

## 2021-ISNST Symposium Program

November 18 (Thursday)					
08:00-09:00	Registration (E-13 Lobby)				
09:00-09:30	Opening Ceremony (Room: E1301) <b>Opening remark: Prof. Deng-Maw, Lu, Chairman of Congress</b> <i>The President of Southern Taiwan University of Science and Technology, Taiwan.</i>				
09:30-10:30	Keynote Lecture 1 (Room: E1301) <b>Prof. Jyh-Cheng Chen</b> <i>Dean, College of Computer Science, National Yang Ming Chiao Tung University (NYCU), Taiwan</i> <i>Title: Free5GC: free the cellular core networks</i> <b>Chair: Prof. Shu-Chen Cheng</b>				
10:30-11:00	Coffee Break				
11:00-12:00	Keynote Lecture 2 (Room: E1301) <b>Prof. Shinichiro Ito</b> <i>President of Kogakuin University, Tokyo, Japan.</i> <i>Title: Science of Swimming and the Swimming of the Soft Shelled Turtle</i> <b>Chair: Prof. Yu-Sheng Lin</b>				Poster Presentation 1 (Session A & C) (E-13 Lobby)
12:00-13:00	Lunch Break (Room: E1302 · E1304 · E407)				
13:00-14:30	Poster Presentation 2 (Session B & D) (E-13 Lobby)				
Location	Room: E1305	Room: E1301	Room: E408	Room: E409	Room: I201
Venue	Session A1	Session B1	Session C1	Session D1	Session E1
14:30-16:00	(Invited) Prof. Torbjörn Nordling  (Invited) Prof. Irsyadi Yani  #58 #60 #75  Chair: Prof. Yu-Ta Chen	(Invited) Prof. Sivaperumal Sampath Chair: Prof. Po-Ming Lee  #64 #169 #187  Chair: Prof. Chun-Hung Yang	(Invited) Prof. Tzue-Hseng S. Li Chair: Prof. Ming-Shyan Wang  #46 #63 #152 #183 #184  Chair: Prof. Chi-Jo Wang	(Invited) Prof. Grrace Ng Hui-Suan Chair: Prof. Jian-Chyi Chen    Academic Exchange	#112 #113 #114 #121 #122 #123  Chair: Prof. Chien-Cheng Huang
16:00-16:30	Coffee Break (E13-Lobby)				
Venue	Session A2	Session B2	Session C2	Session D2	Session E2
16:30-18:00	#4 #165 #198 #142  #116 #168 #195  Chair: Prof. Kuan-Jen Chen	(Invited) Prof. Chris Jordan G. Aliac  (Invited) Prof. Pei-Wei Tsai  (Invited) Prof. Chi-Hua Jonny Yu Chair: Prof. Tz-Heng Hsu	(Invited) Prof. Chien-Liang Chiu  #45 #76 #95 #137 #174  Chair: Prof. Jeng-Feng Lin	Academic Exchange	Academic Exchange
18:30	Banquet (Queena Plaza Hotel)				
November 19 (Friday)					
Location	Room: E1305	Room: E1301	Room: E408	Room: E409	Room: I201
Venue	Session A3	Session B3	Session C3	Session D3	Session E3
09:00-10:00	#8 #107 #117  #115 #94 #202  Chair: Prof. Yu-Ching Lee	#130 #200 #233 Chair: Prof. Horng-Horng Lin  (Invited) Prof. Wei-Yu Li Chair: Prof. Wen-Shan Chen	Academic Exchange	(Invited) Prof. Lance Chang  #194 #204 #219  Chair: Prof. Hong-Ru Lin	
10:00-10:20	Coffee Break (E13-Lobby)				
Venue	Session A4	Session B4	Session C4	Session D4	Session E4
10:20-11:20	Academic Exchange	#38 #139 Chair: Prof. Horng-Horng Lin  Academic Exchange	(Invited) Prof. Renann G. Baldovino Chair: Prof. Aaron Raymond See  (Invited) Prof. Wanwisa Wannapipat Chair: Prof. Aaron Raymond See	(Invited) Prof. Ricardo Guerrero Chair: Prof. Hong-Ru Lin  (Invited) Prof. Kung-Ta Lee Chair: Prof. Chia-Ping Lai	
11:20-12:00	Closing Ceremony (Room: E1301) <b>Closing remark: Prof. Min-Tsai Lai</b> <i>The Vice President for Academic Affairs of Southern Taiwan University of Science and Technology, Taiwan</i>				
12:00-13:00	Lunch Break (Room: E1302 · E1304 · E407)				

# Poster Schedule

**Poster Presentation**  
**November 18 (Thursday) (E-13 Lobby)**  
 (Poster Dimensions: 80 cm X 110 cm)

Session A 10:30~12:00	Session C 10:30~12:00	Session B 13:00~14:30	Session D 13:00~14:30
#1	#3	#12	#6
#2	#5	#13	#33
#7	#14	#26	#34
#16	#15	#27	#35
#17	#19	#59	#39
#18	#20	#70	#40
#28	#21	#77	#48
#29	#22	#83	#49
#30	#23	#96	#50
#41	#24	#97	#51
#42	#25	#101	#52
#44	#31	#108	#53
#62	#32	#124	#54
#66	#36	#125	#55
#68	#37	#126	#56
#74	#43	#127	#57
#78	#47	#128	#61
#79	#72	#132	#65
#80	#85	#141	#71
#81	#87	#146	#73
#82	#92	#157	#90
#84	#93	#158	#91
#86	#103	#159	#98
#109	#105	#160	#100
#118	#106	#161	#102
#131	#129	#162	#104
#133	#151	#170	#110
#134	#153	#175	#111
#135	#154	#178	#119
#136	#163	#179	#120
#156	#171	#189	#138
#166	#177	#199	#140
#167	#181	#207	#143
#176	#182	#211	#144

#201	#186	#212	#145
#203	#206	#213	#147
#214	#208	#229	#148
#223	#209	#232	#149
#226	#218		#150
#227	#220		#155
#228	#222		#164
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	#231		#173
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## Oral Paper List

### Session A

#	Author	Paper Title
4	Jui-Hung Liu, Kathleen Padrigalan and Yu-Jen Chen	Motion Analysis of a Wind Turbine Mecanum Wheel Climbing Robot
8	Jing Angelo Clet, Nai-Shang Liou, Chen-Husn Weng and Yu-Sheng Lin	Iterative Process Design of Molding PneuNets Bending Actuators using Rapid Prototyping Methods
58	Manikandan Rajendran, Ci-En Huang and Keh-Moh Lin	Optimization of sputtering parameters on deposition rate, electrical resistivity of ITO/Ag/ITO film using Taguchi method
60	Shih-Yu Chen, Keh-Moh Lin and Horng-Horng Lin	Analysis of the optical characteristics of the pressed powder container and its application in the high-speed picking and positioning by using delta robotic arm
75	Gadi Ashok Kumar Reddy, Kuang-Chyi Lee and Manova Moses	Structural Analysis of Classifier Car Employing with Different Materials to Analysis Weight and Strength
94	Lisbeth Gonzalez and Tzu Yao Tai	A theoretical analysis in Electrical Discharge Machining of SKD11 using graphite electrodes and Taguchi Method
107	Yu-Jen Chen, Wen-Tong Chong, Yi-Lun Tsai and Chen-Yi Tsai	Integration of Blade Element Momentum Theory and Innovative Mechanism Design for Combined Horizontal Axis Wind Turbine and Vertical Axis Wind Turbine Rotor
115	Wang Sheng-He, Kuo Wei-Fu, Wu Wen-Erh and Huang Kuan-Wei	Achievement and Development of Safety Monitoring Technology Applied in Semiconductor Overhead Hoist Transfer without Force Sensor
116	Wang Sheng-He, Zhuang Ren-Jie, Li Can-Yang, Huang Yi-Kai and Sun Hao-Cheng	Design and Achievement of Power Self-Generating Electric Fan by Piezoelectric Materials
117	Wang Sheng-He, Wu Jun-Xian, Lin Guan-Yan, Deng Xiang-Yu and Wang Shi-Wei	Design and Achievement of Teaching Aids with Building Block for PLC
142	Jermai Al Toussaint and Tzu-Yao Tai	An exploratory study into how conical-tipped brass electrodes of variable angle and diameter impact the contributing factors in Electric Discharge Machining (EDM) of SKD11.
165	Yeh Yi-Jui	Microplasma-assisted and One-step fabricated Silver/Nitrogen doped graphene quantum dot(GQD)nanohybrids for improve Raman detection
168	Ru-Yi Hong and Pei-Chung Chen	Applying image recognition and robotic arm in the material positioning
195	Louis Taylor and Chung Chen Pei	A Robotic Feeder Design and Its Inverse Kinematic Analysis
198	Harwadi and Tai Tzu-Yao	The effect of Machining Parameter and Conical-Tipped Electrodes on Machining Performance of SKD 61 in Electric Discharge Machining (EDM)

## Session B

#	Author	Paper Title
38	Yu-Lin Jeng, Sheng-Bo Huang and Chin-Feng Lai	Implementation of Plug-in Module on Android Studio for Programming Teaching Strategy
64	Yan-Wei Chen, Chun-Hung Yang and Jia-Quan Liou	IoT based Table Tennis Training System
130	Hui-Shan Cheng, Chiu-Ching Tuan and Yi-Chao Wu	The Development of Monitoring Device for Frozen Shoulder Rehabilitation Based on Inertial Sensor
139	Zhi-Ting Yeh and Shu-Ming Tseng	Video Scene Boundary Detection using 2D CNN Deep Visual Feature and Attention Mechanism
169	Chun-Hung Yang, Zhi Xuan Ng and Bo-Cheng Shih	Implementation of Para Table Tennis Training Analyze System
187	Joshua Adiel Wijaya, Poki Chen and Taisen Lin	A 1 ps Bin Size and 5.56 ps RMS Resolution FPGA Time-to-Digital Converter Based on Phase Wrapping, Sorting, and Selection
200	Shi-Cheng Kong, Bing-Yan Wu, Kuo-Tung Huang and Lih-Yang Wang	A Smart Remote-Controlled Vehicle For Triangle Sign Warning
233	Prasad Bvp, Qing Yuan Huang and Jing-Jou Tang	Systematic Research on the Development of a Prototype EV Autonomous Vehicle

## Session C

#	Author	Paper Title
45	Hong-Rong Xu, Zhe-Yu Lin and Seng-Chi Chen	Design and Analysis of Electric Wrench with High Speed Interior Permanent Magnet Brushless DC Motor Based on Finite Element Method
46	Kuan-Xuan Chen, You-Lin Huang and Seng-Chi Chen	IPMSM Sensorless control based on MTPA
63	Aaron Raymond See and Inah Salvador Cabili	Cepstral Coefficients for Heart Sound Signal Classification
76	Li Wang, Zhi-Hong Huang, Ching-Chuan Tseng, Hung-Hsien Ku and Chin-Lung Hsieh	A Study on Integration of a Flow Battery-based Energy-Storage System into a Wind Power-Generation System
95	Yu-Ti Sha, Chun-Jern Pan and Chun-I Lee	An aluminum battery with novel ionic liquid electrolyte and its working mechanism as investigated by in-situ Raman spectroscopy
137	Chi-Fang Weng, Chun-Jern Pan and Chun-I Lee	Water-in-bisalt electrolytes for Zn/LiFePO <sub>4</sub> & Zn/Na <sub>3</sub> V <sub>2</sub> (PO <sub>4</sub> ) <sub>3</sub> batteries
152	Aaron Raymond See and Bhuvanut Duangasidhorn	Haptic Texture Database and Feature Acquisition: A Review
174	Chang-Chih Chu and Yung-Chang	Innovation of Maintenance Strategies for Train Jacking

	Cheng	Equipment
183	Jeng-Han Li, Yu-Ying Lin, Yung-Lun Lin, Pin-Tang Lin and Yi-Lin Chen	Development Safty Warning Systems of Large Trucks' Blind Spots by Using Intelligent Image Monitoring
184	Jeng-Han Li, Wei-Shan Xiao, Guan-Zhi Tzu, Wei-Jun Xu and Jun-Jia Liu	Development of NB-IoT Based Water Quality Monitoring Boats for Intelligent Aquaculture

#### Session D

#	Author	Paper Title
194	Rodiawan Rodiawan and Sheng-Chang Wang	Highly Sensing Response of H <sub>2</sub> S gas on Au Decorated ZnO Gas Sensor
204	Wei-Lin Lin, Po-Sung Huang, Chien-Hsiang Chang and Filip Mravec	On the characteristics of catanionic vesicle/hyaluronic acid complexes: effects of pseudo-physiological environment conditions
219	Chia Ying Lin, Ming Yu Hsiao and Chien Hsiang Chang	Fabrication of olive oil delivery carriers by a homogenization-extrusion approach

#### Session E

#	Author	Paper Title
112	Shih-Feng Weng and Hui-Min Hsieh	The Past, Now and Future of Kaohsiung Medical University Hospital Database
113	Chung-Feng Liu, Chien-Cheng Huang and Chia-Jung Chen	Factors influencing the adoption of medical artificial intelligence: The practical experience of Chi Mei Medical Center
114	Chung-Han Ho, Yu-Cih Wu and Yi-Chen Chen	Colorectal cancer research in Taiwan Cancer Registry (TCR): a real-world database experience
121	Yen-Wei Chiu and Shi-Heng Wang	Risk of acute mesenteric ischemia in patients with diabetes: A population-based cohort study in Taiwan
122	Chia-Te Liao	Big-data application in policy-making from a perspective of health economics
123	Yu-Tung Huang and Shang-Hung Chang	Introduction to Chang Gung Research Database: The largest multi-institutional electronic medical records database in Taiwan

# Poster Paper List

Poster Presentation 1 (Session A & C)

10:30~12:00, November 18 (Thursday) (E-13 Lobby)

(Poster Dimensions: 80 cm X 110 cm)

## Session A

#	Paper Title
1	A cost-effective approach using polyurethane foam and recycled materials for fabricating an injection molding tool with conformal cooling channels
2	Investigations on Polymer-based Injection Molding Tools Fabricated by Rapid Tooling Technology
7	Development of a SCADA system for the Geothermal Power Plant
16	Novel application research on all-solid-state batteries: sprayed gallium anode
17	A heuristic algorithm for the line maze solving robot
18	Theoretical Analysis of Temperature and Pressure Sensor Based on A Fiber Fabry – Perot Interferometer
28	Air-gap Fiber Fabry – Perot interferometer with a Hollow-core Collapsing
29	A Study on Intelligent Control Shoe Box with Dehumidification and Deodorization
30	Investigation an Improved and Invented Design of Cane Umbrella
41	A Yaw Moment Control Enhanced with Active Steering Constraint for Drivers in Panic over Emergency Lane Change
42	Path Tracking Control Algorithms for Autonomous Vehicles: a Comparison Study
44	Disturbance Analysis of Thin Film
62	Growth of TiO <sub>2</sub> films by atomic layer deposition method with photoactivated liquor sensing properties at room temperature
66	Preparation of nanostructured zinc oxide film by high-power pulsed magnetron sputtering for the development of gas sensing components
68	Cleaning device of semiconductor
74	Research on the Laser Processing Depth
78	Particle Detection by Laser Rangefinder
79	AZO thin film growth nanotip preparation nanogenerator
80	Preparation of ZnO-WO <sub>3</sub> thin film MEMS gas sensor by co-sputtering
81	Preparation of CuO-doped ZnO film by co-sputtering method on MEMS for gas sensor
82	Prickly and dense nanopillar on AZO and ZnO film using Hydrothermal methodm
84	Surface Topography Measurement of Thin Film
86	A Study on Design of a Pharmaceutical Dehumidification Box with Multi-Functions
109	Gold nanoparticles were self-assembled on flexible substrate and applied to pressure sensor
118	Design and Test of Dental Handpiece with Pm 2.5 Reduction by Ultrasonic Atomizer
131	Intellectual Autofocus Fan
133	Effects of the magnetic gel abrasive in the rotating cylinder finishing process

134	Study of the polishing effects for the stainless inner tubes by magnetic abrasive finishing
135	Transcription effects of the pressing dies with ultrasonic polishing on glass molding
136	Developing of a conversational window for the servo control system to finish the complex surfaces in abrasive flow machining
156	Verification for the rotary axis location errors compensation effects by machining the NAS 979 cone frustum
166	Ag Microplasma-Engineered Nanoassemblies on Cellulose Papers for Surface-Enhanced Raman Scattering and Catalytic Nitrophenol Reduction
167	Path curvature detection with lane centering based on image recognition
176	A New Air Cushion Method for Unsaturated Polyester Composites Reinforced with Jute Fibers
201	CFD Modeling of Air-Water Separation Efficiency of the Separators.
203	Biomechanical Evaluation of the Multi-Screws Fixations for Calcaneus Fractures: A Finite Element Study.
214	Intelligence Internet of Thing (IoT) type spasm reduction training device
223	Development on an Application of Artificial Reality towards Teaching of Heat Treatment Flame Temperature Classification
226	High-speed dynamic balancing device for mixed flow fan rotor
227	Innovative stretch and flex system applied to film materials
228	Research on the shrinkage rate of optical adhesives used in displays

### Session C

#	Paper Title
3	Dielectric, and Piezoelectric Properties of the ZnO-Doped LKNNT Lead-Free piezoelectric ceramics
5	A Novel Temperature Monitoring Scheme Based on Fiber Optic Sensors for the Vanadium Redox Flow Battery
14	Load Disaggregation Based on Multi-Label Classification by a Naive Bayes Classifier versus an Ensemble for Residential Demand-Side Management: A Comparative Study
15	Load Disaggregation Based on Multi-Label Classification by C-Support Vector Classification for Residential Demand-Side Management
19	A Practical Two-way Wireless Power-Relay System with Symmetric Resonance Mechanism
20	Efficient Inductive Power Transfer with Bipolar Double-D Charging Pad for Light Rail Vehicles
21	Feasibility Assessment of Induction Heating System with Resonance Characteristic Switching Capability for High Flexibility of Load Applications
22	Feasibility Assessment of Enhanced Bridge Type Circuit with High Wide Output Voltage Range Capability for Charging System
23	Feasibility Assessment of Grafted Circuit with Wide Input Voltage Range Capability and Dual Charging Modes for Wireless Charging System
24	Probed-type Microsphere fiber Fabry-Perot interferometer
25	Design of Resonant Inverter with LCC Characteristic for Plasma-Driven Circuit Applications
31	Integration of Porous-Silicon Supercapacitor on Silicon Solar Cell for Energy



	Conversion/Storage/Supply Applications
32	Fabrication of Photocapacitors on Silicon Substrates with Porous Silicon of Various Porosity for Applications of Ultra-Violet Photodetectors
36	Research on Electric Equivalent Characteristics of Electrodeless Lamp Using Resonant Converter
37	Comparison of Optical Displacement Sensors between Surface Plasmon Resonance and Birefringent Refraction Principles
43	LSPR effect of metal nanoparticles on the visible photocatalytic activity of TiO <sub>2</sub> films
47	A simple plasmonic demultiplexer with a nanoscale rectangular cavity utilizing two different resonant modes
72	The study of Cs <sub>0.33</sub> WO <sub>3</sub> film by Spray Coating Method
85	Modelling of Battery Electric Vehicle with Different Driving Cycle Scenarios
87	A Narrowband active noise control system without secondary path model
92	Pneumatic screw locking system with cloud data record
93	IOT applications with low power consumption at 433MHz RF communication
103	Minimizing Surface Topography for Laser Patterned Indium Tin Oxide Thin Films
105	Constant Temperature and Moisture Environment Without the Assist of Air Circulation for Calcium Tests
106	Optimization of Outgassing Condition for Calcium Test
129	The Study of Ga <sub>2</sub> O <sub>3</sub> Metal-Semiconductor-Metal and Metal-Oxide-Semiconductor Photodetectors
151	Effect of PEDOT:PSS Composition on Photoluminescence Imaging of PEDOT:PSS/n-Si
153	Evaluation on Binocular Vision Functions by New Examination Devices
154	BBO birefringent sensing head for non-invasive measurements on the concentration variation of fluidic liquid
163	Increasing the Efficiency of PEDOT:PSS/n-Si Solar Cells with TiO <sub>2</sub> as a Hole Blocking Layer
171	Design and manufacture of virtual projection vision detection device with color vision detection function
177	Simulation of Fault Detection in Permanent Magnet Synchronous Machines by Artificial Intelligence Technology
181	Analysis of Carbon Nano-capsules for solar thermal collector
182	Development of Robot Operating System (ROS) Based Controllers for Mecanum Wheeled Mobile Platforms
186	Development of Wheeled Robot Controllers with 9-Axis Inertial Measurement Unit (IMU) Compensation
206	Research on Virtual Stereo Vision Inspection Device
208	Optimization Design of a Spherical Relay Lens System for Best-Performing a LED AOI Light Source with an Rectangular Tapered Light Pipe
209	Design of Transformer Winding Change Mechanism with Flexible Output Capability for Charging Circuit
218	Human Vision Simulation Based on an Experimental Eye Model

220	The Indoor Positioning System Based on AI Object Detection Technology with IMU sensor for the Regular Ceiling
222	The Preliminary Study of Cognitive Ability for Lyrics Evaluation by Using Serious Game
224	The Design of a Serious Game with Mahjong Tiles for Analyzing the Correlation Between Memory Ability and Age
231	Effect of Suboccipital Myofacial Release on Visual System

Poster Presentation 2 (Session B & D)  
 13:00~14:30, November 18 (Thursday) (E-13 Lobby)  
 (Poster Dimensions: 80 cm X 110 cm)

Session B

#	Paper Title
12	Interactive training and simulation system for autonomous driving
13	Visual autonomous driving training and verification system for teaching
26	Hiding Data in Encoded Bits of Speech Signal using SVM Scheme
27	Implementation of low complexity encryption scheme using BBS algorithm for VoIP audio-bitstream
59	Self-propelled car
70	Voice-Controlled System for Vehicles
77	To evaluate GeoGebra in the learning process of Calculus
83	Using Face Detection and IoT System for Smart windows
96	Architecture Design of Convolutional Neural Networks for Track Identification
97	Investigation of the Ba <sub>0.6</sub> Sr <sub>0.4</sub> Ti <sub>0.9</sub> Mn <sub>0.1</sub> O <sub>3</sub> Light Absorption Thin Films
101	Development of the Lead-free Flexible Composite Piezoelectric Films
108	Investigation of Ba <sub>0.92</sub> Ca <sub>0.08</sub> Ti <sub>0.95</sub> Sn <sub>0.05</sub> O <sub>3</sub> Lead-Free Piezoelectric Creamics
124	The Range of Motion Measuring Device Based on Inertial Sensor for Elbow Fracture Rehabilitation
125	A Wearable Electromyography Sensing Device for Gastrocnemius Measurement During the Plantar Fasciitis Stretching Exercises
126	Development of Wearable Monitoring Device for Cervical Spondylosis Rehabilitation Based on Inertial Sensor
127	Automatically Following Golf Cart
128	A Nova Feeding Machine
132	Design and Implementation of a Line Bot Based Blood Pressure Recording System
141	Fabrication and Investigation of Ba <sub>0.6</sub> Sr <sub>0.4</sub> Ti <sub>1-x</sub> MgxO <sub>3</sub> Ferroelectric Ceramics
146	Constructing a Remote Diagnosis System by the 2D Convolution Neural Networks for Mechanical Defects
157	Printed USB Dongle Antenna for WLAN/5G Application
158	Eight-port MIMO Slot Antennas at 5G C-band for Access Point Applications
159	WLAN/5G C-Band MIMO Coupled-fed Monopole Antennas for Laptop Computer Applications
160	Laptop computer MIMO antennas with split T-shaped strip for WLAN5.2/5.8GHz and 5G C-band applications
161	Portable blood oxygen concentration and body temperature monitoring system for real-time inquiry through LINE Bot
162	Temperature measurement and Face Mask identification system used for the COVID-19
170	A centralized monitoring system for IIoT information implemented with OPC UA
175	A Smart Traffic Light Using Open Source 4G/5G srsLTE And AI Object Detection For Car Collision Prevention

178	Eight-port Dual-band MIMO Slot Antennas With U-shaped Slits for Access Point Applications
179	Eight-port Dual-band MIMO Meandered Slot Antenna With I-shaped slits for Access Point Applications
189	Design of Touch-Free Buttons with Ultrasonic Modules
199	Using Multi-Layers LSTM to Predict Vehicle Speed on Highways
207	Using Neural Networks to Adjust Turning Parameters of Autonomous Guided Vehicles
211	A Knowledge-Based QA System for Early Childhood Education Case Analysis
212	Design of a Redundant Word Speech Removal System using Convolutional Neural Network Model
213	Fault-Resist and Efficient Group Key Protocol Based on Blockchain
229	A Flexible Home Care Management System for Elderly People
232	Identity-Based Anonymous Authentication Scheme for Mobile Edge Computing Based on Bilinear Pairing

### Session D

6	The antidepressant-like effect of garlic essential oil ameliorated brain inflammation in unpredictable chronic mild stress-treated of rat model.
33	All-Silicon Optical Microcavity Devices Realized with Porous-Silicon Multilayer Structures
34	Adhesive and self-healing hydrogel as injectable wound dressing inspired by mussel
35	Polyvinyl Alcohol Hydrogels Prepared by Freeze-Thawing for Negative Pressure Wound Therapy Application
39	Fabrication and characterization of superhydrophobic 2014 aluminum alloys
40	Growth-inhibitory effect of Callicarpa sp. extract on prostate cells
48	A Novel Method to Isolate Ultrapure Plasmid DNA from Bacterial Cells with Silica - Magnetite Nanocomposites
49	Silver Nanoparticles Loaded Poly(ethyl acrylate-co-acrylic acid) Film with Antibacterial Property
50	Development of High Efficiency Purification Method of Recombinant EGFP Proteins with New Immobilized Metal Ion Affinity Chromatography Magnetic Absorbents
51	Recovery of Nickel Ions from Aqueous Solutions by Poly(glycidyl methacrylate) Microspheres Functionalized with Sodium $\beta$ -Alaninate
52	Preparation of Shape Controlled Gold Nanoparticles in Reverse Micelles System
53	Study on the Removal of Cu(II) from Aqueous Solution Using a Polymeric Adsorbent Containing Cysteine as Chelating Groups
54	Efficient Hydrogen Production from Sodium Borohydride Hydrolysis Catalyzed by a Copper(II)-Chelated Resin
55	Synthesis of CuS Nanoparticles Supported on a Chelating Resin and Investigation of Its Catalytic Activity
56	Applications of Superparamagnetic Nanoparticles in Hyperthermia for Tumor Therapy
57	Applications of Multicore MnFe <sub>2</sub> O <sub>4</sub> /SiO <sub>2</sub> /Ag Magnetic Nanoparticles In Surface Enhanced Raman Spectroscopy
61	Ionic Liquid

65	The anti-oxidation and anti-cancer cell proliferation function of Cordyceps militaris cultured on Philosamia cynthia ricine
71	Development of fermentation strategy for keratinase production
73	Development of autolysis system in Escherichia coli for recombinant protein production
90	In situ synthesis of fluorescent polyaniline graphene quantum dots for the detection of pH and water content in organic solvents
91	Preservative effects of edible film incorporating with the extract from Premna microphylla Turcz leaf
98	Impacts of silkworm pupa-cultured Cordyceps militaris fruiting bodies on epithelial-mesenchymal transition in the presence of transforming growth factor- $\beta$ 1
100	PIC simulation of mode competition in a 35-GHz gyrotron traveling-wave amplifier
102	PIC simulation of a 35-GHz gyrotron backward-wave oscillation
104	PIC simulation of a 35-GHz second harmonic gyrotron backward-wave oscillation
110	Surface modification of Cellulose Paper with zwitterionic sulfobetaine copolymer to improve biocompatibility
111	Zwitterionized chitosan based of formylated sulfobetaine copolymers to improve biocompatibility
119	Conductive polyethylene terephthalate fabric coated by polyaniline doped with hydrochloric acid (PET/PANIHCl)
120	Preparation of meta-polyphenylenediamine graphene quantum dots (m-PPD-GQDs) and its application as a Cr <sup>6+</sup> detection sensor at pH=3
138	Analyzing the Multifactor Structure by Applying PRECEDE Model of the Handwashing Practice among General Public's-Cases of Tainan City
140	Fabrication and characteristic analysis of the superhydrophobic surface on 6061 aluminum alloy utilize one-step anodizing method
143	Fluorescent sensor utilizing Soy PC/11-MU gold nanodots for the determination of mercury ions in environmental samples
144	Density function theory investigation of adsorption of hydrogen and nitrogen on MoS <sub>2</sub>
145	Synthesis and Characterization of meta/para-polybenzimidazole random copolymer membranes with PPA process
147	Use of urea-formaldehyde resin to coat the modified polybutadiene micro-particles as a wear-resistant agent
148	Study on the characteristics of cast polyurethane elastomer
149	Synthesis of melt-processable cellulose by esterification reaction
150	Modified cellulose to make synthetic membrane
155	Direct reduction of SO <sub>2</sub> to elemental sulfur by H <sub>2</sub> over NiO/Al <sub>2</sub> O <sub>3</sub> catalysts
164	Tough and self-healing zwitterionic sulfobetaine methacrylate hydrogels
172	Synthesis of Multifunctional Bionanohybrids
173	High-Efficiency Hypochlorous Acid solution
191	Crystallization of Poly(lactic acid)/zinc oxide Nanohybrids
192	Synthesis of Eu <sup>2+</sup> -doped Ca <sub>5</sub> (PO <sub>4</sub> ) <sub>2</sub> SiO <sub>4</sub> ceramic powder by reactive sintering: the study of microstructure and optical properties

193	Promotion the Crystallization of Bisphenol A Polycarbonate Using Nanofillers
196	Temperature-dependent photoluminescence studies on localization effects in AlGaIn doped indium
197	Urbach tail studies in the absorption spectra of CuInS <sub>2</sub> nanocrystals
205	Nucleation and growth of $\beta$ -Si <sub>3</sub> N <sub>4</sub> nanowires from rice straws without/with FeCl <sub>3</sub> catalyst precursor by carbothermal reduction
210	Effect of WPC Treatment on Microstructure and Corrosion Characteristics of Mo <sub>2</sub> C-Containing Layer on Spheroidal Graphite Cast Iron with Electrical Discharge Coating Process
215	Microstructure and Corrosion Characteristics of HVOF-sprayed WC-Co Coatings Containing Lubricated-Gray Cast Iron on Medium Carbon Steel
216	Ultrasonic synthesis of black zinc oxide nanoparticles: the study of microstructure, optical and photocatalytic properties.
217	Gold atomic clusters/nanoparticles by pulsed laser ablation in water: the DSC and mass spectrum study after the freezing process
230	Stabilized Chlorine Dioxide Solution
234	Atomistic insight in deformation and mechanical of copper substrate under various machining tool shapes