

Physics session

Abstract No.	Time	Presented by	Affiliation	Title	Authors	page No.
Plenary Lecture: September 26 at the University Library Hall						
PO-P1	11:15-11:45	Chi Yen Huang	National Changhua University of Education	Contact-free homogeneous liquid crystal alignment realized using doping of organic rubrene molecules	Rab Nawaz, Che-Ju Hsu, Chi-Yen Huang	1

Oral presentations: September 27 at Science Building, Room B201

Chairperson: Kiyoshi Hayasaka (Niigata University)						
	09:00-09:15	Kiyoshi Hayasaka	Niigata University	Opening remarks		
Keynote Lecture						
PO-K1	09:15-09:45	Jan Mickelle V. Maratas	Mindanao State University, Iligan Institute of Technology	Bounds reach of a future circular collider on the parameters of a minimal Baryon-Lepton symmetric model	Marlon P. Brade, Dennis C. Arogancia, Jeremiah D. Juevesano, Jan Mickelle V. Maratas	2
Student Oral Presentations						
PO-S1	9:45-10:00	Belinda B. Faustino	Mindanao State University, Iligan Institute of Technology	Functionalization of Philippine natural zeolite (PNZ) for the adsorption of heavy metal ions in simulated wastewater: adsorption capacity and isotherms studies	Belinda Faustino, Danica Mae Cobo, Reynaldo Vequizo, Rolando Candidato, Jr.	3
PO-S2	10:00-10:15	Hana Shenne H. Patangan	Mindanao State University, Iligan Institute of Technology	Molecular, electrical and electrochemical investigation of in-situ polymerization of polyaniline on natural fiber	Hana Shenne H. Patangan, Reynaldo M. Vequizo	4
PO-S3	10:15-10:30	Mariel Escobal	Mindanao State University, Iligan Institute of Technology	Facile solvothermal synthesis of fluorescent nitrogen-doped carbon dots for potential bioimaging applications	Mariel Escobal, Gisèle Lecomte-Nana, Jean-Rene Duclere, Rolando Candidato Jr.	5

(Break 10:30-10:45)

Chairperson: Fumihiko Ishikawa (Niigata University)						
PO-S4	10:45-11:00	Russel Cruz Sevilla	Chung Yuan Christian University	Visualizing threading dislocations through photoluminescence in Gallium Nitride on Silicon wafers	Russel Sevilla, Hsiu-Ying Huang, Chi-Tsu Yuan	6
PO-S5	11:00-11:15	Irwan Saleh Kurniawan	Chung Yuan Christian University	Shedding Light on Crystal Defects: A Photoluminescence Study of 4H-SiC Threading Dislocations	Irwan Saleh Kurniawan, Russel Cruz Sevilla, Hsiu-Ming Hsu, Chi-Tsu Yuan	7
PO-S6	11:15-11:30	Hsiu-Ming Hsu	Chung Yuan Christian University	Surface defect study of SiC using confocal microscope	Hsiu-Ming Hsu, Russel Cruz Sevilla, Irwan Saleh Kurniawan, Chi-Tsu Yuan	8
PO-S7	11:30-11:45	LAI, YU-WEN	Chung Yuan Christian University	Optical properties of graphene quantum dots in 2D material	Yu-Wen Lai, Ruth Jeane Soebroto, Hsiu-Ying Huang, Chi-Tsu Yuan	9

LUNCH

Chairperson: Yuich Nemoto (Niigata University)						
PO-S8	13:15-13:30	Shun Tsuchida	Niigata University	Carrier doped excitonic insulator Ta ₂ NiSe ₅ by Ti substitution	Shun Tsuchida, Yusuke Hirose, Rikio Settai	10
PO-S9	13:30-13:45	Rio Yamashita	Niigata University	Single crystal growth and measurement of physical properties of Ni site substitution in Ta ₂ NiSe ₅	Rio Yamashita, Shun Tsuchida, Yusuke Hirose, Rikio Settai	11
PO-S10	13:45-14:00	Fukumi Saito	Niigata University	Single crystal growth and physical property of elemental substituted Ta ₂ NiSe ₇	Fukumi Saito, Tatsuya Morohashi, Shun Tsuchida, Yusuke Hirose, Rikio Settai	12

(Break 14:00-14:15)

Chairperson: Mitsuhiro Akatsu (Niigata University)						
PO-S11	14:15-14:30	Ryuhei Araki	Niigata University	Single crystal growth of new heavy-fermion compound CeNiSbBi	Ryuhei Araki, Yusuke Hirose, Rikio Settai	13
PO-S12	14:30-14:45	Rina Shono	Niigata University	Single crystal growth and measurement of physical properties of RRu ₆ As ₄ (R=heavy rare earth elements)	Rina Shono, Yuta Kato, Hiroki Tsukui, Yusuke Hirose, Dai Aoki, Rikio Settai	14
PO-S13	14:45-15:00	Ikaida Riku	Niigata University	Carrier density dependence of superconducting transition temperature of electron-doped SrTiO ₃ based on the first-principles calculations	Riku Ikaida, Kazuhiro Sano, Yoshimi Masuda, Takuya Sekikawa, Yoshiaki Ōno	15

Regular Oral presentations: September 28 at Science Building, Room B201

Chairperson: Rikio Settai						
PO-R1	9:00-9:25	Fuminori Honda	Kyushu University	Effect of pressure on the electronic state of Eu compounds with Eu^{2+} state	F. Honda, M. Hedo, Y. Uwatoko, T. D. Matsuda, D. Aoki, Y. Onuki	16
PO-R2	9:25-9:50	Ruth Jeane Soebroto	Chung Yuan Christian University	Up-conversion/down-conversion photoluminescence in graphene quantum dots	Ruth Jeane Soebroto, Yu-Wen Lai, Hsiu-Ying Huang, Chi-Tsu Yuan	17
PO-R3	9:50-10:15	Feng-Chuan Chuang	National Sun Yat sen University	Engineering Topological Phases of 2D Layered Materials	Feng-Chuan Chuang	18

(Break 10:15-10:30)

Chairperson: Rikio Settai						
PO-R4	10:30-10:55	Meiyu Chen	National Kaohsiung Normal University	Manganese addition effects on the microstructure and electrical properties of CaZrO_3 ceramics sintered under nitrogen atmosphere	MeiYu Chen, Chao-Ming Lee, Hsing-I Hsiang	19
PO-R5	10:55-11:20	Chi Tsu Yuan	Chung Yuan Christian University	In-Situ Formation of 0D/2D van der Waals Heterostructures with Strong Interfacial Coupling for Efficient Self-Powered Photodetectors	Ruth Jeane Sebroto, Russel Cruz Sevilla, Chung-Huan Wang, Li-Lun Wang, Irwan Saleh Kurniawan, Hsiu-Ying Huang, Chi-Tsu Yuan*	20
	11:20	Rikio Settai	Niigata University	Closing remarks		

Poster Presentation: September 26 at University Library Lounge

PP-1	15:30-16:30	Yusuke Inokuma	Niigata University	The spin-singlet and triplet superconductivity in the two-band Hubbard model based on the dynamical mean-field theory	Yusuke Inokuma, Yoshiaki Ōno	21
PP-2	16:30-17:30	Romel Mark Irabon	National Changhua University of Education	Prediction and investigation of metal oxides optimized for hydrogen storage via machine learning assisted density functional theory	Romel Mark Irabon, Rustom Hibone, Francis Kirby B. Bumea, Giovanni Paylaga, Leo Cristobal C. Ambolode II	22
PP-3	15:30-16:30	Shota Masuzawa	Niigata University	Excitonic susceptibilities and excitonic phase diagram in the electron-hole two-band Hubbard model based on the dynamical mean-field theory	S. Masuzawa, K. Sasaki, Y. Inokuma, Y. Ōno.	23
PP-4	16:30-17:30	Sounosuke Ikeda	Niigata University	Space-restricting effects on polarization relaxation of molecular liquids	Sounosuke Ikeda, Akira Yoshimori	24
PP-5	15:30-16:30	Shuto Suzuki	Niigata University	Coarse-grained forms for Langevin equations	Shuto Suzuki, Akira Yoshimori	25
PP-6	16:30-17:30	Towa Takahashi	Niigata University	Flavino dark matter in a non-Abelian discrete flavor model	Towa Takahashi, Yusuke Shimizu, Takaaki Nomura	26
PP-7	15:30-16:30	Yuta Hiranuma	Niigata University	Applying Hilbert-Huang Transform to a Real Gravitational Wave Signal of Open Data	Yuta Hiranuma	27
PP-8	16:30-17:30	Diamond C. Domato	Mindanao State University, Iligan Institute of Technology	Nanoscale Interaction and Properties of Diamond Nanothread/Polymer Composites: A DFT Study	Diamond C. Domato, Art Anthony Z. Munio, Leo Cristobal C. Ambolode II	28
PP-9	15:30-16:30	Miku Osawa	Niigata University	Gauge unification via supersymmetry at Tev-scale or intermediates scale	Miku Osawa, Hiroaki Nakano	29