



宮崎大学学術情報リポジトリ

University of Miyazaki Academic Repository

宮崎大学工学部紀要 第46号表紙等

メタデータ	言語: jpn 出版者: 宮崎大学工学部 公開日: 2020-06-21 キーワード (Ja): キーワード (En): 作成者: 宮崎大学, 工学部 メールアドレス: 所属:
URL	http://hdl.handle.net/10458/6168

MEMOIRS OF FACULTY OF ENGINEERING
UNIVERSITY OF MIYAZAKI
No.46, JULY 2017

CONTENT

Original Articles

- Masahide YASUDA, Hidefumi TAKASHIMA, Tomoko MATSUMOTO
Photocatalytic Hydrogen Production from Water-Soluble Polysaccharides 1
- Tomoko MATSUMOTO, Kento SUGANO, Jin MATSUMOTO, Yoshiyuki FUEDA,
Masahide YASUDA
Evaluation of UV-Stability of Coumarins-Loaded Porphyrin-
Type Humidity Indicator 7
- Yutak DOTE, Daiki UESUGI, Tomoo SEKITO
Influence of pH on Lead Removal Ability of Blast Furnace Slag 13
- Yutak DOTE, Takao NAKAMURA, Tomoo SEKITO
Influence of pH on Zinc Removal Ability of Blast Furnace Slag 19
- Yutak DOTE, Mika ODA, Tomoo SEKITO
Influence of Simultaneously Recovering Ammonium, Phosphorous
and Potassium by Crystallization from Swine Wastewater on Biological Treatment 25
- Muhammad Afnan HABIBI, Ichijo HODAKA
Different Frequencies between Power and Efficiency in Wireless Power Transfer 31
- Hiroki TAMURA, Shogo SHIMOMIYAZONO, Kazuya ARIMA, Fumiya KAWAHARA
A Study on the Influence of Lumbar Support on Walking Motion
and Standing Time on One Leg with Eyes Closed 35
- Fumiya KAWAHARA, Hiroki TAMURA, Koichi TANNO
Kurumi TSURUTA, Tomoko SHIOMITSU, Etsuo CHOSA
A Study on the Locomo Age Calculation Method using the Winner
Node and the Locomotive Syndrome Estimating Method 39
- Hiroki NAKAGAWA, Yoshinori NAGASE, Shigeki TOMOMATSU, Masatoshi KIMURA
Study of Convective Heat Transfer on the Combustion Chamber
Wall Surface of a Gasoline Engine
(Investigation of Negligible Mainstream in a Combustion Chamber) 47
- Tomohiro USUYAMA, Tadashi OKABE, Takayuki HAMAHATA, Naofumi IKEDA, Hayato KATO
Development of Vibratory Mixer Using Magnetically Levitated Fin
Excited by Electromagnetic Force 53
- W. GANG, B. SHIN
Experimental and Numerical Investigation on Surface Vortices
Behavior with Flow Rates in Water Pump Sump 59

S. CHUNG, B. SHIN Numerical Analysis of Mixed Fluid Jet Flows through Cutting Fluid Supplying Nozzle	65
Yasuhiro BONKOBARA, Takahiro KONDOU, Takayuki HAMAHATA, Daichi INOUE, Kaita MATSUURA Development of a Tamping Rammer for Decreasing the Risk of Hand-Arm Vibration Syndrome	71
Yasuhiro BONKOBARA, Takahiro KONDOU, Yuya HANAUCHI, Takayuki HAMAHATA A Ranking Approach to Estimating Structural Damages	77
Anri IWAMOTO, Fuminori ISHITSUKA, Daisuke OHORI, Takaaki MANO, Tetsuo IKARI, Atsuhiko FUKUYAMA, Investigation of Radiative Recombination of GaAs Quantum Dots Produced by Droplet Epitaxy	85
Hideaki TAKEDA, Tsubasa NAKAMURA, Jianan LU Kasidit TOPRASERTPONG, Masakazu SUGIYAMA, Tetsuo IKARI, Atsuhiko FUKUYAMA Investigation of Carrier Transport in GaAs-interlayer-inserted Strain-Balanced InGaAs/GaAsP Quantum Well Solar Cells	89
Shuya TATEGAMI, Naoki TOKUDA, Kenjiro TAKAUCHI, Tetsuo IKARI, Kensuke NISHIOKA, Atsuhiko FUKUYAMA Effect of Light Irradiation on Carrier Mobility of <i>n</i> - and <i>p</i> -Type Si Substrates for Solar Cell Application	95
Masahiro EBIHARA, Naoya KOMAKI, Hirosumi YOKOYAMA, Kentarou SAKAI, Kouji MAEDA Mechanoluminescence Properties of Sulfur Doped Strontium Aluminate Phosphor	101
Hayato KIZU, Kouji MAEDA, Hirosumi YOKOYAMA, Kentaro SAKAI Synthesis and Luminescent Properties in Sr Defect and Oxide doped SrAl ₂ O ₄ : Eu Phosphors	105
Goushi NAKAGAWA, Kouji MAEDA, Hidetoshi SUZUKI, Kentaro SAKAI Growth Temperature Dependence of Optical Properties in GaAs Nanowires Grown by Pulsed-jet Gas Epitaxy	109
Hideaki HASHIMOTO, Toshiki WADA, Yuki YOKOYAMA, Kouji MAEDA, Hidetoshi SUZUKI Effects in Growth Conditions on Crystallinity of GaAsN Films Grown by Atomic Layer Epitaxy using Raman Spectroscopy	113
Yuta MATSUNAGA, Kazuki NIHARA, Shin KAMITAKI, Atsushi YOKOTANI Basic Research for Fabrication of Ultra-thin Films on Si(111)-7x7 Clean Surface	117
Himeka TOMINAGA, Kenji YOSHINO Growth of ZnMgO Films by Spin-coated Method	123
Himeka TOMINAGA, Kenji YOSHINO Thickness Dependence of the Platinum Electrode in Dye-Sensitized Solar Cells	127

Masatoshi ASAKURA, Keisyu KISHIMOTO, Takuma MIYAKE, Tatsuya SAKODA, Yusuke IKI, Kensaku MAEDA Development of Diagnostic Technique of Insulation Deterioration for Vacuum Circuit Breaker by Partial Discharge Detection	133
Yugo SHIRAHAMA, Toshiki HIRASHIMA, Tomoya NAKAMURA, Tatsuya SAKODA Detection of Partial Discharges in Electric Power Distribution Equipment using an Electromagnetic Wave Sensor	139
Toshiki HIRASHIMA, Tomoya NAKAMURA, Yugo SHIRAHAMA, Tatsuya SAKODA Degradation Characterization of Partial Discharge Occurring in Void	143
Tomoya NAKAMURA, Yugo SHIRAHAMA, Toshiki HIRASHIMA, Tatsuya SAKODA Characterization of Acoustic Emission Signal from a Rubber Sheet during a Tracking Deterioration Test	149
Hibiki HORIE, Tatsuya SAKODA, Katsutaka KUBO, Manabu MIZUTANI, Takato FUKANO Study on Improvement of $V-t$ Characteristic of ZnO Surge Arrester with a Series Gap	155
Tatsuya DEGUCHI, Tatsuya SAKODA, Yoshiaki AKA, Tomikazu ANJIKI, Takato FUKANO Withstand Voltage Characteristics of Polymeric Material with AC Voltage Application	159
Hiroki GOTO, Taiga DOZONO, Tatsuya SAKODA Characterization of a Under Water Plasma with Surfactant	165
Taiga DOZONO, Hiroki GOTO, Tatsuya Sakoda Study on Inactivation Process of Bacillus subtilis by an Underwater Plasma Source with a Porous Membrane	169
Takeshi NISHIMURA, Taiga DOZONO, Hiroki GOTO, Masaru TOMINAGA, Tatsuya SAKODA Sterilization of Bacillus Atrophaeus and Escherichia Coli using a Plasma Mist Source for Preventing Diseases of Mango	175
Toshitsugu ISHIKAWA, Ipepi HUIJISAWA, Tatsuya SAKODA, Noriyuki HAYASHI Relationship between Absolute Humidity of Outside Air and System Operation Mode in Desiccant Air Conditioning System	179
Tomoko ISHITSU, Noriyuki HAYASHI, Htin Kyaw Oo Design of Thermoelectric Power Generation System Using Solar Thermal Energy	185
Daiki HIEJIMA, Takahiro KAI, Thin Thin Hlaing, Noriyuki HAYASHI Study on Voltage Fluctuation due to Ferranti Effect and Reverse Power Flow in High Voltage Distribution Line	191
Yuki FUJIHARA, Shouhei KITA, Noriyuki HAYASHI, Hiroo TARAO Influence of BMI and Arm Condition on the Internal Human Body Impedance	197

Yuya NAGAKAWA, Mitsuhiro YOKOTA Numerical Examination on Radio Wave Propagation Loss by Human Body in Two-Dimensional Room Model	203
Shota SAKAKIBARA, Mitsuhiro YOKOTA Numerical Examination of Radio Wave Shadowing Properties for Three-Dimensional Modeling of Human Body.....	209
Tatsuaki MITSUI, Soe Soe Khaing, Mitsuhiro YOKOTA Scattering Problem of EM Wave by Cylindrical Object Using Multigrid-Moment Method	217
Moe Zet Pwint, Mie Mie Tin, Mitsuhiro YOKOTA, Thi Thi Zin Trademark Image Retrieval using Angular Radial Histogram Approach on Object Region	221
Swe Nwe Nwe Htun, Khin Mo Mo Tun, Mitsuhiro YOKOTA, Thi Thi Zin A Hybrid Information Ranking System for Web Image Search	227
Fadila Norasarin ERITHA, Koichi TANNO Design of Low $1/f$ Noise Folded Cascode Operational Amplifier by Using Chopper Stabilization Technique	233
Hiroaki TACHIBANA, Yuki ARIKAWA, Shotaro USUZAKI, Shin-Ichiro KUBOTA, Kayoko TAKATSUKA, Hisaaki YAMABA, Naonobu OKAZAKI Discriminating Legitimate Accesses from a Web Access Log Recorded During DDoS Attack	239
Yuki ARIKAWA, Shin-Ichiro KUBOTA, Hisaaki YAMABA, Naonobu OKAZAKI A Proposal of a Mitigation Method of HTTP Flood Attacks Using a Server for Detailed Examination of Pseudo Positive Accesses	247
Tokiyoshi KUROGI, Hisaaki YAMABA, Shin-Ichiro KUBOTA, Tetsuro KATAYAMA, Naonobu OKAZAKI Evaluation of Feature Values of Surface Electromyograms for User Authentication on Mobile Devices	251
Ryohei TATSUDA, Hisaaki YAMABA, Shin-Ichiro KUBOTA, Naonobu OKAZAKI A Study on the CAPTCHA Using Mouse Tracking.....	257
Koki HINOKUMA, Hisaaki YAMABA, Shin-Ichiro KUBOTA, Naonobu OKAZAKI Proposal of Puzzle Authentication Method with Video Recording Attack Resistance	263
Hiroki TACHIYAMA, Tetsuro KATAYAMA Current Status and Issues of Test Cases Automatic Generation Tool BWDM	269
Satoshi TANOUE, Tetsuro KATAYAMA Current Status and Issues of Refactoring Support Tool MCC Focusing on the Naming of Variables	275
Takuya SATO, Tetsuro KATAYAMA Improvement of TFVIS(Transitions and Flow Visualization)for Applying Java Programs Including Exception Handling	279

Hnin Thandar Tun, Tetsuro KATAYAMA, Kunihito YAMAMORI, Khine Khine Oo Improving Software Development in Business Operation Effectively Approached by CMMI	285
Makoto SAKAMOTO, Akane IDO The Experiment of Program for Designing of the Hula Dresses Adding Accessories.....	291
Makoto SAKAMOTO, Yuichiro ISHIZAKI, Atsushi IIBOSHI Description of the Character by the Inbetweening Algorithm for Animation	295
Kunihito YAMAMORI, Seiya INO, Masaru AIKAWA Three-Step Recognition Method for Handwritten Digits Using SVM and Neural Network.....	299
Kunihito YAMAMORI, Sou OTSUKA, Masaru AIKAWA Evaluation of Japanese Professional Baseball Hitter by Improved OERA Model Considering with Sacrifice Hit and Fly	303
Kunihito YAMAMORI, Yasuhisa NAGANO, Masaru AIKAWA Generalization Ability Improvement by Parallel Convolution and Dropout	309
Kunihito YAMAMORI, Masaya YOSHIDA, Masaru AIKAWA Learning Efficiency Improvement of Reinforcement Learning in Restricted View Environment.....	313
Kunihito YAMAMORI, Yusuke ZUSHI, Masaru AIKAWA Evaluation of Heterogeneous Crossover Island Model by TSP	317
Khaing Zin Htwe, Kunihito YAMAMORI, Tetsuro KATAYAMA, Tin Mar Kyi Early Detection of Lung Cancer by Artificial Neural Network and Fuzzy Inference System	321