abstractFeatures of Mechanical Product Manual and Its Translation Strategies View article, Features of Mechanical Product Manual and Its Translation Strategies PDF, Features of Mechanical Product Manual and Its Translation Strategies

012047

THE FOLLOWING ARTICLE ISOPEN ACCESS

FANUC CNC vertical machining center "EX1016 - Low Air Pressure" fault diagnosis

Cunjin Ai, Chuanchuan Cao, Wen jiang Li and Dakui Yang
Open abstractFANUC CNC vertical machining center “EX1016 - Low Air Pressure” fault diagnosis View article, FANUC CNC vertical machining center "EX1016 - Low Air Pressure" fault diagnosis PDF, FANUC CNC vertical machining center "EX1016 - Low Air Pressure" fault diagnosis

---

2. Development and application of new materials

012048

THE FOLLOWING ARTICLE ISOPEN ACCESS

Performance Analysis and Improvement of Gypsum Board Prepared from Desulfurized Gypsum with High Chloride Ion Content

Dongjie Yin, Fade Wu, Ying Wang, Pengqi Wang, Danjun Tan, Ming Jian and Liang He
Open abstractPerformance Analysis and Improvement of Gypsum Board Prepared from Desulfurized Gypsum with High Chloride Ion Content View article, Performance Analysis and Improvement of Gypsum Board Prepared from Desulfurized Gypsum with High Chloride Ion Content PDF, Performance Analysis and Improvement of Gypsum Board Prepared from Desulfurized Gypsum with High Chloride Ion Content

012049

THE FOLLOWING ARTICLE ISOPEN ACCESS

Discussions on Fracture Mechanisms of Composite Insulator

Jianjun Zheng, Zhigang Wei, Yunpeng Gao and Weiwei Gong
Open abstractDiscussions on Fracture Mechanisms of Composite Insulator View article, Discussions on Fracture Mechanisms of Composite Insulator PDF, Discussions on Fracture Mechanisms of Composite Insulator

012050

THE FOLLOWING ARTICLE ISOPEN ACCESS

Manufacture on marine equipment special repair material—Metalock

Zhelun Shen, Yaning Wang, Wendong Song, Lili Ji and Lu Cai
Open abstractManufacture on marine equipment special repair material—Metalock View article, Manufacture on marine equipment special repair material—Metalock PDF, Manufacture on marine equipment special repair material—Metalock

012051

THE FOLLOWING ARTICLE ISOPEN ACCESS

Comprehensive evaluation and analysis of design scheme of automatic feeding and discharging device for freeze-drying system

Jin Ding, Zheng-hao Ge and Li-hua Cheng
Open abstractComprehensive evaluation and analysis of design scheme of automatic feeding and discharging device for freeze-drying system View article, Comprehensive evaluation and analysis of design scheme of automatic feeding and discharging device for freeze-drying system PDF, Comprehensive evaluation and analysis of design scheme of automatic feeding and discharging device for freeze-drying system

012052

THE FOLLOWING ARTICLE ISOPEN ACCESS

Corrosion resistance of optical diamond-like carbon film

Shuyun Wang, Xu Liu, Yi Liu, Weixin Zhang and Yimin Lu
Open abstractCorrosion resistance of optical diamond-like carbon film View article, Corrosion resistance of optical diamond-like carbon film PDF, Corrosion resistance of optical diamond-like carbon film

012053

THE FOLLOWING ARTICLE ISOPEN ACCESS

Lifetime prediction for carbon fiber composite core wire based on accelerated degradation test

Junbing Wang and Gen Liu
Open abstractLifetime prediction for carbon fiber composite core wire based on accelerated degradation test View article, Lifetime prediction for carbon fiber composite core wire based on accelerated degradation test PDF, Lifetime prediction for carbon fiber composite core wire based on accelerated degradation test

012054

THE FOLLOWING ARTICLE ISOPEN ACCESS

Study on Galloping Characteristics of Large-section Carbon Fiber Composite Core Conductor

Xueping Zhan, Bin Liu, Jingchao Wang and Kunpeng Ji
Open abstractStudy on Galloping Characteristics of Large-section Carbon Fiber Composite Core Conductor View article, Study on Galloping Characteristics of Large-section Carbon Fiber Composite Core Conductor PDF, Study on Galloping Characteristics of Large-section Carbon Fiber Composite Core Conductor

012055

THE FOLLOWING ARTICLE ISOPEN ACCESS

The research and development of Soldering materials applied in IGBT modules packaging

Keming Liu, Erxian Yao, Jinlong Yang, Yiwen Wang and Xiaogang Hu
Open abstractThe research and development of Soldering materials applied in IGBT modules packaging View article, The research and development of Soldering materials applied in IGBT modules packaging PDF, The research and development of Soldering materials applied in IGBT modules packaging

012056

THE FOLLOWING ARTICLE ISOPEN ACCESS

Application of Selective Laser Melting Technology Based on Titanium Alloy in Aerospace Products

Li-li Jing, yu-hua Li, Ke wei Cheng, Feng Wang and Jin Wen Shi
Open abstractApplication of Selective Laser Melting Technology Based on Titanium Alloy in Aerospace Products View article, Application of Selective Laser Melting Technology Based on Titanium Alloy in Aerospace Products PDF, Application of Selective Laser Melting Technology Based on Titanium Alloy in Aerospace Products

012057

THE FOLLOWING ARTICLE ISOPEN ACCESS

Study on Corrosion Resistance of Modified Concrete Grounding Materials

Xianghan Wang, Rui Liu and Bo Tan
Open abstractStudy on Corrosion Resistance of Modified Concrete Grounding Materials View article, Study on Corrosion Resistance of Modified Concrete Grounding Materials PDF, Study on Corrosion Resistance of Modified Concrete Grounding Materials

012058

THE FOLLOWING ARTICLE ISOPEN ACCESS

Preparation and Characterization of Cross-linked Poly(lactic acid) / Poly(butylene succinate) Blends

Miao Zhao, Rong-Rong Hu, Hong Wang, Shan-Shan Yao and Fan-Long Jin
Open abstractPreparation and Characterization of Cross-linked Poly(lactic acid) / Poly(butylene succinate) Blends View article, Preparation and Characterization of Cross-linked Poly(lactic acid) / Poly(butylene succinate) Blends PDF, Preparation and Characterization of Cross-linked Poly(lactic acid) / Poly(butylene succinate) Blends

012059

THE FOLLOWING ARTICLE ISOPEN ACCESS

Lignin Effect to Synthesis of the Hybrid Polyurethane

M. S. Dwijaya, D. A. Setiaji, J.H. Mustafa and M. Chalid
Open abstractLignin Effect to Synthesis of the Hybrid Polyurethane View article, Lignin Effect to Synthesis of the Hybrid Polyurethane PDF, Lignin Effect to Synthesis of the Hybrid Polyurethane

012060

THE FOLLOWING ARTICLE ISOPEN ACCESS

Electric Field Simulation Analysis and Insulation Structure Optimization of Transformer Elevating Seat

Junfeng Zhou, Shuo Wang, Chong Peng, Ning Wang, Kang Wang and Tiantong Zhu
Open abstractElectric Field Simulation Analysis and Insulation Structure Optimization of Transformer Elevating Seat View article, Electric Field Simulation Analysis and Insulation Structure Optimization of Transformer Elevating Seat PDF, Electric Field Simulation Analysis and Insulation Structure Optimization of Transformer Elevating Seat

012061

THE FOLLOWING ARTICLE ISOPEN ACCESS

Preparation and Study of Properties of Polyhydric Alcohols Biphosphate Ethanolamine Salt

Jiang Wei, Li Jinfeng, Li Ziyuan, Chen Jie and Zhang Xiaoyan
Open abstractPreparation and Study of Properties of Polyhydric Alcohols Biphosphate Ethanolamine Salt View article, Preparation and Study of Properties of Polyhydric Alcohols Biphosphate Ethanolamine Salt PDF, Preparation and Study of Properties of Polyhydric Alcohols Biphosphate Ethanolamine Salt

012062

THE FOLLOWING ARTICLE ISOPEN ACCESS

shear contribution of basalt fiber reinforced polymers bars(BFRP) reinforced light weight concrete (FRLWC)

Sara Benzemouli and Zhenying Wang
Open abstractshear contribution of basalt fiber reinforced polymers bars(BFRP) reinforced light weight concrete (FRLWC) View article, shear contribution of basalt fiber reinforced polymers bars(BFRP) reinforced light weight concrete (FRLWC) PDF, shear contribution of basalt fiber reinforced polymers bars(BFRP) reinforced light weight concrete (FRLWC)

012063

THE FOLLOWING ARTICLE ISOPEN ACCESS

Preparation of PUV-3853 and Its Mechanical Properties in ABS Resin

Zhi-Xun Lu, Shu Wang, Jie Chen, Qi Zhong Zhang and Wei Dong
Open abstractPreparation of PUV-3853 and Its Mechanical Properties in ABS Resin View article, Preparation of PUV-3853 and Its Mechanical Properties in ABS Resin PDF, Preparation of PUV-3853 and Its Mechanical Properties in ABS Resin

012064

THE FOLLOWING ARTICLE ISOPEN ACCESS

Preparation and Properties of Graphite/Epoxy Resin Conductive Composites

Shan-Shan Yao, Di Jiang, Qi-Zhong Zhang and Xin-Xin Wang
Open abstractPreparation and Properties of Graphite/Epoxy Resin Conductive Composites View article, Preparation and Properties of Graphite/Epoxy Resin Conductive Composites PDF, Preparation and Properties of Graphite/Epoxy Resin Conductive Composites

012065

THE FOLLOWING ARTICLE ISOPEN ACCESS

Green Synthesis and Application of New Antioxidant 3052

Jun-Lin Guo, Xi-Wang Tong, Ming Xin, Li-Ying Yu and Bo Ning
Open abstractGreen Synthesis and Application of New Antioxidant 3052 View article, Green Synthesis and Application of New Antioxidant 3052 PDF, Green Synthesis and Application of New Antioxidant 3052

012066

THE FOLLOWING ARTICLE ISOPEN ACCESS

First Principles Calculation Study of $Zn_{1-x}Mg_xO/Cu_2ZnSnS_4$ Heterointerface

Wujisuguleng Bao, Sachuronggui and Fangyuan Qiu
Open abstractFirst Principles Calculation Study of Zn1-xMgxO/Cu2ZnSnS4 Heterointerface View article, First Principles Calculation Study of Zn1-xMgxO/Cu2ZnSnS4 Heterointerface PDF, First Principles Calculation Study of Zn1-xMgxO/Cu2ZnSnS4 Heterointerface

012067

THE FOLLOWING ARTICLE ISOPEN ACCESS

Experimental Study on Material Properties of Bearing Bush of Water Lubricated Bearing

Changsheng Chen, Shan Li, Zhen Lu, Zhenlai Ma, Guoping Li and Yi Zhang
Open abstractExperimental Study on Material Properties of Bearing Bush of Water Lubricated Bearing View article, Experimental Study on Material Properties of Bearing Bush of Water Lubricated Bearing PDF, Experimental Study on Material Properties of Bearing Bush of Water Lubricated Bearing

012068

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on Fault Detection Method of Mineral Powder Production Line Based on Information Fusion

Zhantao Wang, Yi Luo, Yong Tang, Xinjia Lu and Yankai Zhang
Open abstractResearch on Fault Detection Method of Mineral Powder Production Line Based on Information Fusion View article, Research on Fault Detection Method of Mineral Powder Production Line Based on Information Fusion PDF, Research on Fault Detection Method of Mineral Powder Production Line Based on Information Fusion

012069

THE FOLLOWING ARTICLE ISOPEN ACCESS

Optimization of Combustion Control System for Regenerative Forging Heating Furnace

Hongtao Li, Xiaobo Liu, Yunguang Ji, Hongbin Cui, Shuqi Xue and Yazhi Liu
Open abstractOptimization of Combustion Control System for Regenerative Forging Heating Furnace View article, Optimization of Combustion Control System for Regenerative Forging Heating Furnace PDF, Optimization of Combustion Control System for Regenerative Forging Heating Furnace

012070

THE FOLLOWING ARTICLE ISOPEN ACCESS

Synergistic effect of OZrP on the combustion properties and thermal degradation behavior of intumescent flame retardant polylactide

Jing Zhan, Xueli Liu and Chunhua Cao
Open abstractSynergistic effect of OZrP on the combustion properties and thermal degradation behavior of intumescent flame retardant polylactide View article, Synergistic effect of OZrP on the combustion properties

and thermal degradation behavior of intumescent flame retardant polylactide PDF, Synergistic effect of OZrP on the combustion properties and thermal degradation behavior of intumescent flame retardant polylactide

012071

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research Status of Experimental Characterization of Materials Electrical Properties

Mingzhe Zhao, Shuang Tian, Xingeng Li, Bo Jiang, Wenjing Li, Xiaoming Wang and Wenjie Zheng
Open abstractResearch Status of Experimental Characterization of Materials Electrical Properties View article, Research Status of Experimental Characterization of Materials Electrical Properties PDF, Research Status of Experimental Characterization of Materials Electrical Properties

012072

THE FOLLOWING ARTICLE ISOPEN ACCESS

The intelligent monitoring of powder material extraction production process

Qingzhong Hu, Zhantao Wang, Xinjia Lu and Yi Luo
Open abstractThe intelligent monitoring of powder material extraction production process View article, The intelligent monitoring of powder material extraction production process PDF, The intelligent monitoring of powder material extraction production process

---

3. Power and energy systems

012073

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on "source-grid-load" coordination operation index system of ADN

Zheng Liao and Xiaotian Li
Open abstractResearch on “source-grid-load” coordination operation index system of ADN View article, Research on "source-grid-load" coordination operation index system of ADN PDF, Research on "source-grid-load" coordination operation index system of ADN

012074

THE FOLLOWING ARTICLE ISOPEN ACCESS

Study on the Influence of Distributed Conductive Capacitance on CVT Error haracteristics on Test Wire

Jinjin Li and Fanghua Mo
Open abstractStudy on the Influence of Distributed Conductive Capacitance on CVT Error haracteristics on Test Wire View article, Study on the Influence of Distributed Conductive Capacitance on CVT Error haracteristics on Test Wire PDF, Study on the Influence of Distributed Conductive Capacitance on CVT Error haracteristics on Test Wire

012075

THE FOLLOWING ARTICLE ISOPEN ACCESS

Steady State Energy Flow Analysis for Energy Internet Planning

Xiaoqing Ji, Fei Wang, Feng Song, Junxu Liu, Jie Liu and Dang Xiong
Open abstractSteady State Energy Flow Analysis for Energy Internet Planning View article, Steady State Energy Flow Analysis for Energy Internet Planning PDF, Steady State Energy Flow Analysis for Energy Internet Planning

012076

THE FOLLOWING ARTICLE ISOPEN ACCESS

The Grey Forecasting Model for the Medium-and Long-Term Load Forecasting

Feng Song, Junxu Liu, Tingting Zhang, Jing Guo, Shuran Tian and Dang Xiong
Open abstractThe Grey Forecasting Model for the Medium-and Long-Term Load Forecasting View article, The Grey Forecasting Model for the Medium-and Long-Term Load Forecasting PDF, The Grey Forecasting Model for the Medium-and Long-Term Load Forecasting

012077

THE FOLLOWING ARTICLE ISOPEN ACCESS

Identification of market power abuse in China's electricity market

Ziyun Cheng, Hao Li, Huihui Xu, Li Dong, Hongyuan Tao, Huichun Hua and Shenghua Wang
Open abstractIdentification of market power abuse in China’s electricity market View article, Identification of market power abuse in China's electricity market PDF, Identification of market power abuse in China's electricity market

012078

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on the Measurement of Zero Sequential Equivalence Impedance of Double-circuit Transmission Lines

Shuai Guan and Zhirui Liang
Open abstractResearch on the Measurement of Zero Sequential Equivalence Impedance of Double-circuit Transmission Lines View article, Research on the Measurement of Zero Sequential Equivalence Impedance of Double-circuit Transmission Lines PDF, Research on the Measurement of Zero Sequential Equivalence Impedance of Double-circuit Transmission Lines

012079

THE FOLLOWING ARTICLE ISOPEN ACCESS

A Control Strategy for Two-stage PV Grid-connected Inverter Based on Voltage Oriented Control

Yiyan Zhang, Xiaobo Tang, Zhongyu Shen, Xiao Chen, Yulong Feng and Yanwei Xu
Open abstractA Control Strategy for Two-stage PV Grid-connected Inverter Based on Voltage Oriented Control View article, A Control Strategy for Two-stage PV Grid-connected Inverter Based on Voltage Oriented Control PDF, A Control Strategy for Two-stage PV Grid-connected Inverter Based on Voltage Oriented Control

012080

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on Performance of Anti-metal RFID in Field Test of Type and 500kV Substation

Maotao Yang, Haibo Tan, Mouhai Liu, Xiangqun Chen, Rui Huang and Qin Liu
Open abstractResearch on Performance of Anti-metal RFID in Field Test of Type and 500kV Substation View article, Research on Performance of Anti-metal RFID in Field Test of Type and 500kV Substation PDF, Research on Performance of Anti-metal RFID in Field Test of Type and 500kV Substation

012081

THE FOLLOWING ARTICLE ISOPEN ACCESS

Study of Influence of Environmental Factor on Capacitive Equipment On-line Monitoring Based on the Grey Relational Analysis

Wang Ning, Xing Lin, Ren Yu and Wu Peng
Open abstractStudy of Influence of Environmental Factor on Capacitive Equipment On-line Monitoring Based on the Grey Relational Analysis View article, Study of Influence of Environmental Factor on Capacitive Equipment On-line Monitoring Based on the Grey Relational Analysis PDF, Study of Influence of Environmental Factor on Capacitive Equipment On-line Monitoring Based on the Grey Relational Analysis

012082

THE FOLLOWING ARTICLE ISOPEN ACCESS

Reliability Assessment on Typical Connection Modes of High Reliability Demonstration Area

Wei Kang, Po Hu, Shan Gao, Yang Zhao and Zijun Wang
Open abstractReliability Assessment on Typical Connection Modes of High Reliability Demonstration Area View article, Reliability Assessment on Typical Connection Modes of High Reliability Demonstration Area PDF, Reliability Assessment on Typical Connection Modes of High Reliability Demonstration Area

012083

THE FOLLOWING ARTICLE ISOPEN ACCESS

Study on Structure Optimization Design for Outrigger of In-situ Slewing Device

Huifu Jiang, Guosheng Zhang, Jiaxing Zhang and Linbo Zhang
Open abstractStudy on Structure Optimization Design for Outrigger of In-situ Slewing Device View article, Study on Structure Optimization Design for Outrigger of In-situ Slewing Device PDF, Study on Structure Optimization Design for Outrigger of In-situ Slewing Device

012084

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on Voltage and Frequency Regulation of Micro-Grid with Distributed Energy Storage

Yulong Feng, Kai Deng, Xiaobo Tang, Zhongyu Shen, Xiao Chen and Yiyan Zhang
Open abstractResearch on Voltage and Frequency Regulation of Micro-Grid with Distributed Energy Storage View article, Research on Voltage and Frequency Regulation of Micro-Grid with Distributed Energy Storage PDF, Research on Voltage and Frequency Regulation of Micro-Grid with Distributed Energy Storage

012085

THE FOLLOWING ARTICLE ISOPEN ACCESS

Calculation of Dynamic Hysteresis Loss of Power Transformer under Harmonic Background

Shaoxin Meng, Xue Cui, Zhexu Li, Jianben Liu, Qionglin Li and Zhiye Du
Open abstractCalculation of Dynamic Hysteresis Loss of Power Transformer under Harmonic Background View article, Calculation of Dynamic Hysteresis Loss of Power Transformer under Harmonic Background PDF, Calculation of Dynamic Hysteresis Loss of Power Transformer under Harmonic Background

012086

THE FOLLOWING ARTICLE ISOPEN ACCESS

A Recognition Scheme Based on K-means Feature Clustering for Obscured Apple Object

Baiping Li and Xiaomei Jing
Open abstractA Recognition Scheme Based on K-means Feature Clustering for Obscured Apple Object View article, A Recognition Scheme Based on K-means Feature Clustering for Obscured Apple Object PDF, A Recognition Scheme Based on K-means Feature Clustering for Obscured Apple Object

012087

THE FOLLOWING ARTICLE ISOPEN ACCESS

Damage Diagnosis of Top Tensioned Riser Based on Strain Response

Lingying Ni, Yu Sun and Zhihui Liu
Open abstractDamage Diagnosis of Top Tensioned Riser Based on Strain Response View article, Damage Diagnosis of Top Tensioned Riser Based on Strain Response PDF, Damage Diagnosis of Top Tensioned Riser Based on Strain Response

012088

THE FOLLOWING ARTICLE ISOPEN ACCESS

Analytical Solution of Eddy Current Field for Arbitrary Coil Placement outside Pipeline

Xiang Wang
Open abstractAnalytical Solution of Eddy Current Field for Arbitrary Coil Placement outside Pipeline View article, Analytical Solution of Eddy Current Field for Arbitrary Coil Placement outside Pipeline PDF, Analytical Solution of Eddy Current Field for Arbitrary Coil Placement outside Pipeline

012089

THE FOLLOWING ARTICLE ISOPEN ACCESS

The design of 1553b relay circuit based on FPGA

Zhonghua Han, Chengcheng Huang, Jiayu Peng and Shuai Wang
Open abstractThe design of 1553b relay circuit based on FPGA View article, The design of 1553b relay circuit based on FPGA PDF, The design of 1553b relay circuit based on FPGA

012090

THE FOLLOWING ARTICLE ISOPEN ACCESS

Multi-source Geographic Information Data Fitting for Transmission Line Design

Yu Ren, Linjie Chai, Bingjun Zhao, Lihuan Wang, Yaning Ren, Ning Wang, Xiangliang Shen and Fan Gao
Open abstractMulti-source Geographic Information Data Fitting for Transmission Line Design View article, Multi-source Geographic Information Data Fitting for Transmission Line Design PDF, Multi-source Geographic Information Data Fitting for Transmission Line Design

012091

THE FOLLOWING ARTICLE ISOPEN ACCESS

A narrowband interference suppression method based on adaptive WPT

Lanying Zhang
Open abstractA narrowband interference suppression method based on adaptive WPT View article, A narrowband interference suppression method based on adaptive WPT PDF, A narrowband interference suppression method based on adaptive WPT

012092

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on Case Design of Electric Energy Meters Reliability Detection Based on Equivalent Class

Jie Liang, Wenqian Jiang and Jinjin Li
Open abstractResearch on Case Design of Electric Energy Meters Reliability Detection Based on Equivalent Class View article, Research on Case Design of Electric Energy Meters Reliability Detection Based on Equivalent Class PDF, Research on Case Design of Electric Energy Meters Reliability Detection Based on Equivalent Class

012093

THE FOLLOWING ARTICLE ISOPEN ACCESS

Study of distribution network fault location based on IACA

Xue Liu, Jun Jia and Jian Wang
Open abstractStudy of distribution network fault location based on IACA View article, Study of distribution network fault location based on IACA PDF, Study of distribution network fault location based on IACA

012094

THE FOLLOWING ARTICLE ISOPEN ACCESS

Effect of Seawater Immersion on Power Frequency Over Voltage Calculation of AC Three-core Submarine Cable

Weiyuan Wang, Jinmin Cheng, Yi Sun, Jinghui Liu, Dajun Shi and Feike Li
Open abstractEffect of Seawater Immersion on Power Frequency Over Voltage Calculation of AC Three-core Submarine Cable View article, Effect of Seawater Immersion on Power Frequency Over Voltage Calculation of AC Three-core Submarine Cable PDF, Effect of Seawater Immersion on Power Frequency Over Voltage Calculation of AC Three-core Submarine Cable

012095

THE FOLLOWING ARTICLE ISOPEN ACCESS

Study on Estimation Method for the Residual Capacity of Battery in Hybrid Devices Based on Grey Prediction

Zhi-Jun Feng, Guo-Lei Si, Xiao-Qian Yin and Ping-Shan Shi
Open abstractStudy on Estimation Method for the Residual Capacity of Battery in Hybrid Devices Based on Grey Prediction View article, Study on Estimation Method for the Residual Capacity of Battery in Hybrid Devices Based on Grey Prediction PDF, Study on Estimation Method for the Residual Capacity of Battery in Hybrid Devices Based on Grey Prediction

012096

THE FOLLOWING ARTICLE ISOPEN ACCESS

State Early Warning Technology for UHV AC Substation Equipment

Ning Wang, Xuefei Liu, Peng Wu, Lin Xing and Suo Wang
Open abstractState Early Warning Technology for UHV AC Substation Equipment View article, State Early Warning Technology for UHV AC Substation Equipment PDF, State Early Warning Technology for UHV AC Substation Equipment

012097

THE FOLLOWING ARTICLE ISOPEN ACCESS

Design of liquid level control system for double tank

Junjie Ye, Xiaoguang Zhang, Chuanmao Lv, Puhao Wang and Haifeng Lv
Open abstractDesign of liquid level control system for double tank View article, Design of liquid level control system for double tank PDF, Design of liquid level control system for double tank

012098

THE FOLLOWING ARTICLE ISOPEN ACCESS

Effect of Fresnel lens as cover in a passive solar water heater with some air gap between cover and absorber plate

Ekadewi A Handoyo, Indriati Njoto Bisono, Peter Jonathan and Dio Valentio
Open abstractEffect of Fresnel lens as cover in a passive solar water heater with some air gap between cover and absorber plate View article, Effect of Fresnel lens as cover in a passive solar water heater with some air gap between cover and absorber plate PDF, Effect of Fresnel lens as cover in a passive solar water heater with some air gap between cover and absorber plate

012099

THE FOLLOWING ARTICLE ISOPEN ACCESS

An Alternative Way to Locate Disturbance Source for Low Frequency Oscillation Considering Control Devices of Generator

Siyuan Guo, Shoushou Zhang, Yongsheng Zhao, Junying Song and Jian Zuo
Open abstractAn Alternative Way to Locate Disturbance Source for Low Frequency Oscillation Considering Control Devices of Generator View article, An Alternative Way to Locate Disturbance Source for Low

Frequency Oscillation Considering Control Devices of Generator PDF, An Alternative Way to Locate Disturbance Source for Low Frequency Oscillation Considering Control Devices of Generator

012100

THE FOLLOWING ARTICLE ISOPEN ACCESS

Design and control of condom delivery system

Zhifeng Chen, Xiaogang Liu, Hong Sun, Xiulong Gao and Jian Wang
Open abstractDesign and control of condom delivery system View article, Design and control of condom delivery system PDF, Design and control of condom delivery system

012101

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on ultrasonic guided wave dispersion compensation for steel strand defect detection

Molin Zhao, Haisheng Wang, Bin Xue, Yonggang Yue, Pengfei Zhang, Fuzai Lv and Zhifeng Tang
Open abstractResearch on ultrasonic guided wave dispersion compensation for steel strand defect detection View article, Research on ultrasonic guided wave dispersion compensation for steel strand defect detection PDF, Research on ultrasonic guided wave dispersion compensation for steel strand defect detection

012102

THE FOLLOWING ARTICLE ISOPEN ACCESS

A new precharging strategy for hybrid MMC based on HBSM and FBSM

Lei Han, Junfeng Jiang and Haitao Yao
Open abstractA new precharging strategy for hybrid MMC based on HBSM and FBSM View article, A new precharging strategy for hybrid MMC based on HBSM and FBSM PDF, A new precharging strategy for hybrid MMC based on HBSM and FBSM

012103

THE FOLLOWING ARTICLE ISOPEN ACCESS

Study on the Selection of New Parallel Gap of 500kV Transmission Line at High Altitude

Wen Hu and Chun Zhao
Open abstractStudy on the Selection of New Parallel Gap of 500kV Transmission Line at High Altitude View article, Study on the Selection of New Parallel Gap of 500kV Transmission Line at High Altitude PDF, Study on the Selection of New Parallel Gap of 500kV Transmission Line at High Altitude

012104

THE FOLLOWING ARTICLE ISOPEN ACCESS

Design and Development of Miniature Non-contact Multi-range Current Sensor

Aidong Xu, Licheng Li, Peng Li, Zhiming Wang, Zhibing Wu and Changjin Hao
Open abstractDesign and Development of Miniature Non-contact Multi-range Current Sensor View article, Design and Development of Miniature Non-contact Multi-range Current Sensor PDF, Design and Development of Miniature Non-contact Multi-range Current Sensor

012105

THE FOLLOWING ARTICLE ISOPEN ACCESS

Static characteristic analysis of a transmission line detection robot

Guang Wen, Rui Su, Kun Yao, Fangjun Zuo, Xuefeng Wu and Chongli Hui
Open abstractStatic characteristic analysis of a transmission line detection robot View article, Static characteristic analysis of a transmission line detection robot PDF, Static characteristic analysis of a transmission line detection robot

012106

THE FOLLOWING ARTICLE ISOPEN ACCESS

Graphical User Interface for Ultrasound Guided Wave Imaging

Wenlong Liu, Yinghong Zhang, Yalong Nie and Zhiyi Hu
Open abstractGraphical User Interface for Ultrasound Guided Wave Imaging View article, Graphical User Interface for Ultrasound Guided Wave Imaging PDF, Graphical User Interface for Ultrasound Guided Wave Imaging

012107

THE FOLLOWING ARTICLE ISOPEN ACCESS

Study on System Operation Characteristics of UHVDC Under Hierarchical Connection Mode

Weiyuan Wang, Jinmin Cheng and Ziyuan Ren
Open abstractStudy on System Operation Characteristics of UHVDC Under Hierarchical Connection Mode View article, Study on System Operation Characteristics of UHVDC Under Hierarchical Connection Mode PDF, Study on System Operation Characteristics of UHVDC Under Hierarchical Connection Mode

012108

THE FOLLOWING ARTICLE ISOPEN ACCESS

Design of rescue equipment for high altitude electrical operation

Xiaojun Mao, Yunfeng Zhang, Zhan Wang, Wangxin Pan, Weilin Zhang, Jie Wang, Jingen Song and Xiaobo Hu
Open abstractDesign of rescue equipment for high altitude electrical operation View article, Design of rescue equipment for high altitude electrical operation PDF, Design of rescue equipment for high altitude electrical operation

012109

THE FOLLOWING ARTICLE ISOPEN ACCESS

Study on numerical simulation of gas pipeline speed regulating detector

Xiaolong Li, Tao Meng, Yilai Ma, Zheng Tan and Jinzhong Chen
Open abstractStudy on numerical simulation of gas pipeline speed regulating detector View article, Study on numerical simulation of gas pipeline speed regulating detector PDF, Study on numerical simulation of gas pipeline speed regulating detector

012110

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on the online temperature measuring device in outdoor high-voltage isolation Switch

Ran Hu, Xuecheng Du, Guojun Hu, Meng Hong, Rufeng Jiang, Tengfei Wei, Erhong Deng and Yongjian Li
Open abstractResearch on the online temperature measuring device in outdoor high-voltage isolation Switch View article, Research on the online temperature measuring device in outdoor high-voltage isolation Switch PDF, Research on the online temperature measuring device in outdoor high-voltage isolation Switch

012111

THE FOLLOWING ARTICLE ISOPEN ACCESS

A Power Metering Pipeline Fault Warning Method Based on Deep Learning

Shuhua Zhao, Yiling Xing, Xiaohui Chen, Yongjian Ou, Wanting Zhang and Bingfeng Lin
Open abstractA Power Metering Pipeline Fault Warning Method Based on Deep Learning View article, A Power Metering Pipeline Fault Warning Method Based on Deep Learning PDF, A Power Metering Pipeline Fault Warning Method Based on Deep Learning

012112

THE FOLLOWING ARTICLE ISOPEN ACCESS

Optimization Research of Power Supply and Distribution Monitoring System Based on PLC

Xiangjun Qian
Open abstractOptimization Research of Power Supply and Distribution Monitoring System Based on PLC View article, Optimization Research of Power Supply and Distribution Monitoring System Based on PLC PDF, Optimization Research of Power Supply and Distribution Monitoring System Based on PLC

---

4. Computer science and information technology

012113

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on Computer Network Service Quality Optimization Method Based on Integration of Multiple Artificial Intelligence Technologies

Yan Huang
Open abstractResearch on Computer Network Service Quality Optimization Method Based on Integration of Multiple Artificial Intelligence Technologies View article, Research on Computer Network Service Quality Optimization Method Based on Integration of Multiple Artificial Intelligence Technologies PDF, Research on Computer Network Service Quality Optimization Method Based on Integration of Multiple Artificial Intelligence Technologies

012114

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on Computer Network Security Analysis Modeling Based on Artificial Intelligence Technology

Yan Huang
Open abstractResearch on Computer Network Security Analysis Modeling Based on Artificial Intelligence Technology View article, Research on Computer Network Security Analysis Modeling Based on Artificial Intelligence Technology PDF, Research on Computer Network Security Analysis Modeling Based on Artificial Intelligence Technology

012115

THE FOLLOWING ARTICLE ISOPEN ACCESS

On the Problem of Inertia in Classical Mechanics

Boshan He
Open abstractOn the Problem of Inertia in Classical Mechanics View article, On the Problem of Inertia in Classical Mechanics PDF, On the Problem of Inertia in Classical Mechanics

012116

THE FOLLOWING ARTICLE ISOPEN ACCESS

Design and Research of under-Voltage Protection Circuit for Motor Driver Chip Based on Special Integrated Chip

Luojie, Wenchang Li and Huaxiang Lu
Open abstractDesign and Research of under-Voltage Protection Circuit for Motor Driver Chip Based on Special Integrated Chip View article, Design and Research of under-Voltage Protection Circuit for Motor Driver Chip Based on Special Integrated Chip PDF, Design and Research of under-Voltage Protection Circuit for Motor Driver Chip Based on Special Integrated Chip

012117

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on Risk Causes and Preventive Strategies of Enterprise Internal Audit Inspection Based on Computer Simulation Technology

Linjun Liu
Open abstractResearch on Risk Causes and Preventive Strategies of Enterprise Internal Audit Inspection Based on Computer Simulation Technology View article, Research on Risk Causes and Preventive Strategies of Enterprise Internal Audit Inspection Based on Computer Simulation Technology PDF, Research on Risk Causes and Preventive Strategies of Enterprise Internal Audit Inspection Based on Computer Simulation Technology

012118

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on Design and Experience of Immersive Virtual Reality Psychological Relaxation Game Based on Image

Zhen Wang, Hengsuo Xu and Hongliang Yuan
Open abstractResearch on Design and Experience of Immersive Virtual Reality Psychological Relaxation Game Based on Image View article, Research on Design and Experience of Immersive Virtual Reality

Psychological Relaxation Game Based on Image PDF, Research on Design and Experience of Immersive Virtual Reality Psychological Relaxation Game Based on Image

012119

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on Network Architecture and Communication Protocol of Network Virtual Reality Based on Image Rendering

Guohui Yang and Mengde Xu
Open abstractResearch on Network Architecture and Communication Protocol of Network Virtual Reality Based on Image Rendering View article, Research on Network Architecture and Communication Protocol of Network Virtual Reality Based on Image Rendering PDF, Research on Network Architecture and Communication Protocol of Network Virtual Reality Based on Image Rendering

012120

THE FOLLOWING ARTICLE ISOPEN ACCESS

Design of Cigarette Factory Based on Bim and System Integration under Industrial Monitoring

Lin Wang, Shengnan Xu, Zhilin Tao and Qidong Zhang
Open abstractDesign of Cigarette Factory Based on Bim and System Integration under Industrial Monitoring View article, Design of Cigarette Factory Based on Bim and System Integration under Industrial Monitoring PDF, Design of Cigarette Factory Based on Bim and System Integration under Industrial Monitoring

012121

THE FOLLOWING ARTICLE ISOPEN ACCESS

Application of Traceability System for Dumping Garbage of North Canal Embankment Based on Ai Artificial Intelligence Recognition

Xiaofei Du
Open abstractApplication of Traceability System for Dumping Garbage of North Canal Embankment Based on Ai Artificial Intelligence Recognition View article, Application of Traceability System for Dumping Garbage of North Canal Embankment Based on Ai Artificial Intelligence Recognition PDF, Application of Traceability System for Dumping Garbage of North Canal Embankment Based on Ai Artificial Intelligence Recognition

012122

THE FOLLOWING ARTICLE ISOPEN ACCESS

Analysis on the Key Points of Architectural Design of Underground Totally Buried Sewage Treatment Plant

Guoying Wang
Open abstractAnalysis on the Key Points of Architectural Design of Underground Totally Buried Sewage Treatment Plant View article, Analysis on the Key Points of Architectural Design of Underground Totally Buried Sewage Treatment Plant PDF, Analysis on the Key Points of Architectural Design of Underground Totally Buried Sewage Treatment Plant

012123

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on Intelligent Informationization of Cigarette Processing and Production by Mes System

Shengnan Xu, Lin Wang, Qilu Huang and Yongwei Mao
Open abstractResearch on Intelligent Informationization of Cigarette Processing and Production by Mes System View article, Research on Intelligent Informationization of Cigarette Processing and Production by Mes System PDF, Research on Intelligent Informationization of Cigarette Processing and Production by Mes System

012124

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on Computer Network Information Security and Its Protection Strategy Based on Secure Big Data

Haiping Wang
Open abstractResearch on Computer Network Information Security and Its Protection Strategy Based on Secure Big Data View article, Research on Computer Network Information Security and Its Protection Strategy Based on Secure Big Data PDF, Research on Computer Network Information Security and Its Protection Strategy Based on Secure Big Data

012125

THE FOLLOWING ARTICLE ISOPEN ACCESS

Application and Analysis of the Wheel Method in the Measurement of the Center of Gravity of a General-Purpose Aircraft

Dongxiao Jiang, Jianxin He and Jun Cao
Open abstractApplication and Analysis of the Wheel Method in the Measurement of the Center of Gravity of a General-Purpose Aircraft View article, Application and Analysis of the Wheel Method in the Measurement of the Center of Gravity of a General-Purpose Aircraft PDF, Application and Analysis of the Wheel Method in the Measurement of the Center of Gravity of a General-Purpose Aircraft

012126

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on Network Database Laboratory Instrument Management Information System Based on Content Query

Bo Yang
Open abstractResearch on Network Database Laboratory Instrument Management Information System Based on Content Query View article, Research on Network Database Laboratory Instrument Management Information System Based on Content Query PDF, Research on Network Database Laboratory Instrument Management Information System Based on Content Query

012127

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on Computer Network Security Vulnerabilities and Preventive Measures Based on Multi-Platform

Wenchao Xing
Open abstractResearch on Computer Network Security Vulnerabilities and Preventive Measures Based on Multi-Platform View article, Research on Computer Network Security Vulnerabilities and Preventive Measures Based on Multi-Platform PDF, Research on Computer Network Security Vulnerabilities and Preventive Measures Based on Multi-Platform

012128

THE FOLLOWING ARTICLE ISOPEN ACCESS

Application and Development of Tissue Engineering Technology in the Fields of Cardiac Reconstruction, Nerve Regeneration and Bone Reconstruction

Shuang Li
Open abstractApplication and Development of Tissue Engineering Technology in the Fields of Cardiac Reconstruction, Nerve Regeneration and Bone Reconstruction View article, Application and Development of Tissue Engineering Technology in the Fields of Cardiac Reconstruction, Nerve Regeneration and Bone Reconstruction PDF, Application and Development of Tissue Engineering Technology in the Fields of Cardiac Reconstruction, Nerve Regeneration and Bone Reconstruction

012129

THE FOLLOWING ARTICLE ISOPEN ACCESS

Stock Trading Based on Principal Component Analysis and Clustering Analysis

Yanru Guo
Open abstractStock Trading Based on Principal Component Analysis and Clustering Analysis View article, Stock Trading Based on Principal Component Analysis and Clustering Analysis PDF, Stock Trading Based on Principal Component Analysis and Clustering Analysis

012130

THE FOLLOWING ARTICLE ISOPEN ACCESS

Application of Edge Computing in 5g Communications

Tongyu Wang
Open abstractApplication of Edge Computing in 5g Communications View article, Application of Edge Computing in 5g Communications PDF, Application of Edge Computing in 5g Communications

012131

THE FOLLOWING ARTICLE ISOPEN ACCESS

Ux Design of a Mobile Food App for Pregnant Women Mixed-Methods Approach

Wenjin Yang
Open abstractUx Design of a Mobile Food App for Pregnant Women Mixed-Methods Approach View article, Ux Design of a Mobile Food App for Pregnant Women Mixed-Methods Approach PDF, Ux Design of a Mobile Food App for Pregnant Women Mixed-Methods Approach

012132

THE FOLLOWING ARTICLE ISOPEN ACCESS

Emerging Applications of Generative Adversarial Networks

Xinyu Yu
Open abstractEmerging Applications of Generative Adversarial Networks View article, Emerging Applications of Generative Adversarial Networks PDF, Emerging Applications of Generative Adversarial Networks

012133

THE FOLLOWING ARTICLE ISOPEN ACCESS

Classification of Encrypted Text Based on Artificial Intelligence

Bo Zhang
Open abstractClassification of Encrypted Text Based on Artificial Intelligence View article, Classification of Encrypted Text Based on Artificial Intelligence PDF, Classification of Encrypted Text Based on Artificial Intelligence

012134

THE FOLLOWING ARTICLE ISOPEN ACCESS

Network Security in the Era of Big Data

Feiyu Zhong
Open abstractNetwork Security in the Era of Big Data View article, Network Security in the Era of Big Data PDF, Network Security in the Era of Big Data

012135

THE FOLLOWING ARTICLE ISOPEN ACCESS

Ux Design of Artificial Intelligence News Robot

Wenjin Yang
Open abstractUx Design of Artificial Intelligence News Robot View article, Ux Design of Artificial Intelligence News Robot PDF, Ux Design of Artificial Intelligence News Robot

012136

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on Power Network Regulation Mechanism Based on Knowledge Mapping

Jianzhong Dou, Yang Wang, Di Cheng, Tao Sun, Yifei Wu and Yong Jin
Open abstractResearch on Power Network Regulation Mechanism Based on Knowledge Mapping View article, Research on Power Network Regulation Mechanism Based on Knowledge Mapping PDF, Research on Power Network Regulation Mechanism Based on Knowledge Mapping

012137

THE FOLLOWING ARTICLE ISOPEN ACCESS

Type Identification and Classification of Cascading Failures of Time Sections of Dispatching and Operation Based on Data Mining

Junying Yue and Cunbin Li
Open abstractType Identification and Classification of Cascading Failures of Time Sections of Dispatching and Operation Based on Data Mining View article, Type Identification and Classification of Cascading Failures of Time Sections of Dispatching and Operation Based on Data Mining PDF, Type Identification and Classification of Cascading Failures of Time Sections of Dispatching and Operation Based on Data Mining

012138

THE FOLLOWING ARTICLE ISOPEN ACCESS

Study on Cascading Failures of Power Grid Information Physics Fusion System Based on Pattern Search

Junying Yue and Cunbin Li
Open abstractStudy on Cascading Failures of Power Grid Information Physics Fusion System Based on Pattern Search View article, Study on Cascading Failures of Power Grid Information Physics Fusion System Based on Pattern Search PDF, Study on Cascading Failures of Power Grid Information Physics Fusion System Based on Pattern Search

012139

THE FOLLOWING ARTICLE ISOPEN ACCESS

Design and Application of Cigarette Automated Logistics System Based on Computer Simulation Technology

Lin Wang, Shengnan Xu, Zhantao Zhang and Qilu Huang
Open abstractDesign and Application of Cigarette Automated Logistics System Based on Computer Simulation Technology View article, Design and Application of Cigarette Automated Logistics System Based on Computer Simulation Technology PDF, Design and Application of Cigarette Automated Logistics System Based on Computer Simulation Technology

012140

THE FOLLOWING ARTICLE ISOPEN ACCESS

Application Research of Distributed Control Technology in Tobacco Primary Processing Control System

Shengnan Xu, Lin Wang, Zhilin Tao and Tietuo Tao
Open abstractApplication Research of Distributed Control Technology in Tobacco Primary Processing Control System View article, Application Research of Distributed Control Technology in Tobacco Primary Processing Control System PDF, Application Research of Distributed Control Technology in Tobacco Primary Processing Control System

012141

THE FOLLOWING ARTICLE ISOPEN ACCESS

Design and Application of Intelligent Greenhouse Information Management System Based on Hybrid Architecture

Chang Su, Chao Yang, Lina Hu and Chong Tian

Open abstractDesign and Application of Intelligent Greenhouse Information Management System Based on Hybrid Architecture View article, Design and Application of Intelligent Greenhouse Information Management System Based on Hybrid Architecture PDF, Design and Application of Intelligent Greenhouse Information Management System Based on Hybrid Architecture

012142

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on Fault Location and Intelligent Inspection Based on Gps + Gis Transmission Line

Chao Yang, Chang Su, Chong Tian and Lina Hu
Open abstractResearch on Fault Location and Intelligent Inspection Based on Gps + Gis Transmission Line View article, Research on Fault Location and Intelligent Inspection Based on Gps + Gis Transmission Line PDF, Research on Fault Location and Intelligent Inspection Based on Gps + Gis Transmission Line

012143

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on the Model Construction and Development of Computer Information Acquisition System

Rui Deng
Open abstractResearch on the Model Construction and Development of Computer Information Acquisition System View article, Research on the Model Construction and Development of Computer Information Acquisition System PDF, Research on the Model Construction and Development of Computer Information Acquisition System

012144

THE FOLLOWING ARTICLE ISOPEN ACCESS

Environmental Protection Requirements of Power Transmission and Transformation Project Construction Based on Internet of Things Technology and Its Change Trend Analysis

Xiaomeng Zhai and Xi Cheng
Open abstractEnvironmental Protection Requirements of Power Transmission and Transformation Project Construction Based on Internet of Things Technology and Its Change Trend Analysis View article, Environmental Protection Requirements of Power Transmission and Transformation Project Construction Based on Internet of Things Technology and Its Change Trend Analysis PDF, Environmental Protection Requirements of Power Transmission and Transformation Project Construction Based on Internet of Things Technology and Its Change Trend Analysis

012145

THE FOLLOWING ARTICLE ISOPEN ACCESS

Effect of Inertial on the Adiabatic Shear Instability: Numerical Analysis

Jiejian Liu and Genwei Wang
Open abstractEffect of Inertial on the Adiabatic Shear Instability: Numerical Analysis View article, Effect of Inertial on the Adiabatic Shear Instability: Numerical Analysis PDF, Effect of Inertial on the Adiabatic Shear Instability: Numerical Analysis

012146

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on the Product Development Process of the Elderly Based on the Concept of Design Industrialization

Meng Yang and Yanying Lv
Open abstractResearch on the Product Development Process of the Elderly Based on the Concept of Design Industrialization View article, Research on the Product Development Process of the Elderly Based on the Concept of Design Industrialization PDF, Research on the Product Development Process of the Elderly Based on the Concept of Design Industrialization

012147

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on Electricity Market Transaction Model under the Background of Big Data

Yicheng Mu
Open abstractResearch on Electricity Market Transaction Model under the Background of Big Data View article, Research on Electricity Market Transaction Model under the Background of Big Data PDF, Research on Electricity Market Transaction Model under the Background of Big Data

012148

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on Fault Diagnosis Method of Rolling Bearing

Huan Zhou and Hao Wang
Open abstractResearch on Fault Diagnosis Method of Rolling Bearing View article, Research on Fault Diagnosis Method of Rolling Bearing PDF, Research on Fault Diagnosis Method of Rolling Bearing

012149

THE FOLLOWING ARTICLE ISOPEN ACCESS

Design of Embedded Terminal Data Remote Transmission Control System in Internet of Things

Weiqing Fu and Minglai Yang
Open abstractDesign of Embedded Terminal Data Remote Transmission Control System in Internet of Things View article, Design of Embedded Terminal Data Remote Transmission Control System in Internet of Things PDF, Design of Embedded Terminal Data Remote Transmission Control System in Internet of Things

012150

THE FOLLOWING ARTICLE ISOPEN ACCESS

Reasonable distribution of electric vehicle charging stations

Tingxuan Zhang
Open abstractReasonable distribution of electric vehicle charging stations View article, Reasonable distribution of electric vehicle charging stations PDF, Reasonable distribution of electric vehicle charging stations

012151

THE FOLLOWING ARTICLE ISOPEN ACCESS

Application and Development of Virtual Reality Technology in Artificial Intelligence Deep Learning

Qi Lin
Open abstractApplication and Development of Virtual Reality Technology in Artificial Intelligence Deep Learning View article, Application and Development of Virtual Reality Technology in Artificial Intelligence Deep Learning PDF, Application and Development of Virtual Reality Technology in Artificial Intelligence Deep Learning

012152

THE FOLLOWING ARTICLE ISOPEN ACCESS

A Deep Research in Classic Classification Network

Hanyue He
Open abstractA Deep Research in Classic Classification Network View article, A Deep Research in Classic Classification Network PDF, A Deep Research in Classic Classification Network

012153

THE FOLLOWING ARTICLE ISOPEN ACCESS

The Comparison and Analysis of Classic Convolutional Neural Network in the Field of Computer Vision

Hanyue He
Open abstractThe Comparison and Analysis of Classic Convolutional Neural Network in the Field of Computer Vision View article, The Comparison and Analysis of Classic Convolutional Neural Network in the Field of Computer Vision PDF, The Comparison and Analysis of Classic Convolutional Neural Network in the Field of Computer Vision

012154

THE FOLLOWING ARTICLE ISOPEN ACCESS

Design and Implementation of Academic Search Aggregation Engine

Jun Yan, Peng Xu, Yu He and Zhi Wang
Open abstractDesign and Implementation of Academic Search Aggregation Engine View article, Design and Implementation of Academic Search Aggregation Engine PDF, Design and Implementation of Academic Search Aggregation Engine

012155

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on S2B2C E-commerce Model of Fresh Agricultural Products in the Field of Social E-commerce

Lijun Fu
Open abstractResearch on S2B2C E-commerce Model of Fresh Agricultural Products in the Field of Social E-commerce View article, Research on S2B2C E-commerce Model of Fresh Agricultural Products in the Field of Social E-commerce PDF, Research on S2B2C E-commerce Model of Fresh Agricultural Products in the Field of Social E-commerce

012156

THE FOLLOWING ARTICLE ISOPEN ACCESS

Saliency Detection based on spectra Destiny Peaks Clustering

Ruochen Xia, Guangwei Wang and Xiang Cheng
Open abstractSaliency Detection based on spectra Destiny Peaks Clustering View article, Saliency Detection based on spectra Destiny Peaks Clustering PDF, Saliency Detection based on spectra Destiny Peaks Clustering

012157

THE FOLLOWING ARTICLE ISOPEN ACCESS

Design for Communication Network of Internet in On-line Monitoring System for Power Transmission and Transformation Equipment

Jin Tao She
Open abstractDesign for Communication Network of Internet in On-line Monitoring System for Power Transmission and Transformation Equipment View article, Design for Communication Network of Internet in On-line Monitoring System for Power Transmission and Transformation Equipment PDF, Design for Communication Network of Internet in On-line Monitoring System for Power Transmission and Transformation Equipment

012158

THE FOLLOWING ARTICLE ISOPEN ACCESS

A design of alternating magnetic field analysis and storage module based on embedded MCU

Jie Leng, Yibo Fu and Zhe Zhao
Open abstractA design of alternating magnetic field analysis and storage module based on embedded MCU View article, A design of alternating magnetic field analysis and storage module based on embedded MCU PDF, A design of alternating magnetic field analysis and storage module based on embedded MCU

012159

THE FOLLOWING ARTICLE ISOPEN ACCESS

Joint sleep staging model based on pressure-sensitive sleep signal

Yongfeng Huang and LiWei Liang
Open abstractJoint sleep staging model based on pressure-sensitive sleep signal View article, Joint sleep staging model based on pressure-sensitive sleep signal PDF, Joint sleep staging model based on pressure-sensitive sleep signal

012160

THE FOLLOWING ARTICLE ISOPEN ACCESS

Intelligent license plate recognition system based on digital image processing

Yulong Zhang

Open abstractIntelligent license plate recognition system based on digital image processing View article, Intelligent license plate recognition system based on digital image processing PDF, Intelligent license plate recognition system based on digital image processing

012161

THE FOLLOWING ARTICLE ISOPEN ACCESS

Block Chain Financial Transaction Using Artificial Neural Network Deep Learning

Bowen Zhao, Runyu Wang, Yan Cai and Enyu Zhao
Open abstractBlock Chain Financial Transaction Using Artificial Neural Network Deep Learning View article, Block Chain Financial Transaction Using Artificial Neural Network Deep Learning PDF, Block Chain Financial Transaction Using Artificial Neural Network Deep Learning

012162

THE FOLLOWING ARTICLE ISOPEN ACCESS

Existence design of output feedback $H\infty$ system compensator

Xiurong Shi
Open abstractExistence design of output feedback H ∞ system compensator View article, Existence design of output feedback H ∞ system compensator PDF, Existence design of output feedback H ∞ system compensator

012163

THE FOLLOWING ARTICLE ISOPEN ACCESS

Hand tracking and fingertip detection based on Kinect*

Xinyi Wang, Wenxiao Ge and Jinhu Li
Open abstractHand tracking and fingertip detection based on Kinect* View article, Hand tracking and fingertip detection based on Kinect* PDF, Hand tracking and fingertip detection based on Kinect*

012164

THE FOLLOWING ARTICLE ISOPEN ACCESS

Construction of smart city evaluation system based on big data

Qian Cheng and Xiaolong Li
Open abstractConstruction of smart city evaluation system based on big data View article, Construction of smart city evaluation system based on big data PDF, Construction of smart city evaluation system based on big data

012165

THE FOLLOWING ARTICLE ISOPEN ACCESS

The Safety precautions and Design of Mail System

Lei Fang
Open abstractThe Safety precautions and Design of Mail System View article, The Safety precautions and Design of Mail System PDF, The Safety precautions and Design of Mail System

012166

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on algorithm recommendation mechanism and characteristics of personalized news app——Taking "Toutiao" as an example

Yuan Yuan
Open abstractResearch on algorithm recommendation mechanism and characteristics of personalized news app——Taking “Toutiao” as an example View article, Research on algorithm recommendation mechanism and characteristics of personalized news app——Taking "Toutiao" as an example PDF, Research on algorithm recommendation mechanism and characteristics of personalized news app——Taking "Toutiao" as an example

012167

THE FOLLOWING ARTICLE ISOPEN ACCESS

Personalized information recommendation simulation system based on compound recommendation algorithm——A research tool to study the push effect of algorithm

Yan Yuqiao, Zhang Weiping, Luo Fangdan and Zhang Hongli
Open abstractPersonalized information recommendation simulation system based on compound recommendation algorithm——A research tool to study the push effect of algorithm View article, Personalized information recommendation simulation system based on compound recommendation algorithm——A research tool to study the push effect of algorithm PDF, Personalized information recommendation simulation system based on compound recommendation algorithm——A research tool to study the push effect of algorithm

012168

THE FOLLOWING ARTICLE ISOPEN ACCESS

Application Research of Short-term Traffic Flow Forecast Based on Bat Algorithm Support Vector Machine

Rongxia Wang
Open abstractApplication Research of Short-term Traffic Flow Forecast Based on Bat Algorithm Support Vector Machine View article, Application Research of Short-term Traffic Flow Forecast Based on Bat Algorithm Support Vector Machine PDF, Application Research of Short-term Traffic Flow Forecast Based on Bat Algorithm Support Vector Machine

012169

THE FOLLOWING ARTICLE ISOPEN ACCESS

Numerical Simulation of Elbow Erosion in Liquid-Solid Two-Phase Flow

Dingkun Xie, Yurong Wu, Zhaolun Zhang, Tengru Wang, Puxin Chen, Yu Cui, Ce Li and Shenyang Feng
Open abstractNumerical Simulation of Elbow Erosion in Liquid-Solid Two-Phase Flow View article, Numerical Simulation of Elbow Erosion in Liquid-Solid Two-Phase Flow PDF, Numerical Simulation of Elbow Erosion in Liquid-Solid Two-Phase Flow

012170

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on the Effectiveness and Operability of Urban and Rural Planning Implementation Evaluation Based on Ecological Environment

Lu Zhao and Chengying Li
Open abstractResearch on the Effectiveness and Operability of Urban and Rural Planning Implementation Evaluation Based on Ecological Environment View article, Research on the Effectiveness and Operability of Urban and Rural Planning Implementation Evaluation Based on Ecological Environment PDF, Research on the Effectiveness and Operability of Urban and Rural Planning Implementation Evaluation Based on Ecological Environment

012171

THE FOLLOWING ARTICLE ISOPEN ACCESS

Reliability Research of Vacuum Circuit Breaker Based on Degradation

Yan Mu, Yongxing Wang and Jiyan Zou
Open abstractReliability Research of Vacuum Circuit Breaker Based on Degradation View article, Reliability Research of Vacuum Circuit Breaker Based on Degradation PDF, Reliability Research of Vacuum Circuit Breaker Based on Degradation

012172

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on Design of Multimedia Platform Based on Digital Campus

Zhenyu Wang, Zichang Huang, Hao Sun, Yongzhi Li and Jianhua Lyu
Open abstractResearch on Design of Multimedia Platform Based on Digital Campus View article, Research on Design of Multimedia Platform Based on Digital Campus PDF, Research on Design of Multimedia Platform Based on Digital Campus

012173

THE FOLLOWING ARTICLE ISOPEN ACCESS

Analysis of arch bridge collapse based on finite element technology

Yu Niu and Qingshun Yang
Open abstractAnalysis of arch bridge collapse based on finite element technology View article, Analysis of arch bridge collapse based on finite element technology PDF, Analysis of arch bridge collapse based on finite element technology

012174

THE FOLLOWING ARTICLE ISOPEN ACCESS

Strength properties and reinforcement mechanism of bio-enzyme stabilized marine soils

Jinzhu Li, Wenjun Wang and Hongxiang Huang
Open abstractStrength properties and reinforcement mechanism of bio-enzyme stabilized marine soils View article, Strength properties and reinforcement mechanism of bio-enzyme stabilized marine soils PDF, Strength properties and reinforcement mechanism of bio-enzyme stabilized marine soils

012175

THE FOLLOWING ARTICLE ISOPEN ACCESS

Quantification of graphene materials in fibers

Weidong Li, Yingjie Wang and Zhiping Mao
Open abstractQuantification of graphene materials in fibers View article, Quantification of graphene materials in fibers PDF, Quantification of graphene materials in fibers

012176

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on Optimization Strategy of Regional Haze Governance Based on Synergy Effect——A Case of Central Plains City Group

Zili Peng and Ganggang Zhang
Open abstractResearch on Optimization Strategy of Regional Haze Governance Based on Synergy Effect——A Case of Central Plains City Group View article, Research on Optimization Strategy of Regional Haze Governance Based on Synergy Effect——A Case of Central Plains City Group PDF, Research on Optimization Strategy of Regional Haze Governance Based on Synergy Effect——A Case of Central Plains City Group

012177

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on the framework of full-process condition monitoring and evaluation method for express logistics based on multi-information fusion and intelligent identification

Luping Ma, Yuan Zhang, Yanping Du and Lei Huang
Open abstractResearch on the framework of full-process condition monitoring and evaluation method for express logistics based on multi-information fusion and intelligent identification View article, Research on the framework of full-process condition monitoring and evaluation method for express logistics based on multi-information fusion and intelligent identification PDF, Research on the framework of full-process condition monitoring and evaluation method for express logistics based on multi-information fusion and intelligent identification

012178

THE FOLLOWING ARTICLE ISOPEN ACCESS

Simulation and Experiment of Stainless Steel - Carbon Steel Cladding Rebar Rolling

Shen Wu, Jianping Tan, Zhen Li and Yong Xiang
Open abstractSimulation and Experiment of Stainless Steel - Carbon Steel Cladding Rebar Rolling View article, Simulation and Experiment of Stainless Steel - Carbon Steel Cladding Rebar Rolling PDF, Simulation and Experiment of Stainless Steel - Carbon Steel Cladding Rebar Rolling

012179

THE FOLLOWING ARTICLE ISOPEN ACCESS

Self-absorbed Ca doublet lines for stand-off quantitative analysis by laser induced breakdown spectroscopy

Na Zhao, Jing Qian, Jiansi Cai, Hongyan Zhang and Menghan Wang
Open abstractSelf-absorbed Ca doublet lines for stand-off quantitative analysis by laser induced breakdown spectroscopy View article, Self-absorbed Ca doublet lines for stand-off quantitative analysis by laser induced breakdown spectroscopy PDF, Self-absorbed Ca doublet lines for stand-off quantitative analysis by laser induced breakdown spectroscopy

012180

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on Human-Computer Interaction Design of Office Chair Based on QFD Method

Zhenyu Wang, Ming Chen, Jianhua Lyu, Siyuan Chen and Yuting Chen
Open abstractResearch on Human-Computer Interaction Design of Office Chair Based on QFD Method View article, Research on Human-Computer Interaction Design of Office Chair Based on QFD Method PDF, Research on Human-Computer Interaction Design of Office Chair Based on QFD Method

012181

THE FOLLOWING ARTICLE ISOPEN ACCESS

Study of the types and characteristics of geological hazards in reefs of Nansha Waters, South China Sea

Lei Guo, Jing Qian, Chengbin Lei, Yihuang Cai and Hongjuan Zhao
Open abstractStudy of the types and characteristics of geological hazards in reefs of Nansha Waters, South China Sea View article, Study of the types and characteristics of geological hazards in reefs of Nansha Waters, South China Sea PDF, Study of the types and characteristics of geological hazards in reefs of Nansha Waters, South China Sea

012182

THE FOLLOWING ARTICLE ISOPEN ACCESS

Analysis of load variation of two-pipe climbing robot under three gait conditions

Weifeng Yi and Jianping Tan
Open abstractAnalysis of load variation of two-pipe climbing robot under three gait conditions View article, Analysis of load variation of two-pipe climbing robot under three gait conditions PDF, Analysis of load variation of two-pipe climbing robot under three gait conditions

012183

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research and development of icon recognition system based on machine vision

Ning Cao
Open abstractResearch and development of icon recognition system based on machine vision View article, Research and development of icon recognition system based on machine vision PDF, Research and development of icon recognition system based on machine vision

012184

THE FOLLOWING ARTICLE ISOPEN ACCESS

Study on Water Hammer Protection of Accumulator for High Pressure Water Descaling System

ShengLi Meng, Xiao Bing Chen, Weiguo Yao and Congbin Che
Open abstractStudy on Water Hammer Protection of Accumulator for High Pressure Water Descaling System View article, Study on Water Hammer Protection of Accumulator for High Pressure Water Descaling System PDF, Study on Water Hammer Protection of Accumulator for High Pressure Water Descaling System

012185

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on the Linkage Mechanism of Multi-Time Scale Electricity Market in Northern Hebei

Zhongkang Wei, Tianbo Zhu, Bo Ning, Xinrui Zhong and Tianyu Zhang
Open abstractResearch on the Linkage Mechanism of Multi-Time Scale Electricity Market in Northern Hebei View article, Research on the Linkage Mechanism of Multi-Time Scale Electricity Market in Northern Hebei PDF, Research on the Linkage Mechanism of Multi-Time Scale Electricity Market in Northern Hebei

012186

THE FOLLOWING ARTICLE ISOPEN ACCESS

Simulation of fluid around parallel-column by LES

Lei Cheng, Zhenwei Zhang, Xinyu Zhao and Xiaoming Zhang
Open abstractSimulation of fluid around parallel-column by LES View article, Simulation of fluid around parallel-column by LES PDF, Simulation of fluid around parallel-column by LES

012187

THE FOLLOWING ARTICLE ISOPEN ACCESS

Working Mechanism and Numerical Simulation of a Novel 6-DOF Robotic Crusher

Guoguang Li, Boqiang Shi, Ruiyue Liu and Jie Gu
Open abstractWorking Mechanism and Numerical Simulation of a Novel 6-DOF Robotic Crusher View article, Working Mechanism and Numerical Simulation of a Novel 6-DOF Robotic Crusher PDF, Working Mechanism and Numerical Simulation of a Novel 6-DOF Robotic Crusher

012188

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research and Application on the Power Transmission and Transformation Equipments' Fault Diagnosis Method Based on Online Monitoring

Zhaohui Chen
Open abstractResearch and Application on the Power Transmission and Transformation Equipments’ Fault Diagnosis Method Based on Online Monitoring View article, Research and Application on the Power Transmission and Transformation Equipments' Fault Diagnosis Method Based on Online Monitoring PDF, Research and Application on the Power Transmission and Transformation Equipments' Fault Diagnosis Method Based on Online Monitoring

012189

THE FOLLOWING ARTICLE ISOPEN ACCESS

Development of intelligent remote control walking fish robot

Guoguo Wu, Guolai Yang, Chunjiang Li, Tianhong Luo, Rongliang Jiang, Jiameng Liao, Baojun Yang and Denghua Zheng
Open abstractDevelopment of intelligent remote control walking fish robot View article, Development of intelligent remote control walking fish robot PDF, Development of intelligent remote control walking fish robot

012190

THE FOLLOWING ARTICLE ISOPEN ACCESS

Optimization of the Circuit Parameter in Class-E Power Amplifier in the Two-coil Wireless Power Transfer System

Zhuang Sun, Qing Liu, Kun Li, Bin Hu, Haibo Zhao, Yankai Shi, Shijie Zhang and Yang Liu
Open abstractOptimization of the Circuit Parameter in Class-E Power Amplifier in the Two-coil Wireless Power Transfer System View article, Optimization of the Circuit Parameter in Class-E Power Amplifier in the Two-coil Wireless Power Transfer System PDF, Optimization of the Circuit Parameter in Class-E Power Amplifier in the Two-coil Wireless Power Transfer System

012191

THE FOLLOWING ARTICLE ISOPEN ACCESS

Study on the dynamic relationship between environmental pollution control and tourism economic growth -- a case study of China

Wei Wang
Open abstractStudy on the dynamic relationship between environmental pollution control and tourism economic growth -- a case study of China View article, Study on the dynamic relationship between environmental pollution control and tourism economic growth -- a case study of China PDF, Study on the dynamic relationship between environmental pollution control and tourism economic growth -- a case study of China

012192

THE FOLLOWING ARTICLE ISOPEN ACCESS

Study on the main biochemical components of CH-1 and the suitability of green tea

Xiao-Qin Tan, Jia-Cheng Huang, Hong-Li Fan and Qian Tang
Open abstractStudy on the main biochemical components of CH-1 and the suitability of green tea View article, Study on the main biochemical components of CH-1 and the suitability of green tea PDF, Study on the main biochemical components of CH-1 and the suitability of green tea

012193

THE FOLLOWING ARTICLE ISOPEN ACCESS

Design and Implementation of Embedded Network Intelligent Control System Based on Big Data Era

Junhong Tong

Open abstractDesign and Implementation of Embedded Network Intelligent Control System Based on Big Data Era View article, Design and Implementation of Embedded Network Intelligent Control System Based on Big Data Era PDF, Design and Implementation of Embedded Network Intelligent Control System Based on Big Data Era

012194

THE FOLLOWING ARTICLE ISOPEN ACCESS

Browning Treatment in Tissue Culture of 'Miliang 1' Delicious Kiwifruit

Rui Wang, Qingling Song, Lingling Kongd and Yong Zhang
Open abstractBrowning Treatment in Tissue Culture of ‘Miliang 1’ Delicious Kiwifruit View article, Browning Treatment in Tissue Culture of 'Miliang 1' Delicious Kiwifruit PDF, Browning Treatment in Tissue Culture of 'Miliang 1' Delicious Kiwifruit

012195

THE FOLLOWING ARTICLE ISOPEN ACCESS

Anti-browning in Tissue Culture of 'Donghong' Kiwifruit

Liyun Sui, Lingling Kong, Xiaomin Liu and Yong Zhang
Open abstractAnti-browning in Tissue Culture of ‘Donghong’ Kiwifruit View article, Anti-browning in Tissue Culture of 'Donghong' Kiwifruit PDF, Anti-browning in Tissue Culture of 'Donghong' Kiwifruit

012196

THE FOLLOWING ARTICLE ISOPEN ACCESS

Callus-induced explants selection of 'Pyrus betulifolia'

Yufei Gao, Jiufeng Chai, Ying Dong, Lingling Kong and Yong Zhang
Open abstractCallus-induced explants selection of ‘Pyrus betulifolia’ View article, Callus-induced explants selection of 'Pyrus betulifolia' PDF, Callus-induced explants selection of 'Pyrus betulifolia'

012197

THE FOLLOWING ARTICLE ISOPEN ACCESS

System Dynamics Simulation Research on Ship Emission Control Area Policy

Zheng Wang, Ying Liu, Cui-Hong Qin and Wei Zhang
Open abstractSystem Dynamics Simulation Research on Ship Emission Control Area Policy View article, System Dynamics Simulation Research on Ship Emission Control Area Policy PDF, System Dynamics Simulation Research on Ship Emission Control Area Policy

012198

THE FOLLOWING ARTICLE ISOPEN ACCESS

Measurement and Control Event Planning for Formation Satellites

Yanhui Pan, Ming Li, Dongxin Wu and Bo Gao

Open abstractMeasurement and Control Event Planning for Formation Satellites View article, Measurement and Control Event Planning for Formation Satellites PDF, Measurement and Control Event Planning for Formation Satellites

012199

THE FOLLOWING ARTICLE ISOPEN ACCESS

System Dynamics Simulation of CO_2 Emissions from Typical Route Ships

Zheng Wang, Cuihong Qin, Chunling Liu and Wei Zhang
Open abstractSystem Dynamics Simulation of CO2 Emissions from Typical Route Ships View article, System Dynamics Simulation of CO2 Emissions from Typical Route Ships PDF, System Dynamics Simulation of CO2 Emissions from Typical Route Ships

012200

THE FOLLOWING ARTICLE ISOPEN ACCESS

Application of Data Mining Method Based on Integrated Learning in Early Warning Research of SMEs' Financial Crisis

Yanxu Yan
Open abstractApplication of Data Mining Method Based on Integrated Learning in Early Warning Research of SMEs' Financial Crisis View article, Application of Data Mining Method Based on Integrated Learning in Early Warning Research of SMEs' Financial Crisis PDF, Application of Data Mining Method Based on Integrated Learning in Early Warning Research of SMEs' Financial Crisis

012201

THE FOLLOWING ARTICLE ISOPEN ACCESS

The Research of Embedded Remote Monitoring System Based on B/S Framework

Xiaoyan Cheng and Guoqing Dang
Open abstractThe Research of Embedded Remote Monitoring System Based on B/S Framework View article, The Research of Embedded Remote Monitoring System Based on B/S Framework PDF, The Research of Embedded Remote Monitoring System Based on B/S Framework

012202

THE FOLLOWING ARTICLE ISOPEN ACCESS

An Approach to Multiple Attribute Decision Making with Intuitionistic Fuzzy Information and Its Application to Software Quality Evaluation

Zejian Dong
Open abstractAn Approach to Multiple Attribute Decision Making with Intuitionistic Fuzzy Information and Its Application to Software Quality Evaluation View article, An Approach to Multiple Attribute Decision Making with Intuitionistic Fuzzy Information and Its Application to Software Quality Evaluation PDF, An Approach to Multiple Attribute Decision Making with Intuitionistic Fuzzy Information and Its Application to Software Quality Evaluation

012203

THE FOLLOWING ARTICLE ISOPEN ACCESS

Bim-Based Artificial Engineering Integration Method for Building Engineering Database

Xiaoyang Che
Open abstractBim-Based Artificial Engineering Integration Method for Building Engineering Database View article, Bim-Based Artificial Engineering Integration Method for Building Engineering Database PDF, Bim-Based Artificial Engineering Integration Method for Building Engineering Database

012204

THE FOLLOWING ARTICLE ISOPEN ACCESS

Construction of 3d Model of Complex Geological Structure Deposits under Big Data

Xiaogang Xue, Mingli Bi, Caihong Li and Guoqiang Chen
Open abstractConstruction of 3d Model of Complex Geological Structure Deposits under Big Data View article, Construction of 3d Model of Complex Geological Structure Deposits under Big Data PDF, Construction of 3d Model of Complex Geological Structure Deposits under Big Data

012205

THE FOLLOWING ARTICLE ISOPEN ACCESS

Application of Artificial Intelligence in Quality Test of Vibrating Fruit Harvesting Mechanical Operation

Xiaozhou Yang
Open abstractApplication of Artificial Intelligence in Quality Test of Vibrating Fruit Harvesting Mechanical Operation View article, Application of Artificial Intelligence in Quality Test of Vibrating Fruit Harvesting Mechanical Operation PDF, Application of Artificial Intelligence in Quality Test of Vibrating Fruit Harvesting Mechanical Operation

012206

THE FOLLOWING ARTICLE ISOPEN ACCESS

Application of Multi-Channel Communication Technology in Wireless Sensor Networks

Wei Guan
Open abstractApplication of Multi-Channel Communication Technology in Wireless Sensor Networks View article, Application of Multi-Channel Communication Technology in Wireless Sensor Networks PDF, Application of Multi-Channel Communication Technology in Wireless Sensor Networks

012207

THE FOLLOWING ARTICLE ISOPEN ACCESS

Submarine Target Recognition Based on Gps Positioning System

Weihua Qiao and LI Shoujun
Open abstractSubmarine Target Recognition Based on Gps Positioning System View article, Submarine Target Recognition Based on Gps Positioning System PDF, Submarine Target Recognition Based on Gps Positioning System

012208

THE FOLLOWING ARTICLE ISOPEN ACCESS

Design and Application of High Stubble Rice Harvester

Xiaobo Zhuang and Yaoming Li
Open abstractDesign and Application of High Stubble Rice Harvester View article, Design and Application of High Stubble Rice Harvester PDF, Design and Application of High Stubble Rice Harvester

012209

THE FOLLOWING ARTICLE ISOPEN ACCESS

Research on GPS Timing Remote Synchronization Algorithm in High Altitude Meteorological Data Acquisition System

Min Qiu, Yang Qiu, Yurong Yang and Yu Bai
Open abstractResearch on GPS Timing Remote Synchronization Algorithm in High Altitude Meteorological Data Acquisition System View article, Research on GPS Timing Remote Synchronization Algorithm in High Altitude Meteorological Data Acquisition System PDF, Research on GPS Timing Remote Synchronization Algorithm in High Altitude Meteorological Data Acquisition System

Effect of Fresnel lens as cover in a passive solar water heater with some air gap between cover and absorber plate

IOP Conf. Series: Materials Science and Engineering **740** (2020) 012098 doi:10.1088/1757-899X/740/1/012098

Effect of Fresnel lens as cover in a passive solar water heater with some air gap between cover and absorber plate

Ekadewi A Handoyo[1*], Indriati Njoto Bisono[2], Peter Jonathan[3] and Dio Valentio[1]

[1] Mechanical Engineering Department, Petra Christian University, Surabaya, 60236, Indonesia

[2] Industrial Engineering Department, Petra Christian University, Surabaya, 60236, Indonesia

[3] PT. Anugerah Cipta Ekamulia, Surabaya, Indonesia

[*]Corresponding author's e-mail: ekadewi@petra.ac.id

Abstract. A passive solar heater can be used to heat air in a room or water for some household needs. Passive solar heater can reduce the energy consumption by converting solar radiation energy to be thermal energy. Basically, a simple passive solar heater consists of absorber plate, thermal insulation, working fluid, cover, and structure to hold everything. This paper will discuss about the effect of Fresnel lens used as the cover and the air gap between cover and absorber plate on a passive solar water heater. The results of the experiment are that the commercial Fresnel lens could not gave the highest water temperature nor efficiency for passive solar water heater. The highest efficiency with glass cover and five-cm air gap was 22.8%. The smaller the air gap, the higher the water temperature in a passive solar water heater. The highest water temperature with glass cover and five-cm air gap was 63.8°C. The result of this experiment gives new challenge for the next research: we do the experiment in a solar water heater where water is circulated in a pipe and design until manufacture the new Fresnel lens.

1. Introduction

Indonesia is located in Tropics and gets a lot of Sunshine almost all the time in a year. Yet, in some countries that experience severe winter usually do not get much Sunshine. The heating process in there is required to maintain life, but it consumes much energy. Whereas, the radiation emitted by the Sun can be converted into thermal energy using solar collector. Passive heater is basically a very simple solar collector with water or air as the working fluid. The benefit of passive heating is no energy consumption for mechanical driven equipment. Since water is a good thermal storage, the working fluid used is usually water. The solar passive water heater is placed such that it is exposed to the Sun. So, the water inside get warmer and then it will warm the room. Although the building still needs to be heated, but the heating load is less and we can save energy consumption. While in tropics countries, passive heating could be used to produce hot water for bath or washing dishes.

A solar passive heater generally consists of absorber plate, thermal insulation, working fluid, cover, and structure to hold everything. The absorber plate is made of metal that has good conductivity and usually painted black to absorb more heat. Thermal insulation is used only when it is necessary. When the passive heater used for warming air inside a room, then no insulation is needed. Yet, when it is

used for producing hot water, then insulation is required to prevent heat loss. The cover could be made of glass or plastic to prevent heat transfer from the absorber plate or the fluid to the ambient air.

The cover was usually made of glass and sometimes plastic. Plastic is much lighter than glass. To overcome the lower transparency of plastic, Fresnel lens is used. Fresnel lens could be used for three application, i.e.: as collimator, collector, and condenser or diverger. Collimator produces parallel ray out of lens. Collector is focusing collimated beam to a focal. Condenser or diverger makes collimated beam disperse to a wider area. In general, Fresnel lens is classified as imaging and non-imaging. Imaging lens will produce image of object, while non imaging could not. Fresnel lens is much lighter and easier to manufacture than plan-convex lens (Leutz & Suzuki, 2001). The lens material since the official invention of Fresnel lens in 1822 is polymethylmetacrylate (PMMA) which has a good transmissivity and resistance for sunlight. Imaging Fresnel lens solar concentrators are designed as focusing devices. While non-imaging Fresnel lens solar concentrators are well suited for the collection of solar energy, because the goal is not the reproduction of an accurate image of the sun, but instead the collection of energy. Non-imaging Fresnel lens concentrators are thought to be very competitive solar collectors because of their high optical efficiency, light-weight and cost effectiveness (Xie, Dai, Wang, & Sumathy, 2011).

Xie et al. explained that solar energy concentration technology using Fresnel lens is an effective way to make full use of sunlight (Xie, Dai, Wang, & Sumathy, 2011). Fresnel lens could be used in solar concentrator in Photovoltaic/Thermal applications, because it becomes a promising alternative due to its potential to overcome techno commercial constraints associated with conventional reflector based Concentrated Solar Power. Non-imaging type of Fresnel lens allows optimal transfer of light ray from source to target at spot and does not attempt to form any image of source. Widest possible acceptance angles, higher tolerances both in manufacturing and operation, less precise tracking, misalignment compensation are the parameters of non-imaging optics which makes it most efficient and best suitable for CSP technology (Kumar, Shrivastava, & Untawale, 2015). Luminosu et al. has setup an experiment with Fresnel lenses tested for solar thermal. The results obtained were average efficiency of the installation equipped with linear focus Fresnel lens of 13.98% and an average efficiency of the installation equipped with point focus Fresnel lens of 16.48%. (LUMINOSU, DE SABATA, & JURCA, 2017). Berin and Lionel use Fresnel lenses as solar radiation concentrator to generate power. The non-imaging system give more merits, such as larger accept angles, higher optical efficiency (Aniesh N. B & Beneston , 2017). Fresnel lenses could be used in solar collector to heat water for desalination process (Mahmoud & Mohamed, 2011). Alibakhsh et al. did the review on parabolic trough/Fresnel based photovoltaic thermal systems and explained that trough collectors and Fresnel lenses are more significant in case of concentrating devices (Kasaeian, Tabasi, Ghaderian, & Yousefi, 2018). Fresnel lens could also be used with receiver module and tracking system to remove all direct radiation of the sun into a greenhouse for pot plant (typical shadow plant who does not like direct radation) (Sonneveld, Swinkels, van Tuijl, Janssen, & Gieling). Compared with parabolic troughs, linear Fresnel collectors suffer from lower optical efficiency. In addition, the linear Fresnel structure is particularly suitable for the combination of CSP, solar heating/cooling, photovoltaic (PV) and/or concentrating photovoltaic (CPV) technologies (Zhu, Wendelin, Wagner, & Kutscher, 2014). In Indonesia, Fresnel lens was used to focus the sunlight to heat up stove (Asrori, Soeparman, Wahyudi, & Widhiyanuriyawan, 2014).

Another variable beside the cover that affects the solar collector's performance is the air gap between the absorber plate and the cover. Arsham et al. did exergy analysis of solar flat plate air collector and found that exergy destruction in the glass cover is largest and unavoidable (Mortazavi & Amari, 2018). Ferahtaa et al. found that the absorber temperature varies with the thickness of the air gap, consequently the temperature of the heated fluid varies in the same way (Ferahtaa, Bougoula, Ababsaa, & Abid, 2011). Ralph has constructed analytical model for convective heat loss across the air gap between absorber and cover plate in flat plat solar collector (Eismann, 2015). Alison Subiantoro also constructed analytical model for the glazing flat plate solar collector with air gap spacing. The result is that for both single and double glazing, the air gap spacing that give Rayleigh

number near to its critical value of 1708, the heat loss thru glazing will be minimum (Subiantoro & Kim, 2013). Abbas and Azat has investigated experimentally the effect of width of the channel in a solar passive using Trombe wall. They used six different widths of air gap channel, ie. 10, 15, 20, 25, 30, and 35 cm. They found that the mass flow rate is proportional directly to the width channel and the highest efficiency obtained was at depth of 30 cm (Abbas & Azat, 2018).

Fresnel lens is used a lot in many solar power concentrators or photovoltaic, but not many used in solar collector. So, it is an opportunity to study the effect of installing Fresnel lens as cover on solar collector, which is passive heater, experimentally. Since the air gap in a solar collector is important, then the effect of air gap will also be studied.

2. Experimental Setup

The experiments were conducted between April – June 2019 in Surabaya – Indonesia which is located at the latitude 7°17'-7°21' of the South. Since it was conducted outdoor, the experiments shall be conducted simultaneously on horizontal plane. So, three solar passive heater were set-up. All of passive heater will heat the same amount of water, i.e. 500 ml. The Fresnel lenses used in this experiment is the commercial ones. The dimension of the solar passive heater box will follow the dimension of commercial Fresnel lens, i.e. 26 cm x 18 cm. The absorber plate is made of 0.7-mm aluminium.

In this experiment, the performance of the passive heater with different covers will be studied. The covers used are clear glass, one piece and two pieces of Fresnel lens with some certain air gap. The cross section of the solar passive heater and its photograph are shown in figure 1. The air gap was chosen such that the focal point of Fresnel lens will be on the absorber plate. From the measurement, the focal point of one piece of Fresnel lens is 25 cm and of two pieces put together is 9 cm. The air gap effects the heat loss from the absorber plate to the ambient. To study the effect of air gap, the height of the passive heater will be adjusted. The air gap used were 5 cm, 9 cm, 15 cm, 20 cm, and 25 cm.

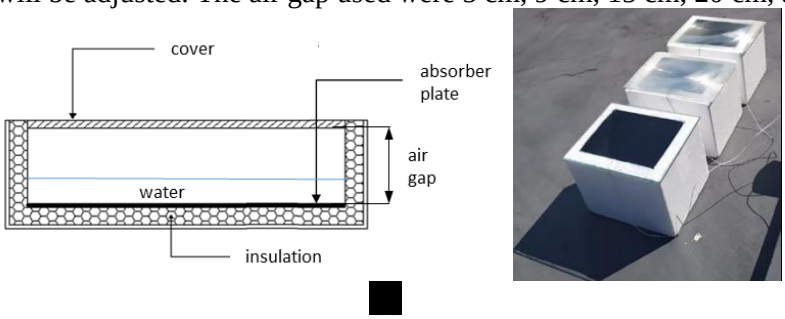


Figure 1. The schema and photograph of the passive solar heater used.

Data measured during the experiments were temperature of water, solar radiation intensity in the location, wind speed, and ambient temperature. Solar radiation intensity was measured using a pyranometer (Kipp&Zonen type SP Lite2). Temperature was measured using K-type thermocouple with Pico data logger TC-08. Wind speed was measured using Lutrin AM-4203 digital anemometer. The experiment was conducted from 09:00 am to 15:00 pm. The solar heater with three kinds of cover were tested together with the same air gap as in figure 1 for one day.

3. Result and Discussion

From the experiments conducted, the highest water temperature inside solar passive heater was obtained when the cover was clear glass at all the air gap used. Figure 2 shows the effect of cover and solar radiation intensity on water temperature. There are four graph in figure 2, i.e. when the air gap or distance between absorber plate and the cover is (a) 5 cm, (b) 9 cm, (c) 15 cm, and (d) 20 cm. The water temperature was rather symmetry, because all passive heaters were located in a horizontal plane, not tilted. The highest water temperature, 63.8^{o}C, got during experiments happened when glass cover used with 5 cm air gap between cover and absorber plate. The water got warmed and produced some water vapor inside the solar heater. These water vapor goes up and wet the inside cover. The

commercial Fresnel lens is serrated and not smooth. This serrated surface keeps more water vapor and less sunlight reach the water and absorber plate. This cause the water temperature with commercial Fresnel lens was lower than clear glass.

The Fresnel lens is much used to concentrate solar radiation for generating electricity or used in concentrator, but it is not used as cover in passive heating (Aniesh N. B & Beneston , 2017) (Asrori, Soeparman, Wahyudi, & Widhiyanuriyawan, 2014) (Kasaeian, Tabasi, Ghaderian, & Yousefi, 2018) (Kumar, Shrivastava, & Untawale, 2015) (Sonneveld, Swinkels, van Tuijl, Janssen, & Gieling) (Xie, Dai, Wang, & Sumathy, 2011) (Zhu, Wendelin, Wagner, & Kutscher, 2014). Yet, Fresnel lens has better benefit compares to clear glass. It is able to focus the solar radiation to absorber plate and lighter than glass.

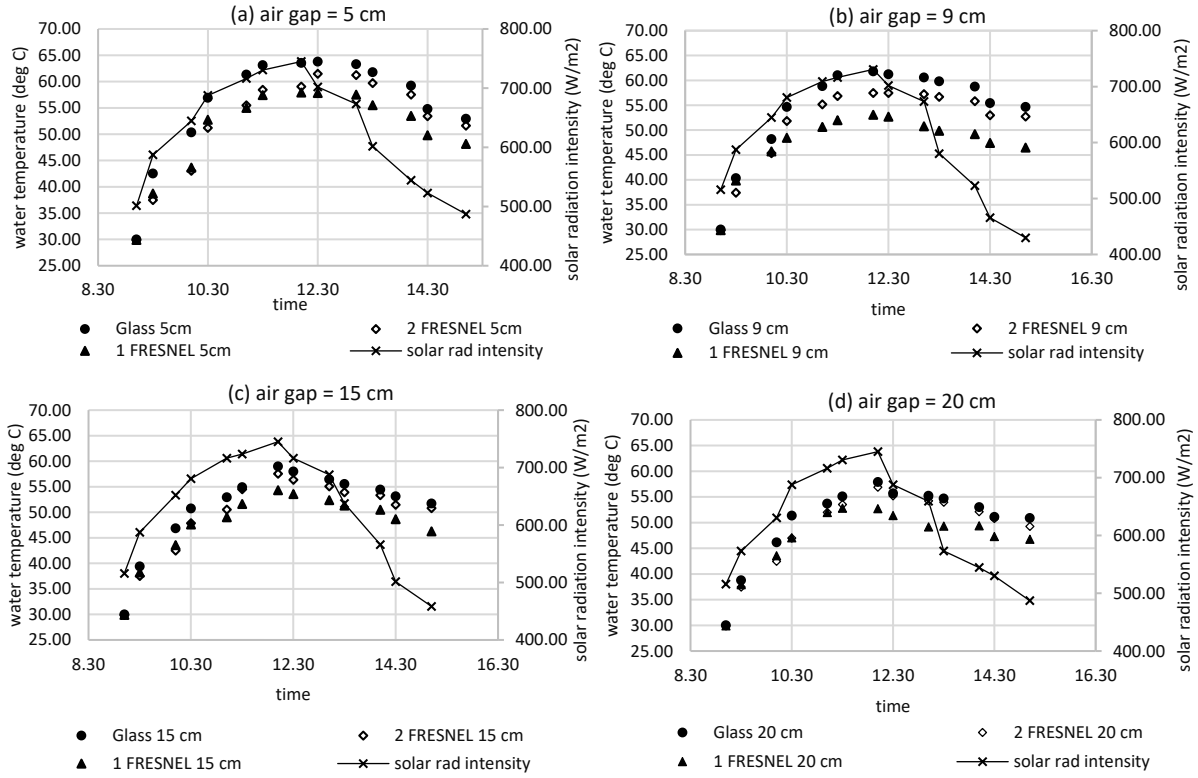


Figure 2. Average water temperature inside solar passive heater with some covers.

Figure 3 was made to show the effect of the air gap for a certain cover, i.e. glass and one piece of Fresnel lens. The smaller air gap gave higher water temperature for any cover. The less air gap means less air trapped above the water. The higher water temperature means less heat loss to the surrounding. Since the temperature of the absorber plate was almost the same with water, then convection will be more dominant than radiation. The trapped air in the gap will deliver heat by natural convection. The hot plate which was in the bottom increase the convection heat transfer from the water to the surrounding. Thus, thicker air gap will deliver more heat loss.

The glass cover gave the highest result and one-piece of Fresnel gave the least. For five-cm air gap, the water temperature could reach 63.8^{o}C with glass cover and only 57.9^{o}C with one-piece of Fresnel lens. This fact shows that the commercial Fresnel lens is not suitable for solar passive heater where water vapour could rise and block some sunlight. The next experiment will be on solar water heater where water is circulated in pipe arrangement. So, the water vapour problem could be avoided. Since the commercial Fresnel lens used is not giving good result for solar collector or passive heater, a Fresnel lens will be designed with expectation to improve the commercial one.

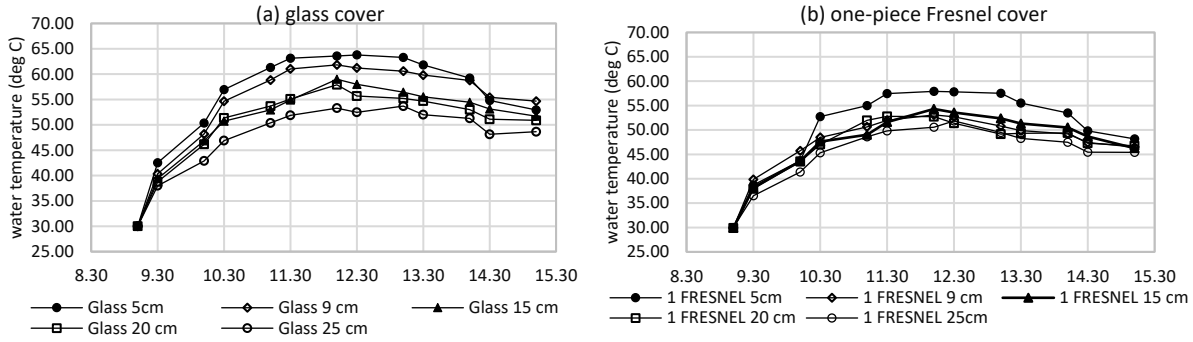


Figure 3. The effect of air gap for glass cover and one-piece Fresnel lens cover on water temperature.

Another important variable discussed in passive heater is efficiency. Figure 4 and figure 5 shows the effect of the cover and air gap on efficiency of the pasive heater. The efficiency was calculated using equation (1). The data needed are *m*, mass of water inside, *c*, the specific heat of water, T_w is water temperature, *t* is time for the increasing temperature, *I* is the solar radiation intensity, and *A* is the absorber plate are.

$$\eta = \frac{Q_{usefull}}{Q_{input}} = \frac{\frac{mc\left(T_{w,final}-T_{w,initial}\right)}{t}}{I.A} \quad (1)$$

The efficiency of the solar passive heater was quite low. The maximum was only 22.8% and it happened at the beginning of the experiment. Around 9.00 am, which the experiments were started, the increasing of water temperature was tremendous and the solar intensity was still low. Thus, the combination produced high efficiency. Glass cover gave slightly higher efficiency compare to Fresnel lens cover. Figure 4 and figure 5 shows that the efficiency downed sharply as the solar radiation intensity increased. The Fresnel cover could not give better efficiency compare to glass. The possible reasons are first the emergence of water vapor stick to inside surface of the cover produced by water. Second, the commercial Fresnel lens has only one focal point and the heating process focused on that point only and this made the water temperature increase less. Thus, for next research a new designed Fresnel lens shall be used on a solar collector which water is flowing inside pipes.

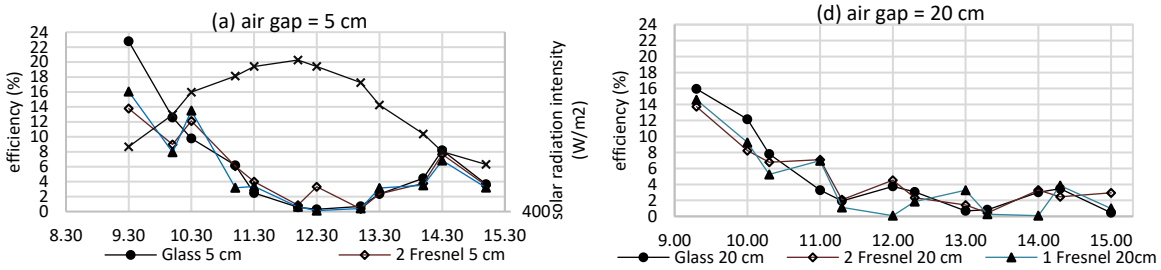


Figure 4. Efficiency of the solar passive heater using some cover with some air gap.

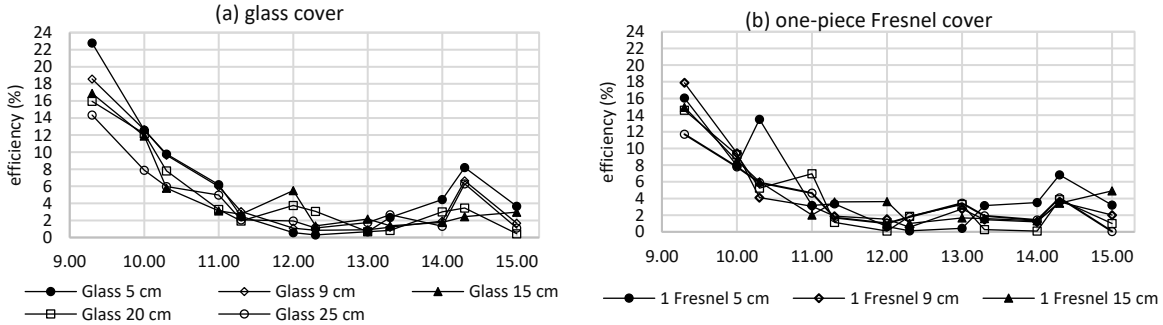


Figure 5. The effect of air gap for cover on efficiency of the passive solar water heater

4. Conclusion

From the experiments conducted, some conclusions are: the commercial Fresnel lens could not gave the highest water temperature and efficiency for passive solar water heater. The highest efficiency with glass cover and five-cm air gap was 22.8%. The smaller the air gap, the higher the water temperature in a passive solar water heater. The highest water temperature with glass cover and five-cm air gap was 63.8°C. The result of this experiment gives new challenge for the next research: do the experiment in a solar water heater where water is circulated in a pipe and design until manufacture the new Fresnel lens.

Acknowledge:

Here, I am very grateful for the support from LLDIKTI wilayah VII Jawa Timur, Kementerian Pendidikan dan Kebudayaan by providing Research Grant under contract No: 002/SP2H/LT/MONO/LT/2019.

References

[1] Abbas , E., & Azat, S. (2018). The Impact of Width of the Air Gap Channel on the Mass Flow Rate, Rayleigh Number, and Efficiency of Passive Solar Heating System . *Tikrit Journal of Engineering Sciences 25*, 47 – 52 .

[2] Aniesh N. B, B., & Beneston , S. (2017). A Review on the Application of Fresnel Lenses in Solar Radiation Concentrator . *International Journal of Innovative Research in Science, Engineering and Technology Vol 6*, 5941-5945.

[3] Asrori, Soeparman, S., Wahyudi, S., & Widhiyanuriyawan, D. (2014). Konsentrator Lensa Fresnel : Kajian Pemanfaatan Energi Panas Matahari Untuk Aplikasi Kompor Surya . *Prosiding SENTIA* (pp. F17-F23). Malang: Politeknik Negeri Malang.

[4] Eismann, R. (2015). Accurate analytical modeling of flat plate solar collectors: Extended correlation for convective heat loss across the air gap between absorber and cover plate. *Solar Energy, Vol 122*, 214-1224.

[5] Ferahtaa, F., Bougoula, S., Ababsaa, D., & Abid, C. (2011). Numerical Study of the Convection in the Air Gap of a Solar Collector . *Energy Procedia 6* , 176-184.

[6] Kasaeian, A., Tabasi, S., Ghaderian, J., & Yousefi, H. (2018). A review on parabolic trough/Fresnel based photovoltaic thermal systems . *Renewable and Sustainable Energy Reviews 91* , 193-204.

[7] Kumar, V., Shrivastava, R., & Untawale, S. (2015). Fresnel lens: A promising alternative of reflectors in concentrated solar power. *Renewable and Sustainable Energy Reviews, 44*, 376–390.

[8] Leutz, R., & Suzuki, A. (2001). *Nonimaging Fresnel Lenses: Design and Performance of Solar Concentrators.* Berlin: Springer Series in Optical Sciences.

[9] Luminosu, I., De Sabata, A., & Jurca, T. (2017, ianuarie-martie). Thermal Solar Experimental Model Equipped With Fresnel Lenses. *Buletinul 104 AGIR nr. 1*, pp. 104-110.

[10] Mahmoud, M., & Mohamed, A.-S. (2011). Utilization Of Fresnel Lens Solar Collector In Water Heating For Desalination By Humidification-Dehumidification Process . *Fifteenth International Water Technology Conference, IWTC-15*, (pp. 1-12). Alexandria, Egypt .

[11] Mortazavi, A., & Amari, M. (2018). Conventional and advanced exergy analysis of solar flat plate air collectors. *Energy Vol 142*, 277-288.

[12] Sonneveld, P., Swinkels, G., van Tuijl, B., Janssen, H., & Gieling, T. (n.d.). *A Fresnel Lenses Based Concentrator PV System in a Greenhouse.* Netherlands.

[13] Subiantoro, A., & Kim, T. (2013). Analytical models for the computation and optimization of single and double glazing flat plate solar collectors with normal and small air gap spacing. *Applied Energy Vol 104*, 392-399.

[14] Xie, W., Dai, Y., Wang, R., & Sumathy, K. (2011). Concentrated solar energy applications using Fresnel lenses: A review. *Renewable and Sustainable Energy Reviews , 15*, 2588–2606.
[15] Zhu, G., Wendelin, T., Wagner, M., & Kutscher, C. (2014). History, current state, and future of linear Fresnel concentrating solar collectors. *Solar Energy 103* , 639–652.