

# CETAS-2018



**Development Research Symposium,  
on Information & Communication Technologies**

**The Howard Plaza Hotel Taipei, Taiwan  
August 06-07, 2018**



**ESRDB**

# ***CONFERENCE BOOK OF ABSTRACT PROCEEDINGS***

***ESRDB***

Engineering Science Research & Development Board



## TABLE OF CONTENTS

SCIENTIFIC COMMITTEE	vii
SCIENTIFIC COMMITTEE	viii
SCIENTIFIC COMMITTEE	ix
ORGANIZING COMMITTEE	x
CONFERENCE TRACKS	xi
CONFERENCE CHAIR MESSAGE	xii
CONFERENCE AGENDA	xiii
Timeline of Day 01	xiii
Tea/ Coffee Break: 08:40 - 09:00 am	xiii
<i>TRACK A</i>	xvi
<i>ENGINEERING, TECHNOLOGY AND APPLIED SCIENCES</i>	xvi
A Simple Synthesis of Pd Nanosheets	xvii
Effect of Crumb Rubber Waste Filler to Physical and Mechanical Properties of LDPE/Melamine/Sand Composite for Flooring Application	xviii
<i>TRACK B</i>	xix
<i>MEDICAL, MEDICINE &amp; HEALTH SCIENCES</i>	xix
Radiology Peer Review is Broken Big Data offers a Better Way	xx
<i>UP COMING EVENTS</i>	xxi

# **Book of Abstracts Proceedings**

**International Conference on Current Challenges in Engineering, Technology and Applied Sciences Research (CETAS-2018)**

Taiwan  
August 06-07, 2018  
ISBN: 978-602-6327-23-9

Email: [info@esrdb.com](mailto:info@esrdb.com)  
URL: [www.esrdb.com](http://www.esrdb.com)



All rights reserved. Without the consent of the publisher in written, no individual or entity is allowed to reproduce, store or transmit any part of this publication through any means or in any possible form. For obtaining written permission of the copyright holder for reproducing any part of the publication, applications need to be submitted to the publisher.

Proceedings of the International Conference on Current Challenges in Engineering, Technology and Applied Sciences Research (CETAS-2018)

#### **Disclaimer**

Authors have ensured sincerely that all the information given in this book is accurate, true, comprehensive, and correct right from the time it has been brought in writing. However, the publishers, the editors, and the authors are not to be held responsible for any kind of omission or error that might appear later on, or for any injury, damage, loss, or financial concerns that might arise as consequences of using the book. The views of the contributors stated might serve a different perspective than that of the ESRDB.

***International Conference on Current Challenges in  
Engineering, Technology and Applied Sciences Research  
(CETAS-2018)***

**Venue: The Howard Plaza Hotel Taipei, Taiwan**

**Conference Theme:** : To provide an international forum where researchers, practitioners, and professionals interested in the advances in, and applications of Information technology and engineering can exchange the latest research, results, and ideas in these areas through presentation and discussion.



## SCIENTIFIC COMMITTEE

**Dr. Kun-Li Wang**

National Taipei University of Technology, Taiwan

**Dr. I-Fang Cheng**

National Applied Research Laboratories, Taiwan

**Frank Hsia-San Shu**

National Tsing Hua University

**Ming-Hsiu Liu, Yuan Ze University**

Taoyuan, Taiwan (R.O.C)

**Chau, Chi Fai**

Department of Food Science and Biotechnology, National Chung Hsing University,  
Taiwan

**Assistant Professor Tsang**

Ling Min, Institute of Marine Biology, The National Taiwan Ocean University

**Prof. Tjokorda Gde Tirta Nindhia**

Udayana University, Indonesia

**Prof. Nobuaki Nakazawa**

Gunma University, Japan



## SCIENTIFIC COMMITTEE

**Dr. Fararishah binti Abdul Khalid**

Universiti Teknikal Malaysia Melaka, Malaysia

**Head of department Odupitan Kolade Mattias**

Oshodi/Isolo Local Government, Nigeria

**Prof. Doc Golda Aira V. Crisostomo**

University of Santo Tomas, Philippines

**Assistant Professor. Intekhab N Khan**

MA. Jauhar University, Rampur, India

**Assistant Professor. Chulaporn Sota**

Khon Kaen University, Thailand

**Dr. Halimah Mohamed Ali**

Universiti Sains Malaysia, Malaysia

**Assoc. Prof. Wong Ming Wong**

University College of Technology Sarawak, Malaysia

**Prof. Erni Tanius**

University of Selangor, Malaysia





## SCIENTIFIC COMMITTEE

**Dr. Supaporn Chalapati**

I-Shou University, Australia

**Assoc. Prof. Nor Aznin Abu Bakar**

Universiti Utara Malaysia, Malaysia

**Prof. R. H.Y.Subban**

Universiti Teknologi MARA, Malaysia

**Dr. Siew-Teng Ong**

Universiti Tunku Abdul, Malaysia

## ORGANIZING COMMITTEE

**Ms Anne Li**

Conference Chair

**Email:** Anne.li@esrdb.com

**Mei Shu Lai, Professor Emeritus**

Conference Supervisor

**Email:** lai@esrdb.com

**Philip L-F. Liu**

Conference Supervisor

**Email:** liu@esrdb.com



## CONFERENCE TRACKS

- Basic Science
- ICT
- Electrical Engineering
- Mechanical & Industrial Engineering
- Civil Engineering
- Business and Management Studies
- Electric Drives and Control
- Electrical Machines
- Instrumentation Engineering
- Power Generation, Transmission and Distribution
- Power System Engineering

## CONFERENCE CHAIR MESSAGE

**Ms. Mei Shu Lai**

“International Conference of Engineering Science Research and Development Board” is a platform that thrives to support the worldwide scholarly community to analyze the role played by the multidisciplinary innovations for the betterment of human societies. It also encourages academicians, practitioners, scientists, and scholars from various disciplines to come together and share their ideas about how they can make all the disciplines interact in an innovative way and to sort out the way to minimize the effect of challenges faced by the society. All the research work presented in this conference is truly exceptional, promising, and effective. These researches are designed to target the challenges that are faced by various sub-domains of the social sciences and applied sciences.

I would like to thank our honorable scientific and review committee for giving their precious time to the review process covering the papers presented in this conference. I am also highly obliged to the participants for being a part of our efforts to promote knowledge sharing and learning. We as scholars make an integral part of the leading educated class of the society that is responsible for benefitting the society with their knowledge. Let’s get over all sorts of discrimination and take a look at the wider picture. Let’s work together for the welfare of humanity for making the world a harmonious place to live and making it flourish in every aspect. Stay blessed.

Thank you.

Ms. Mei Shu Lai

Conference Chair

Email: [contact@esrdb.com](mailto:contact@esrdb.com)



## CONFERENCE AGENDA

**Conference Name: International Conference on Current Challenges in Engineering, Technology and Applied Sciences Research (CETAS-2018)**

**Day & Date: Monday, August 06, 2018**

**Venue: The Howard Plaza Hotel Taipei**

### Timeline of Day 01

08:00 - 08:10 am	Registration of Participants
08:10 - 08:20 am	Introduction of Participants
08:20 - 08:30 am	Inauguration and Opening address
08:30 - 08:40 am	Grand Networking Session

**Tea/ Coffee Break: 08:40 - 09:00 am**

**DAY 01 Monday (August 06, 2018)**

**Presentation Session (09:00 am - 10:00 am)**

**Venue: Room 1**

**Track A: Medical, Medicine & Health Sciences**

<b>Paper ID</b>	<b>Manuscript Title</b>	<b>Presenter Name</b>
TAI-188-101M	Radiology Peer Review is Broken Big Data Offers a Better Way	David S. Dinhofer

**Track B: Engineering & Technology, Computer, Basic & Applied Sciences**

CETAS-AUG-TW101	A Simple Synthesis of Pd Nanosheets	Tran Thi Bich Quyen
CETAS-AUG-TW102	Effect of Crumb Rubber Waste Filler to Physical and Mechanical Properties of LDPE/Melamine/Sand Composite for Flooring Application	Sigit Tri Wicaksono

**Closing Ceremony**

## **Conference Day 02 (August 07, 2018)**

Second day of conference will be specified for touristy. Relevant expenses are borne by Individual him/herself.

***TRACK A***  
***ENGINEERING, TECHNOLOGY AND APPLIED SCIENCES***





## A Simple Synthesis of Pd Nanosheets

<sup>1\*</sup>Tran Thi Bich Quyen, <sup>2</sup>Nguyen Thi Xuan Chi

<sup>3</sup>Nguyen Thi Diem Nhi, <sup>4</sup>Doan Van Hong Thien

<sup>5</sup>Luong Huynh Vu Thanh, <sup>6</sup>Bui Le Anh Tuan

<sup>1,2,3,4,5</sup>Department of Chemical Engineering, College of Technology, Can Tho University, 3/2 Street, Ninh Kieu District, Can Tho City, Vietnam

<sup>6</sup>Department of Civil Engineering, Can Tho University, 3/2 Street, Ninh Kieu District, Can Tho City, Vietnam

Corresponding Email: ttbquyen@ctu.edu.vn

---

**Keywords:** Palladium Nanosheets (Pd NSs), Simple Synthesis, Characterization, Plasmonic, Catalytic.

A simple and effective approach has been developed to synthesize Pd nanosheets that were successfully employed by reducing the Pd salt precursor in N,N-dimethylformamide (DMF), cetyltrimethylammonium bromide (CTAB) and used various reducing agents (i.e, citric acid, lemon aqueous extract as a biological reducing agent) in the presence of Tungsten hexacarbonyl without CO gas. It indicates to be an eco-friendly and novel method for the synthesis providing a cost effective and an efficient route for the Pd nanosheets synthesis. The prepared Pd nanosheets have been characterized by UV-vis, TEM and XRD. Result showed those Pd nanosheets have been obtained with the average edge length of 25 nm. Thus, this eco-friendly method could be a competitive alternative to the conventional physical/chemical methods used for the synthesis of Pd nanosheets. Since, it has a potential to use for applications in sensing, photothermal therapy, biosensor, catalyst, with highly plasmonic and catalytic properties in the current and in future.

## Effect of Crumb Rubber Waste Filler to Physical and Mechanical Properties of LDPE/Melamine/Sand Composite for Flooring Application

<sup>1\*</sup>Sigit Tri Wicaksono, Ph.D, <sup>2</sup>Amaliya Rasyida

<sup>3</sup>Adityo Tri Saputra

<sup>1,2,3</sup>Department of Materials and Metallurgical Engineering, Institut Teknologi Sepuluh Nopember (ITS) Surabaya - Indonesia

Corresponding Email: sigittriw@gmail.com,

---

**Keywords:** Composite, Crumb Rubber, Composite, Floor building Materials, LDPE, Melamine

The increasing number of scrap tires becomes a problematic issue. The main problems of scrap tires are the air pollution produced when its burned, and a very long decomposition time of scrap tires in nature. Considering the abundant stock-pile and its potential for recycling enough to urge this research. This study aims to reuse rubber from scrap tires become floor building aggregate as an environmentally friendly filler material. The materials used include waste LDPE, melamin, sand and waste crumb rubber. The variables used in this study are the composition variables LDPE/melamine/sand/crumb rubber/ 45/25/30/0, 45/25/25/5, 45/25/20/10, 45/25/15/15, 45/25/10/20, 45/25/5/25, 45/25/0/30. Tests carried out in this study include SEM, FTIR, compression testing, flexural testing, hardness testing, water absorption test, and density test. The effect of addition scrap tires rubber as filler show that the mechanical properties of composite become weaken. The highest flexural strength of the composite is 20,18 MPa on composite with composition of crumb rubber 5%.

***TRACK B***

***MEDICAL, MEDICINE & HEALTH SCIENCES***

## Radiology Peer Review is Broken Big Data offers a Better Way

\*David S. Dinhofer

Advanced Medical Imaging and Informatics, New York

Corresponding Email: david@dinhofner.net

---

**Keywords:** Community, Educational Materials, Radiologist

Radiology peer review in the US is a broken system due to multiple issues including: variance of reviews, bias, lack of integration into workflow, lack of acceptance, limited implementation, and abuse(1-3). The goal of peer review is to promote patient safety and identify interpretation weaknesses for improvement(4). Continuing with a broken process may show some improvement but the system is not situated to make the leap of real change in the community. Digital records, large Datasets (Big Data) and analytics can be the new gold standard if properly implemented(5). If the system reduces radiologist time, identifies weaknesses, and presents appropriate corrective educational materials, acceptance of the process is more likely to succeed. Radiologists already function at a high cognitive and educational level. As such, the radiologist, only needs minor corrections in their interpretive process to improve their care. The role of a quality improvement system for interpretive skills should focus on individual weaknesses. And, ideally, this should be an ongoing process with easy access to the available newest information. As most peer review systems, including Radpeer(ACR)(6, 7), are set up to identify diagnostic errors rather than individual weaknesses. In addition, problems with peer review are known to radiologists who see the system as flawed which limits acceptance and creates an environment ripe for abuse. The author recommends that Radiologists completely discard the peer review system and proposes that analysis of clinical data and imaging findings should be the new gold standard. Radiologists should adopt a system that uses large data sets combined with analytics to identify individual radiologists weaknesses. This requires: a change in the way radiologists document reports, creation of a analytic process to identify weaknesses, creation a safe haven for radiologists to review their own personal quality report, and offer services to improve on weaknesses. Structured data capture is a key issue in the development of such a system.

## *UP COMING EVENTS*

You can find the details regarding our upcoming events by following below:

<http://esrdb.com/irestm/>

<http://http://esrdb.com/citas/>

<http://http://esrdb.com/aecit/>

<http://http://esrdb.com/icta/>

<http://http://esrdb.com/iaets-2018/>

<http://http://esrdb.com/ctsest-2018/>

<http://http://esrdb.com/ictkea-2018/>

<http://http://esrdb.com/conferences/dRICT-2018/>

<http://anissh.com/conferences/turkey-conferences/>

<http://http://esrdb.com/conferences/csndm-2018/>

<http://http://esrdb.com/conferences/etase-2018/>

<http://http://esrdb.com/conferences/cetas-2018/>

## Vision

Invests in creation of 21st century engineers and discovery of technologies through transformational center-based research, research in education and inclusion, and research opportunities for students and teachers.

## Mission

To increase the diversity of the scientific and engineering workforce by including all members of society, regardless of race, ethnicity, or gender, in all aspects of the centers' activities. Because ESRDBs play critical roles in academe by integrating research, education, diversity, outreach, and industrial collaboration.



ESRDB