

# **Siam Physics Congress 2017 (SPC 2017)**

Journal of Physics: Conference Series Volume 901

Rayong, Thailand  
24 – 26 May 2017

ISBN: 978-1-5108-4927-3  
ISSN: 1742-6588

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571



**Some format issues inherent in the e-media version may also appear in this print version.**

Copyright© (2017) by the Institute of Physics  
All rights reserved. The material featured in this book is subject to  
IOP copyright protection, unless otherwise indicated.

Printed by Curran Associates, Inc. (2017)

For permission requests, please contact the Institute of Physics  
at the address below.

Institute of Physics  
Dirac House, Temple Back  
Bristol BS1 6BE UK

Phone: 44 1 17 929 7481  
Fax: 44 1 17 920 0979

[techtracking@iop.org](mailto:techtracking@iop.org)

**Additional copies of this publication are available from:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: 845-758-0400  
Fax: 845-758-2633  
Email: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

# TABLE OF CONTENTS

<b>Constraints on Dark Matter Annihilation by Synchrotron Emission based on Planck Data</b> .....	1
<i>Chalit Muanglay, Maneenate Wechakama, Brandon K. Cantlay</i>	
<b>Effect of a Modified Sinusoidal Forcing on Spiral Wave in a Simulated Reaction-diffusion System</b> .....	5
<i>Kritsana Khaothong, Malee Sutthiopad, Nakorn Kumchaiseemak, Jiraporn Luengviriya, Jarin Kanchanawarin, Stefan C. Müller, Chaiya Luengviriya</i>	
<b>Gibbs Energy Additivity Approaches in Estimation of Dynamic Viscosities of n-Alkane-1-ol</b> .....	9
<i>S. Phankosol, K. Krisnangkura</i>	
<b>Microanalysis Study on Ancient Wiangkalong Pottery</b> .....	13
<i>K Won-in, S Tancharakorn, P Dararutana</i>	
<b>Unpinning of Spiral Waves from Rectangular Obstacles by Stimulated Wave Trains</b> .....	17
<i>Benjamas Ponboonjaroenchai, Panatda Srithamma, Nakorn Kumchaiseemak, Malee Sutthiopad, Stefan C. Müller, Chaiya Luengviriya, Jiraporn Luengviriya</i>	
<b>Preparation of Strontium- And/or Zinc-doped Hydroxyapatite Nanoparticles and Their Polycaprolactone Composite Fibrous Scaffolds</b> .....	21
<i>Teeranat Pantasri, Suphasinee Seet, Pimsiree Suwanna</i>	
<b>Effects of Chemical Composite, Puffing Temperature and Intermediate Moisture Content on Physical Properties of Potato and Apple Slices</b> .....	25
<i>S Tabtaing, S Paengkanya, P Tanthong</i>	
<b>Production of Dried Shrimp Mixed with Turmeric and Salt by Spouted Bed Technique Enter the Rectangular Chamber</b> .....	30
<i>P Thanthong, Y Mustafa, D Ngamrungraj</i>	
<b>Non-chemistry Coupled PM10 Modeling in Chiang Mai City, Northern Thailand: a Fast Operational Approach for Aerosol Forecasts</b> .....	34
<i>Ronald Macatangay, Gerry Bagtasa, Thiranan Sonkaew</i>	
<b>Deep Shear Wave Velocity of Southern Bangkok and Vicinity</b> .....	39
<i>T Wongpanit, K Hayashi, P Pananont</i>	
<b>Comparison of Spectral Ultraviolet Irradiance Measured from Satellite and Ground-based Instrument at Nakhon Pathom Province</b> .....	43
<i>J Sriwongsa, S Buntoung</i>	
<b>Determining the Appropriate Altitude to Improve Accuracy in Rainfall Estimation from Radar Reflectivity Data</b> .....	47
<i>M Lakkham</i>	
<b>Investigating Differences in Light Stable Isotopes Between Thai Jasmine Rice and Sungyod Rice</b> .....	51
<i>C Kukulamude, S Kongsri</i>	
<b>A Preliminary Study on Identification of Thai Rice Samples by INAA and Statistical Analysis</b> .....	55
<i>S Kongsri, C Kukulamude</i>	
<b>Potential Increasing of Rubber Sheet Production with Fungus Displacement by Solar Tunnel Dryer by Integrating a Biomass Gasifier as an Assisting Heat Source</b> .....	59
<i>D Dangphonhong, P Ruenruangrit, W Pinate</i>	
<b>Atmospheric Water Vapor: Distribution and Empirical Estimation in the Atmosphere of Thailand</b> .....	63
<i>S Phokate</i>	
<b>Supersymmetrizing a Quantum Mechanical System</b> .....	67
<i>Patipan Uttayarat</i>	
<b>Forbush Decreases Detected at the Princess Sirindhorn Neutron Monitor in the 24<sup>th</sup> Solar Cycle</b> .....	72
<i>M Deeprom, T Nutaro</i>	
<b>Characteristics of Linear Variable Differential Transformer(LVDT) Probe for Gauge Blocks Calibration</b> .....	76
<i>S Peingbangyang, J Wongsaraj</i>	
<b>A New Proficiency Testing (PT) Evaluation for Conformity Assessment of Roughness Measuring Instruments</b> .....	80
<i>A Teppitaksak, J Buajarern</i>	
<b>Author Index</b>	