PROGRAM BOOK

IcAUMS 2018

The 5th International Conference of Asian Union of Magnetics Societies

June 3-7 (Sun.-Thur.), 2018

Ramada Plaza Jeju Hotel, Jeju, Korea

Organized by The Asian Union of Magnetics Societies

Co-organized by The Korean Magnetics Society

Sponsored by SAMSUNG ELECTRONICS, LG Innotek, AMO AMOGREENTECH

Supported by Jeju CVB, Korea Tourism Organization, KOFST

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ETC.

LG 70 Anniversary 미래를 보다 삶을 혁신하다

즐거운 상상이 현실이 됩니다

알아서 운전해주는 편리한 스마트카
흔들림없이 선명한 스마트폰 카메라
박테리아까지 없애주는 청소기
외출 중에 우리집을 지켜주는 스마트홈

LG이노텍의 최첨단 기술이
당신의 즐거운 상상을 현실로 만들어 갑니다

Mobile
카메라·무선충전모듈,
PCB 등

Automotive
모터, 센서, ADAS 및 통신 부품,
전기차용 부품, 무선충전·열전모듈 등

LED
조명·모바일·차량용 LED,
BLU, LED드라이버, UV LED 등

Display
포토마스크, 테이프 서브스트레이트,
디지털 튜너, 파워 모듈 등

Semiconductor
Flip Chip CSP, SiP,
2Metal COF, COB등

IoT
3G/4G모뎀, 모바일 라우터, ESL,
네트워크·스마트 카메라, 센서 등

전장부품구매팀 김지언 대리

LG이노텍
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- GIM(Graphite Injection Molding)
- Vent
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Energy

- Amorphous/Nano-Crystalline Magnetic Components
- Flexible Battery
- ESS(UPS)

Environment

- Water Treatment System
- Vent Cleaner
- SCR(De-NOx system)
- Hydrogen Reformer

Smart Tex

- Silver Wire
- Nano Fiber for Functional Textile

WELCOME MESSAGE

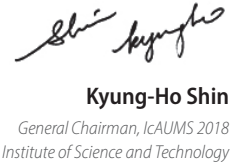
On behalf of the Organizing Committee for the 5th International Conference of Asian Union of Magnetics Societies, we are pleased to welcome you all to the IcAUMS 2018 to be held in Jeju, Korea, from June 3 to 7, 2018.

As you are probably aware, the IcAUMS is one of the foremost international conferences for researchers working in the fields of magnetism and magnetic materials, affording participants a great opportunity to share and learn about the most recent research results and technological trends.

The Organizing Committee is committed to hosting the scientific must-attend event of 2018, with a broad range of plenary and award lectures, symposiums, oral & poster presentations, and lively sightseeing activities. IcAUMS 2018 opens discussions on latest advances in spintronics, nanostructured magnetic materials, novel magnetic phenomena, soft/hard magnetic materials, energy applications of magnetic materials, bio-magnetism, and many other relevant topics.

Jeju island has been granted UNESCO World Heritage site thanks to its unique natural scenery of a volcanic island. Beautiful beaches, waterfalls, cliffs and caves lie in harmony, and the mild weather makes Jeju an even more ideal tourist destination. We believe that all the participants enjoy the beautiful natural scenery as well as the scientific programs by attending IcAUMS 2018.

Please join the 5th IcAUMS with your colleagues and friends. We are sure that you will have a memorable and productive conference.
We look forward to having the pleasure of welcoming you all to Jeju.



Kyung-Ho Shin
General Chairman, IcAUMS 2018
Korea Institute of Science and Technology

Soon Cheol Hong
Conference Chairman, IcAUMS 2018
University of Ulsan

ABOUT AUMS

The Asian Union of Magnetics Societies

The AUMS was initiated by the four magnetic societies - the Magnetics Society of Japan (MSJ), the Korean Magnetics Society (KMS), the Taiwan Association for Magnetic Technology (TAMT), and the Chinese Society of Magnetic Materials and Applications (CSMMA). The framework of the AUMS was first proposed at the 4th Asia Forum on Magnetics in Taiwan, 2007. One year later in Beijing, at the 5th Asia Forum foundation of the AUMS has been decided.

Since the establishment in January 1, 2009, AUMS has been contributing tremendous efforts to promote advances in the fields of magnetism, magnetic materials and applications in Asia Pacific region. IcAUMS has been very proud of providing an outstanding platform for all scientists, experts, and entrepreneurs to communicate and exchange recent academic and industrial developments.

THE AUMS COUNCIL MEMBERS

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HISTORY

The 5th IcAUMS	June 3-7, 2018 Jeju, Korea	
The 4th IcAUMS	August 1-5, 2016 Tainan, Taiwan	
The 3rd IcAUMS	October 28-November 2, 2014 Haikou, China	
The 2nd IcAUMS	October 2-5, 2012 Nara, Japan	
The 1st IcAUMS	December 5-8, 2010 Jeju, Korea	

HIGHLIGHT ON IcAUMS 2018!

- ✓ New ideas and intelligence presented at 15 symposiums focusing on contemporary topics
- ✓ 6 plenary & 153 invited talks by prestigious scholars
- ✓ Special events at the 5th IcAUMS
  : outdoor reception, doughnut time, student communication party, and more
- ✓ 10 exhibitors showcasing their advanced technology!

IcAUMS 2018

The 5th International Conference of
Asian Union of Magnetics Societies

COMMITTEE

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Nguyen Hoang Luong	VNU University of Science	Vietnam
Nguyen Xuan Phuc	Vietnam Academic of Science and Technology	Vietnam

PROGRAM AT A GLANCE

	June 3 (Sun.)	June 4 (Mon.)	June 5 (Tue.)	June 6 (Wed.)	June 7 (Thur.)
09:00		**Opening Ceremony & Award Speech** Ballroom 1 (2F)	**Oral Session**	**Oral Session**	**Oral Session**
10:00					
11:00		**Plenary Session 1&2** Ballroom 1 (2F)			
12:00			**Lunch**		
13:00					
14:00		**Plenary Session 3** Tamra (8F)	**Plenary Session 4&5** Ballroom 1 (2F) & Tamra (8F)	**Plenary Session 6** Ballroom 1 (2F)	**Poster Session** Lobby (8F)
15:00		**Oral Session**	**Oral Session**	**Oral Session**	**Closing Ceremony** Ballroom 1 (2F)
16:00					
17:00		**Poster Session** Lobby (8F)			
18:00	**Welcome Reception** Outdoor Pool (3F)		**Poster Session** Lobby (8F)	**Poster Session** Lobby (8F)	
19:00				**Banquet** Ramada Ballroom (2F)	
20:00	**Summer School** Tamra (8F)	**Summer School** Tamra (8F)	**Summer School** Tamra (8F)		
21:00					
22:00		**Student Communication Party** Lobby (8F)	**Student Communication Party** Lobby (8F)		
23:00					

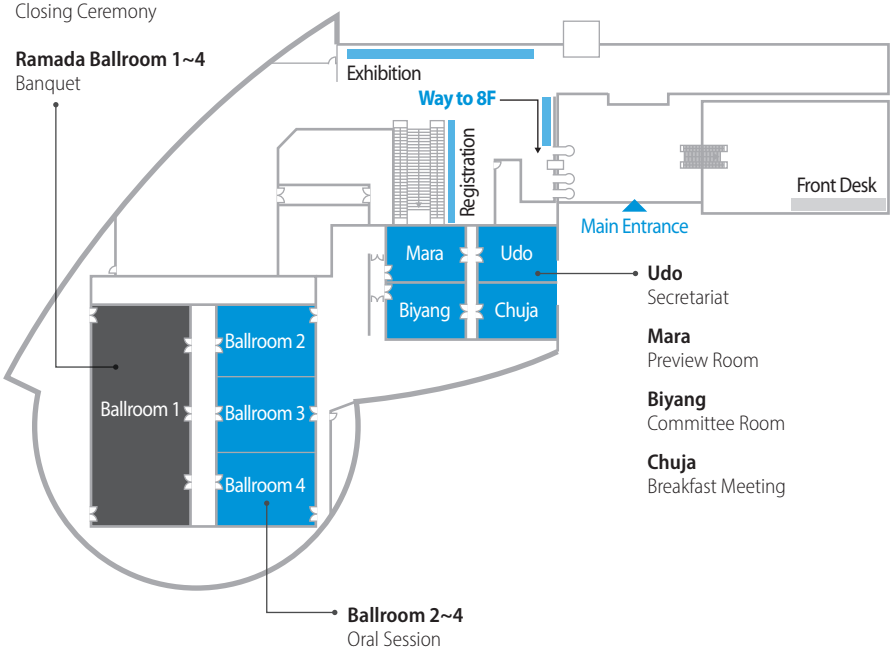
Excursion (June 6 (Wed.))

Excursion (June 7 (Thur.))

VENUE LAYOUT

Ballroom 1
Opening Ceremony
Award Speech
Plenary Session
Closing Ceremony

Ramada Ballroom 1~4
Banquet



Udo
Secretariat

Mara
Preview Room

Biyang
Committee Room

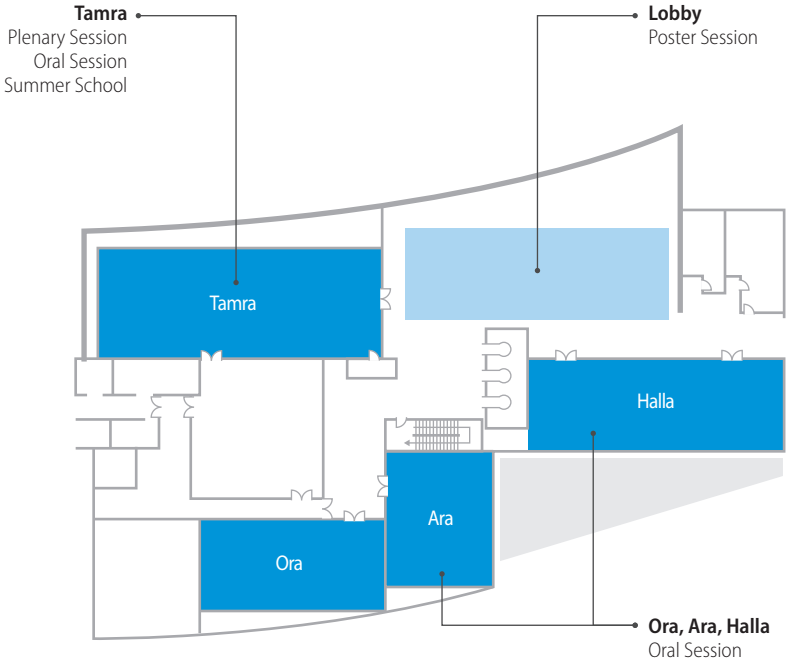
Chuja
Breakfast Meeting

Ballroom 2~4
Oral Session

2F

Save the Schedule!

Welcome Reception	SUN June 3	18:00-20:00	3F Outdoor Pool
Opening Ceremony & Award Speech	MON June 4	09:00-10:20	
Banquet	WED June 6	18:30-20:00	
Closing Ceremony	THU June 7	14:30-15:00	



8F

Daily Poster Session

MON	June 4	**G1-1**	**G2-1**	**G5-1**	**G9**			
TUE	June 5	**G1-2**	**G2-2**	**G3**	**G5-2**	**G10**	**G11**	
WED	June 6	**G1-3**	**G5-3**	**G6**	**G7-1**	**G8-1**		
THU	June 7	**G4**	**G7-2**	**G8-2**				

SESSION TIMETABLE

June 3 (Sun.)

	Ballroom 1 (2F)	Ballroom 2 (2F)	Ballroom 3 (2F)	Ballroom 4 (2F)	Tamra (8F)	Halla (8F)	Ara (8F)	Ora (8F)
18:00-20:00	Welcome Reception (3F Outdoor Pool)							
20:00-22:00					**Summer School** Hyun Soo Yang Haifeng Ding			

June 4 (Mon.)

	Ballroom 1 (2F)	Ballroom 2 (2F)	Ballroom 3 (2F)	Ballroom 4 (2F)	Tamra (8F)	Halla (8F)	Ara (8F)	Ora (8F)
09:00-10:20	Opening Ceremony & Award Speech (2F Ballroom 1)							
10:20-10:40	Coffee Break							
10:40-12:00	**Plenary Session** Joonyeon Chang Ryoji Asahi							
12:00-13:30	Lunch							
13:30-16:30		**S1** High-Performance Permanent Magnets for Future Society p. 024	**S5** Recent Development on Nanomaterials for Biomagnetics p. 025	**G9** Bio-magnetism and Biomedical Applications p. 025	**Plenary Session** Chih-Huang Lai **G1-1** Spintronics p. 027	**S6** Spin-orbitronics p. 028	**S13** Ab initio Theory in Magnetism 1 – Memorial for Arthur J. Freeman p. 029	**G2-1** Nanostructured Magnetic Materials p. 029
16:30-18:00	**Poster Session (8F Lobby)** **G1-1** Spintronics p. 058 **G2-1** Nanostructured Magnetic Materials p. 060 **G5-1** Fundamental Properties of Materials p. 063 **G9** Bio-magnetism and Biomedical Applications p. 065							
20:00-22:00					**Summer School** Chanyong Hwang H. Fukunaga			

June 5 (Tue.)

	Ballroom 1 (2F)	Ballroom 2 (2F)	Ballroom 3 (2F)	Ballroom 4 (2F)	Tamra (8F)	Halla (8F)	Ara (8F)	Ora (8F)
09:00-12:00		**S4** Permanent Magnets (Hard Ferrite Magnets) p. 031	**G3/G10** Magnetic Recording and Information Technology/ Functional Magnetic Devices p. 032		**G1-2** Spintronics p. 035	**S15** Modulated Spin and Magnetic Properties p. 037	**G5** Fundamental Properties of Materials p. 038	**G2-2** Nanostructured Magnetic Materials p. 040
12:00-13:30	Lunch							
13:30-14:10	**Plenary Session** Yoshihiko Oda				**Plenary Session** Ung-Hwan Pi			
14:10-14:30	Coffee Break							
14:30-17:30		**S2** Bio-initiative Spintronics p. 031	**S3** Next Generation Permanent Magnetic Materials p. 033	**G11** Magnetic Characterizations p. 034	**G1-3** Spintronics p. 036	**S7-1** Antiferromagnetic and Ferrimagnetic Spintronics p. 038	**S14** Ab initio Theory in Magnetism 2 – Memorial for Arthur J. Freeman p. 039	**G2-3** Nanostructured Magnetic Materials p. 041
17:00-18:30	**Poster Session (8F Lobby)** **G1-2** Spintronics p. 067 **G2-2** Nanostructured Magnetic Materials p. 069 **G3** Magnetic Recording and Information Technology p. 070 **G5-2** Fundamental Properties of Materials p. 071 **G10** Functional Magnetic Devices p. 073 **G11** Magnetic Characterizations p. 075 **Poster Award Candidates**							
20:00-22:00					**Summer School** Hiroaki Yoda Ying-Hao Chu			

June 6 (Wed.)

	Ballroom 1 (2F)	Ballroom 2 (2F)	Ballroom 3 (2F)	Ballroom 4 (2F)	Tamra (8F)	Halla (8F)	Ara (8F)	Ora (8F)
09:00-12:00		**S8** Magnetic Microscopy for nm-scale Spin Structure p. 043	**S11** Superconducting Magnet Technology and Applications p. 043	**G7-1** Soft/Hard Magnetic Materials and Their Applications p. 044	**G1-4** Spintronics p. 045	**S7-2** Spin and Heat Conversion p. 047	**G8-1** Energy Applications of Magnetic Materials p. 048	**G6-1** Novel Magnetic Phenomena p. 050
12:00-13:30	Lunch							
13:30-14:10	**Plenary Session** Boping Hu							
14:10-14:30	Coffee Break							
14:30-17:30	**Banquet Preparation**				**S9** Spin Dynamics p. 046	**S7-3** Magnetic Domain Walls and Skyrmions p. 048	**Vietnam Magnetics Society** – International Cooperation for Further Development (16:00-17:30) p. 049	**G6-2** Novel Magnetic Phenomena p. 051
17:00-18:30	**Poster Session (8F Lobby)** **G1-3** Spintronics p. 076 **G5-3** Fundamental Properties of Materials p. 077 **G6** Novel Magnetic Phenomena p. 078 **G7-1** Soft/Hard Magnetic Materials and Their Applications p. 080 **G8-1** Energy Applications of Magnetic Materials p. 082							
18:30-20:00	**Banquet (2F Ramada Ballroom)**							

June 7 (Thur.)

	Ballroom 1 (2F)	Ballroom 2 (2F)	Ballroom 3 (2F)	Ballroom 4 (2F)	Tamra (8F)	Halla (8F)	Ara (8F)	Ora (8F)
09:00-12:00		**S12** Soft Magnetic Materials p. 052	**S10** Smart Control of Ferroic Orders, Vortices and Topology p. 052	**G7-2** Soft/Hard Magnetic Materials and Their Applications p. 053	**G4** Magnetization Dynamics p. 054	**S7-4** Spin and Charge Conversion p. 055	**G8-2** Energy Applications of Magnetic Materials p. 056	
12:00-13:30	Lunch							
13:30-14:30	**Poster Session (8F Lobby)** **G4** Magnetization Dynamics p. 084 **G7-2** Soft/Hard Magnetic Materials and Their Applications p. 085 **G8-2** Energy Applications of Magnetic Materials p. 087							
14:30-15:00	**Closing Ceremony (2F Ballroom 1)**							

CATEGORIES

1. Spintronics
Spin-Orbit Torque, Spin-Transfer Torque, Magnetoresistance, THz, Spin Current, MRAM, Skyrmions, etc.

2. Nanostructured Magnetic Materials
Interface Effects, Magnetic Domains, Thin Films, Superlattices, Nanowires, Exchange Bias, 2D Materials, etc.

3. Magnetic Recording and Information Technology
Computing Devices, Patterned Media, Read/Write Heads, etc.

4. Magnetization Dynamics
Spin Waves, Micromagnetics, Ultrafast Switching, etc.

5. Fundamental Properties of Materials
Electronic Structures, Anisotropies, etc.

6. Novel Magnetic Phenomena
Spin Glasses, Superconductivity, Magnetoelasticity, Multiferroics, Oxide Magnets, Voltage Controlled Magnetism, etc.

7. Soft/Hard Magnetic Materials and Their Applications
Soft/Hard Magnetic Materials, Permanent Magnets, Amorphous Alloys, Ferrites, etc.

8. Energy Applications of Magnetic Materials
Motors, Transformers, Power Electronics, etc.

9. Bio-magnetism and Biomedical Applications
Nanoparticles, Chemical Magnetism, Biomedical Sensors and Devices, Magnetofluidics, Molecular Magnets, etc.

10. Functional Magnetic Devices
High Frequency, Sensors, Actuators, Magneto-Optics, Magnetic Shielding and Absorption, Wireless Power Transfer, etc.

11. Magnetic Characterizations
Microscopy, Soft/Hard X-rays, Magnetic Measurement Techniques, etc.

GENERAL SESSION

SYMPOSIUM

Sym. 1	Jung-Goo Lee	High-Performance Permanent Magnets for Future Society
Sym. 2	CheolGi Kim	Bio-initiative Spintronics
Sym. 3	Chul-Jin Choi	Next Generation Permanent Magnetic Materials
Sym. 4	Masaki Nakano Jae-Young Kim	Permanent Magnets (Hard Ferrite Magnets)
Sym. 5	Yasushi Takemura	Recent Development on Nanomaterials for Biomagnetics
Sym. 6	Young Keun Kim	Spin-orbitronics 1
Sym. 7	Kyung-Jin Lee	Spin-orbitronics 2
Sym. 8	Chanyong Hwang	Magnetic Microscopy for nm-scale Spin Structure
Sym. 9	Sang-koog Kim	Spin Dynamics
Sym. 10	Kee Hoon Kim	Smart Control of Ferroic Orders, Vortices and Topology
Sym. 11	Haigun Lee	Superconducting Magnet Technology and Applications
Sym. 12	Haein Yim	Soft Magnetic Materials
Sym. 13	S. H. "Sonny" Rhim	Ab initio Theory in Magnetism 1 – Memorial for Arthur J. Freeman
Sym. 14	S. H. "Sonny" Rhim	Ab initio Theory in Magnetism 2 – Memorial for Arthur J. Freeman
Sym. 15	Kyung-Jin Lee	Modulated Spin and Magnetic Properties

PRESENTATION GUIDELINE

ORAL PRESENTATION

1. Presentation Time

- Length of presentation material should be in accordance with your time assigned as follows;
  Invited Presentation: 25 min. presentation + 5 min. Q&A
  Oral Presentation: 12 min. presentation + 3 min. Q&A
- Due time is strongly encouraged.

2. Presentation File & Speaker's Autobiography

- If you use fonts other than standard Windows Office 2016, please bring the font files along with the presentation file.
- Please bring your PowerPoint presentation file on USB memory stick and submit it to the staff of each presentation room at least 15 minutes before each session starts. The operator will load the presentation files to the laptop PC.
- Each presenter (except invited speaker) is also asked to submit his/her own short autobiography to the session chair at least 10 minutes before each session starts.

3. Preview Room

Place: Mara (2F)
Operation Hours: 16:00-18:00, June 3(Sun.) /
08:00-18:00, June 4-6(Mon.-Wed.) / 08:00-15:00, June 7(Thur.)

- Please visit the preview room to check your presentation file at least 3 hours before your session starts to ensure your presentation file appears properly.
- If your presentation file contains animations or movies, you are advised to check over the technical matters 6 hours prior to your session.

4. No Camera & No Record

- Please note that photo taking and video recording are strictly prohibited in the presentation room.

POSTER PRESENTATION

Poster Session Information and Dates

Presentation Day	Set-up Time	Presentation Time	Tear-Down Time
June 4 (Mon.)	12:00-13:00	16:30-18:00	08:00-10:00, June 5 (Tue.)
June 5-6 (Tue.-Wed.)		17:00-18:30	08:00-10:00, June 6-7 (Wed.-Thur.)
June 7 (Thur.)		13:30-14:30	14:30-, June 7 (Thur.)

- Each poster will be assigned a panel, which has its own paper's number at the conference.
- We do not specify the poster format, but each poster should include the paper title, authors, and affiliation and must fit within a 0.9m x 1.2m space.
- The poster text including the paper title should be printed and enlarged, so that it can be read from a distance of at least 2 meters.
- Poster presenters are required to prepare their own poster materials in advance.
- The materials such as some scissors and tapes will be provided in poster session place.

REGISTRATION

REGISTRATION DESK: CONFERENCE ROOM LOBBY (2F)

SUN	June 3	16:00-18:30
MON TUE WED	June 4, 5, 6	08:00-18:30
THU	June 7	08:00-15:00

ON-SITE REGISTRATION FEE

Regular	USD 600 | KRW 650,000
Students/Retired	USD 300 | KRW 350,000
Accompanying Person	USD 100 | KRW 110,000
Banquet Fee (Student)	Not accept

Registration Fee Includes

Regular/Retired	Admission to All Sessions, Welcome Reception, Banquet, Lunch (1 day only), Coffee Service, Souvenir
Students	Admission to All Sessions, Welcome Reception, Lunch (1 day only), Coffee Service, Souvenir
Accompanying Person	Welcome Reception, Banquet, Coffee Service

01 For security purposes, wearing the badge is required for admission to all areas during the conference

02
- Lunch
- Souvenir
- Excursion (applicant only)

03 Registration receipt and a certificate of attendance are provided.

04 Useful information of IcAUMS 2018

LUNCH

One free lunch on a day of your choice
Bring your lunch coupon with your name badge.

Korean Cuisine (1F) OR International Buffet (2F)

Mon. 6/4	12:00-13:30
Tue. 6/5	12:00-13:30
Wed. 6/6	12:00-13:30
Thur. 6/7	12:00-13:30

COFFEE

Fresh coffee and tea will be served during the break times.

Conference Room Lobby (2F & 8F)

Mon. 6/4	10:20-10:40
Tue. 6/5	14:10-14:30
Wed. 6/6	14:10-14:30

PREVIEW ROOM

Internet and printing service are available.

Mara (2F)

Sun. 6/3	16:00-18:00
Mon. 6/4	08:00-18:00
Tue. 6/5	08:00-18:00
Wed. 6/6	08:00-18:00
Thur. 6/7	08:00-15:00

DOUGHNUT TIME

Doughnut & coffee will be provided every morning.

Conference Room Lobby (2F & 8F)

Mon. 6/4	08:30-09:00
Tue. 6/5	08:30-09:00
Wed. 6/6	08:30-09:00
Thur. 6/7	08:30-09:00

MESSAGE BOARD

Message board will be set up at the conference room lobby (2F & 8F) so that participants can get useful information.

MOBILE CHARGE

Mobile device charging is available at the registration desk (2F).

Wi-Fi ACCESS

IcAUMS 2018 Area Wireless Network

Network: RAMADA or RAMADA_PAD

PARKING

Parking is available at no cost during the conference.

ABSTRACT e-BOOK

Simply scan the QR code with your device!

You can download your abstract from the website. www.icaums.org

SOCIAL PROGRAMS

Welcome Reception 18:00-20:00, June 3(Sun.) Outdoor Pool (3F)

Come and feel most welcome. The host of IcAUMS 2018 will offer free refreshments and drinks to all registrants.

Opening Ceremony & Award Speech 09:00-10:20, June 4(Mon.) Ballroom 1 (2F)

The ceremony in Ballroom 1 will mark the official opening of IcAUMS 2018. All registered participants are cordially invited to join us and celebrate the official opening of the conference. The AUMS award speeches will follow.

Student Communication Party 22:00-23:00, June 4(Mon.)-5(Tue.) Lobby (8F)

Student Communication Party will be a good chance to make new connections and to build friendship. Beer and snacks are on us!

Banquet Sponsor KOREA TOURISM ORGANIZATION 18:30-20:00, June 6(Wed.) Ramada Ballroom (2F)

Please join us and share an unforgettable evening. The Banquet will be the ideal place for networking among participants. It will surely be the climax of IcAUMS 2018 with an amazing dinner.

Excursion 13:00-17:30, June 6 or 7(Wed. or Thur.) Entrance (1F)

Itinerary: Ramada Plaza Jeju Hotel → Hallim Park → Hyeopjae Beach → Ramada Plaza Jeju Hotel
Please come to the designated meeting point on time.

Closing Ceremony 14:30-15:00, June 7(Thur.) Ballroom 1 (2F)

This ceremony is a chance for you to say goodbye to your friends, look back through this year's IcAUMS, and have a sneak preview of the venue for the next IcAUMS. Moreover, the winners of the Migaku Awards will be announced!

PLENARY SPEAKERS

Joonyeon Chang

Korea Institute of Science & Technology, Korea

"Spin Transport in Low Dimensional Nanostructures"

10:40-11:20, June 4(Mon.)
Ballroom 1 (2F)

Ryoji Asahi

Toyota Central R&D Labs., Inc., Japan

"Materials Design of Function Materials using Machine Learning"

11:20-12:00, June 4(Mon.)
Ballroom 1 (2F)

Chih-Huang Lai

National Tsing Hua University, Taiwan

"Multilevel-state and Unidirectional Switching Driven by Spin-orbit Torque"

13:30-14:10, June 4(Mon.)
Tamra (8F)

Yoshihiko Oda

JFE Steel Corporation, Japan

"Recent Development of Non-oriented Electrical Steel Sheet for Automobile Motors"

13:30-14:10, June 5(Tue.)
Ballroom 1 (2F)

Ung-Hwan Pi

Samsung Electronics, Korea

"Recent Progress of Spin Transfer Torque Magnetic Random Access Memory"

13:30-14:10, June 5(Tue.)
Tamra (8F)

Boping Hu

Beijing Zhongke Sanhuan Hi-tech, China

"China's Rare-earth Permanent Magnet Industry"

13:30-14:10, June 6(Wed.)
Ballroom 1 (2F)

AUMS AWARDEES

AUMS AWARDS

Xiufeng Han

Institute of Physics, CAS, China

"Magnon Valve and Magnon Valve Effect"

09:35-09:55, June 4(Mon.)
Ballroom 1 (2F)

Hiroaki Muraoka

Tohoku University, Japan

"Big-data Storage by Small Magnetic Bits"

09:55-10:15, June 4(Mon.)
Ballroom 1 (2F)

AUMS YOUNG RESEARCHER AWARDS

Dahai Wei

Institute of Semiconductors, CAS, China

"Spin Hall Effect as a PRObe of Magnetic Fluctuation and A.C. Spin Currents"

14:15-14:45, June 4(Mon.)
Tamra (8F)

Ming-Hao Liu

National Cheng Kung University, Taiwan

"Magnetoconductance Oscillation in Graphene pn Junctions"

14:45-15:15, June 4(Mon.)
Tamra (8F)

Kyoung-Woong Moon

Korea Research Institute of Standards and Science, Korea

"Electric Current Induced Domain Walls in Perpendicular Magnetic Films"

15:15-15:45, June 4(Mon.)
Tamra (8F)

Shunsuke Fukami

Tohoku University, Japan

"Spin-orbit Torque Switching and Its Applications – From High-speed Memory to Artificial Neural Network –"

15:00-15:30, June 5(Tue.)
Tamra (8F)

SUMMER SCHOOL SPEAKERS

Hyunsoo Yang

National University of Singapore, Singapore

"Advancing Terahertz Technology Using Spintronics"

20:00-21:00, June 3(Sun.)
Tamra (8F)

Haifeng Ding

Nanjing University, China

"Towards Skyrmion Spintronics: Hybrid Magnetic Skyrmion Approach"

21:00-22:00, June 3(Sun.)
Tamra (8F)

Chanyong Hwang

Korea Research Institute of Standards and Science, Korea

"Metrology for Spintronics"

20:00-21:00, June 4(Mon.)
Tamra (8F)

Hirotoshi Fukunaga

Nagasaki University, Japan

"Micromagnetic Simulation for Future Magnets"

21:00-22:00, June 4(Mon.)
Tamra (8F)

Hiroaki Yoda

Toshiba Corporate R&D Center, Japan

"Applications of Spintronics Physics to Memories"

20:00-21:00, June 5(Tue.)
Tamra (8F)

Ying-Hao Chu

National Chiao Tung University, Taiwan

"Multiferroic $BiFeO_3$ Thin Films"

21:00-22:00, June 5(Tue.)
Tamra (8F)

June 4, 2018 (Mon.) Oral Session

S1. High-Performance Permanent Magnets for Future Society

June 4 (Mon.) *Ballroom 2 (2F)*

Chairs Ming Yue (Beijing University of Technology, China)
Jung-Goo Lee (Korea Institute of Materials Science, Korea)

S1-0771 13:30-14:00
Magnetic Performance and Electrical Resistivity of Ceramics-bonded Nd-Fe-B-type Magnet
Hae-Woong Kwon[1], Min-Seok Kang[1], Dong-Hwan Kim[2], Jung-Goo Lee[3], Ji-Hoon Yu[3]
[1]Pukyong National University, Korea, [2]Star-group Ind. Co., Korea, [3]Korea Institute of Materials Science, Korea

S1-0648 14:00-14:30
High Performance Sm-Fe-N Zn-bonded Magnets Prepared Using Hydrogen Plasma-metal Reaction and Arc Plasma Deposition
Satoshi Sugimoto[1], Masashi Matsuura[1], Yuki Nishijima[1], Nobuki Tezuka[1], Tomoki Shiraiwa[1], Noritsugu Sakuma[2, 3], Tetsuya Shoji[2, 3]
[1]Tohoku University, Japan, [2]Toyota Motor Corporation, Japan, [3]Technology Research Association of Magnetic Materials for High-efficiency Motors, Japan

S1-0680 14:30-15:00
Bulk Nanocrystalline RCo5 (R=Sm, Pr) Permanent Magnets with Strong Magnetic Anisotropy
Ming Yue, Weiqiang Liu
Beijing University of Technology, China

S1-1250 15:00-15:30
Anisotropic Sm-Co/α-Fe Thick Film-magnets with Layered Structure
Hirotoshi Fukunaga[1], Xu Hun[1], Masaru Itakura[2], Masaki Nakano[1], Takeshi Yanai[1]
[1]Nagasaki University, Japan, [2]Kyushu University, Japan

S1-1343 15:30-16:00
Study on the Effects of Synergetic Crystallization in a $Nd_2Fe_{14}B$/α-Fe Nanocomposite under Electron Beam Exposure Conditions
Jinbo Yang, Jingzhi Han, Haidong Tian
Peking University, China

S1-0918 16:00-16:30
TEM Studies on Magnetic Microstructures of Permanent Magnets
Hyun Soon Park
Inha University, Korea

S1-0626 16:30-17:00
Magnetic Properties and Microstructure of Hard Magnetic Nanostructure Prepared by Chemical Method
Yongsheng Yu
Harbin Institute of Technology, China

S1-1654 17:00-17:30
Development of Heavy-rare-earth-free Hot-deformed Nd-Fe-B Magnets for Traction Motors
Keiko Hioki[1], Atsushi Hattori[2]
[1]Daido Steel Co., Ltd., Japan, [2]Daido Electronics Co., Ltd., Japan

S5. Recent Development on Nanomaterials for Biomagnetics

June 4 (Mon.) *Ballroom 3 (2F)*

Chair Yasushi Takemura (Yokohama National University, Japan)

S5-1721 Surface Functionality of Au/Iron-oxide Composite Nanoparticles for Nano-bio Applications
13:30-14:00 Satoshi Seino, Takashi Nakagawa, Takao A. Yamamoto
Osaka University, Japan

S5-1232 Fe_3O_4 Nanoparticles : Doping, Clustering and Magnetic Properties
14:00-14:30 D Darminto
Institut Teknologi Sepuluh Nopember, Indonesia

S5-1202 Targeted Hyperthermia Based on Robotic Control with an Electromagnetic Manipulation
14:30-15:00 Sung Hoon Kim
Wonkwang University, Korea

S5-0974 Magnetic Nanoparticle/Graphene Oxide Composite for Magnetic Hyperthermia
15:00-15:30 Jun Ding
National University of Singapore, Singapore

S5-0774 Chemical Synthesis and Theranostic Applications of Magnetic Nanoparticles
15:30-16:00 Yanmin Ju, Hongchen Zhang, Zhiyi Wang, Yanglong Hou
Peking University, China

S5-0604 Magnetic Hyperthermia Using Magnetic Nanoparticles: - For Maximizing Temperature Rise -
16:00-16:30 Yasushi Takemura
Yokohama National University, Japan

G9. Bio-magnetism and Biomedical Applications

June 4 (Mon.) *Ballroom 4 (2F)*

Chairs Takashi Yoshida (Kyushu University, Japan)
Sang-Suk Lee (Sangji University, Korea)

G9-0848 Evaluation and Optimization of Magnetic Nanoparticles for Magnetic Particle Imaging
13:30-14:00 Takashi Yoshida, Oji Higashi, Takuru Nakamura, Yuki Matsugi, Keiji Enpuku
INVITED *Kyushu University, Japan*

G9-2053 Biomolecule-loaded Superparamagnetic Colloids Monitoring by Using Spintrophoretic Spider-web
14:00-14:15 Byeonghwa Lim, CheolGi Kim
Daegu Gyeongbuk Institute of Science and Technology, Korea

G9-1586 14:15-14:30
Application of Nano SiO_2@Fe_3O_4@SH Immobilized with A/G Antigen for CD34 Isolation from Umbilical Cord Mono-nuclear Cells
Thuong Nguyen Thi Lien[1], Bach Thang Phan[2], Ik-Keun Yoo[3]
[1]Thu Dau Mot University, Vietnam, [2]Vietnam National University, Ho Chi Minh City, Vietnam, [3]University of Ulsan, Korea

G9-1274 14:30-14:45
Synthesis of Fe_3O_4@SiO_2 with Mesoporous and Biodegradable Shell for Drug Delivery Application
Thi Kieu Hanh Ta[1, 2], Ngoc Xuan Dat Mai[2], Le Hoang Tan Doan[2], Kim Ngoc Pham[1, 2], Thi Y Dang[2], Thi Thanh Van Tran[1], Thi Hoa Lai[2], Bach Thang Phan[1, 2]
[1]University of Science, Vietnam National University, Ho Chi Minh City, Vietnam, [2]Center for Innovative Materials and Architectures, Vietnam National University, Ho Chi Minh City, Vietnam

G9-1254 14:45-15:00
Effect of RAMicro Beats on Layered GMR Platforms Magnetization
Oksana Koplak[1], Roman Morgunov[1, 2], Artem Talantsev[1, 2], Stéphane Mangin[3]
[1]Institute of Problems of Chemical Physics of Russian Academy of Sciences, Russia, [2]Tambov State Technical University, Russia, [3]University de Lorraine, France

G9-0147 15:00-15:15
A New Method for Measuring Magnetic Moment of a Single Particle by Trapping within a Suspended Water Droplet
Norio Inui, Naoya Kishimoto, Takuma Kawano, Koji Sumitomo, Kousuke Moritani
University of Hyogo, Japan

G9-1713 15:15-15:30
Highly Efficient Energy Dissipation in Soft Magnetic Nanoparticles in Single-domain State for Hyperthermia Bio-application
Min-Kwan Kim, Jaegun Sim, Jae-Hyeok Lee, Miyoung Kim, Sang-Koog Kim
Seoul National University, Korea

G9-0913 15:30-15:45
Multifunctional Graphene Oxide-iron Oxide-silver Nanostructures for Bacterial Disinfection and Sensing Applications
Anh-Tuan Le[1], Xuan Dinh Ngo[2], Ngoc Phan Vu[1], Van Quy Nguyen[1], Quang Huy Tran[3]
[1]Hanoi University of Science and Technology, Vietnam, [2]University of Transport Technology, Vietnam, [3]National Institute of Hygiene and Epidemiology, Vietnam

G9-0351 15:45-16:00
Effects of Calcium Channel Blockers and Extremely Low Frequency Electromagnetic Radiation (1 mT, 50 Hz) on Mice's Motor Coordination of Mice
Lama Sakhnini[1], Habib A.Nabi Habib[2], Mohammed Naiser[2], Mohamed Hameed Alrahim[2], Ahmmed Adel Almubarak[2], Amer Kamal[2]
[1]University of Bahrain, Bahrain, [2]Arabian Gulf University, Bahrain

G9-0283 16:00-16:15
Physiological Magnetic Stimulation Using Small ELF Magnetic Field for Bio Activation
Yoshiyuki Mohri[1], Kaneo Mohri[2], Masanori Fukushima[3], Muneo Yamada[4], Yasuya Inden[5]
[1]Aichi Steel Corporation, Japan, [2]Prof. emeritus at Nagoya University, Japan, [3]Foundation for Bio-medical Research, Japan, [4]Meijo University, Japan, [5]Nagoya University, Japan

G9-0270 16:15-16:30
Detection of Critical Nucleation and Aggregation of Magnetic Nanoparticles by Magnetic Linear Dichroism
Hitoshi Watarai
Osaka University, Japan

G1-1. Spintronics

June 4 (Mon.) *Tamra (8F)*

Chairs Dahai Wei (Institute of Semiconductors, Chinese Academy of Sciences, China)
Jongill Hong (Yonsei University, Korea)

G1-2094 Spin Hall Effect as a Probe of Magnetic Fluctuation and A.C. Spin Currents
INVITED Dahai Wei
14:15-14:45 *Institute of Semiconductors, Chinese Academy of Sciences, China*

G1-2084 Magnetoconductance Oscillation in Graphene pn Junctions
14:45-15:15 Ming-Hao Liu
INVITED *National Cheng Kung University, Taiwan*

G1-2096 Electric Current Induced Domain Walls in Perpendicular Magnetic Films
15:15-15:45 Kyoung-Woong Moon
INVITED *Korea Research Institute of Standards and Science, Korea*

G1-0382 Photonic Crystal Enhanced Conversion Efficiency in Optically Pumped Spintronic THz Emitter
15:45-16:00 Zheng Feng[1], Rui Yu[2], Yu Zhou[3], Hai Lu[4], Wei Tan[1], Hu Deng[5], Quan Cheng Liu[5], Zhao Hui Zhai[6], Li Guo Zhu[6], Jian Wang Cai[3], Bing Feng Miao[2], Hai Feng Ding[2]
[1]Microsystem & Terahertz Research Center, China Academy of Engineering Physics, China, [2]Nanjing University, China, [3]Institute of Physics, Chinese Academy of Sciences, China, [4]Henan Normal University, China, [5]Southwest University of Science and Technology, China, [6]Institute of Fluid Physics, China Academy of Engineering Physics, China

G1-1075 Magnetic Skyrmion Diode: Unidirectional Skyrmion Transport via Confining Potential Modulation
16:00-16:15 Dae-Han Jung, Hee-Sung Han, Namkyu Kim, Ki-Suk Lee
Ulsan National Institute of Science and Technology, Korea

G1-0853 Observation of Spin-orbit Torque-induced Skyrmion Dynamics Revealed by Time-resolved X-ray Imaging
16:15-16:30 Kyung Mee Song[1,2], Seonghoon Woo[1], Hee-Seung Han[3], Min Seung Jung[4], Mi-Young Im[4,5], Ki-Suk Lee[3], Kun Soo Song[1], Jae-Sung Kim[2], Peter Fischer[5,6], Jung Il Hong[4], Jun Woo Choi[1], Hyun Cheol Koo[1,7], Joonyeon Chang[1]
[1]Korea Institute of Science and Technology, Korea, [2]Sookmyung Women's University, Korea, [3]National Institute of Science and Technology, Korea, [4]Daegu Gyeongbuk Institute of Science and Technology, Korea, [5]Lawrence Berkeley National Laboratory, USA, [6] University of California, USA, [7]KU-KIST Graduate School of Converging Science and Technology, Korea

G1-1299 Current Driven Domain Wall Motion Study of Magnetic Wire with Hetero-interface between RE-TM and Heavy Metal Layers
16:30-17:00 Hiroyuki Awano[1], Cheng Ying Wu[1,2], Hiroyasu Kondo[1], Ryogo Yoshimura[1], Satoshi Sumi[1], Yuichiro Kurokawa[1], Do Bang[1], Pham Van Thach[1], Ko Wii Lin[2]
INVITED *[1]Toyota Technological Institute, Japan, [2] National Chung Hsing University, Taiwan*

G1-2048 17:00-17:15 **Negative Tunneling Magnetoresistance in Magnetic Tunnel Junctions with Tetragonal and Ferrimagnetic Mn_3Ge Heusler Electrodes Having Giant Perpendicular Magnetic Anisotropy Using Amorphous Substrates**

Yari Ferrante[1], Jaewoo Jeong[2], Sergey Faleev[3], Mahesh Samant[1], Claudia Felser[4], Stuart Parkin[3]
[1]IBM Almaden Research Center, USA, [2]Samsung Electronics, USA, [3]Max-Planck Institute for Microstructure Physics, Germany, [4]Max-Planck Institute for Chemical Physics of Solids, Germany

G1-0965 17:15-17:30 **Long Distance Lateral Spin Transport in Antiferromagnetic Insulators**

Romain Lebrun[1], Andrew Ross[1], Alireza Qaiumzadeh[2], Lorenzo Baldrati[1], Joel Cramer[1], Olena Gomonay[1], Jairo Sinova[1], Arne Brataas[1], Mathias Kläui[1]
[1]Johannes Gutenberg University, Germany, [2]Norwegian University of Science and Technology, Norway

S6. Spin-orbitronics

June 4 (Mon.) *Halla (8F)*

Chair Young Keun Kim (Korea University, Korea)

S6-1215 14:15-14:45 **Beyond the STT-MRAM; Faster, to a Higher Density - Spin-Orbit-Torque (SOT) and Voltage-Control-MRAM -**

Masashi Sahashi[1,2]
[1]Japan Science and Technology Agency, Japan, [2]Tohoku University, Japan

S6-1142 14:45-15:15 **Spin-orbit Torque Materials for Magnetic Memory Applications**

Young Keun Kim
Korea University, Korea

S6-0801 15:15-15:45 **Magnetization Behaviors of Magnetic Tunnel Junctions Driven by the Spin-orbit Torque**

Te-Ho Wu
National Yunlin University of Science and Technology, Taiwan

S6-0673 15:45-16:15 **From Stt-mram to Voltage-control Spintronics Memory (Vocsm), as the Pursuit of Saving Energy Consumption of Memory Systems**

Hiroaki Yoda
Toshiba Corporation, Japan

S6-1415 16:15-16:45 **Control of Magnetization Switching via Spin-orbit Torque**

Chanyong Hwang
Korea Research Institute of Standards and Science, Korea

S6-2068 16:45-17:15 **Spin Pumping and Probe in Permalloy Dots-topological Insulator Nanostructured Bilayers**

Konstantin Zvezdin
Moscow Institute of Physics and Technology, Russia

S13. Ab initio Theory in Magnetism 1 – Memorial for Arthur J. Freeman

June 4 (Mon.) *Ara (8F)*

Chairs Jae Il Lee (Inha University, Korea)
S. H. "Sonny" Rhim (University of Ulsan, Korea)

S13-3001 Art Freeman, a Physicist, Material Scientist, and Father
14:15-14:45 Jeffrey G. Grossman
Massachusetts Institute of Technology, USA

S13-2064 The Role of the FLAPW Method in the Understanding of Magnetic Materials – A Retrospective
14:45-15:15 Erich Wimmer
Materials Design S.A.R.L., France

S13-1261 Working on Surface Magnetism with Art Freeman
15:15-15:45 Ding-sheng Wang[1], Ru-qian Wu[2], Lie-ping Zhong[3]
[1]Chinese Academy of Sciences, China, [2]University of California - Irvine, USA, [3]Western Digital Corporation, USA

S13-0658 Exploration of Heusler Alloys for Spintronics
15:45-16:15 Tamio Oguchi
Osaka University, Japan

S13-0924 Electronic Structures and Topological Properties off-electron Systems
16:15-16:45 B. I. Min, Chang-Jong Kang, Junwon Kim, Kyoo Kim, Sooran Kim, Hong Chul Choi, Ji Hoon Shim
Pohang University of Science and Technology, Korea

S13-1508 Novel Topological Magnetic Insulators in Layered Transition Metal Compounds
16:45-17:15 Jaejun Yu
Seoul National University, Korea

S13-1305 Magnetic Fluctuations in Single-layer FeSe
17:15-17:45 Tatsuya Shishidou, Daniel Agterberg, Michael Weinert
University of Wisconsin-Milwaukee, USA

G2-1. Nanostructured Magnetic Materials

June 4 (Mon.) *Ora (8F)*

Chairs Manh-Huong Phan (University of South Florida, USA)
Sanghoon Kim (University of Ulsan, Korea)

G2-1988 Varied Magnetoelectric Coupling Effects from Designed Multiferric Composite Configurations
14:15-14:45 Yaodong Yang[1], Yanxi Li[2]
INVITED *[1]Xian Jiaotong University, China, [2]Virginia Tech, USA*

G2-1290 Room Temperature Ferromagnetism and Exchange Bias Effect in Transition Metal Dichalcogenide Monolayers
14:45-15:15
INVITED
Manh-Huong Phan
University of South Florida, USA

G2-0716 Molecular Tuning of Giant Exchange Bias at Metal-organic Hybrid Interface
15:15-15:30
Jung-Woo Yoo[1], Junhyeon Jo[1], Inseon Oh[1], Jungmin Park[1], Mi-Jin Jin[1], Jaekwang Lee[2]
[1]Ulsan National Institute of Science and Technology, Korea, [2]Busan National University, Korea

G2-1485 The Study of Flexible $La_{0.7}Sr_{0.3}MnO_3$/Muscovite Heteroepitaxial Structure
15:30-15:45
Min Yen[1], Ying-Hao Chu[1, 2]
[1]National Chiao Tung University, Taiwan, [2]Industrial Technology Research Institute, Taiwan

G2-1708 Effect of Surface Plasmon Resonance on Magnetism of Sub-micron Hollow CeO_2 Sphere
15:45-16:00
Eric Nestor Tseng, Pei-Kai Hsu, Yuan-Ching Tsai, Yi-Che Chen, Shih-Yun Chen
National Taiwan University of Science and Technology, Taiwan

G2-1684 Anomalous and Spin Hall Effect in Co and Co(0001)/TMs Interface : First-principles Study
16:00-16:15
Duc Cuong Do, Soon Cheol Hong, S.H Rhim
University of Ulsan, Korea

G2-1099 Structural and Magnetic Characterization of MnBi Thin Films
16:15-16:30
Yi-Ju Lee[1], Chun-Hsien Wu[1], Yi-Lun Huang[1], Chiao-Ling Huang[1], Jai-Lin Tsai[1], Te-Ho Wu[2], Ko-Wei Lin[1]
[1]National Chung Hsing University, Taiwan, [2]National Yunlin University of Science and Technology, Taiwan

G2-1354 The Role of Graphene Oxide (GO) to Enhance Magnetism in Fe3O4–graphene Nanocomposite: Interfacial Effect
16:30-16:45
S. Majumder[1,2], M. Sardar[3], B. Satpati[1], S. Kumar[2], S. Banerjee[1]
[1]Saha Institute of Nuclear Physics, India, [2]Jadavpur University, India, [3]Indira Gandhi Centre for Atomic Research, India

S4. Permanent Magnets (Hard Ferrite Magnets)

June 5 (Tue.) *Ballroom 2 (2F)*

Chair Jae-Young Kim (Institute for Basic Science, Korea)

S4-1368 09:00-09:30 **Rare-earth Free Permanent Magnets and Motor: M- and W-type Hexaferrites**
Yang-Ki Hong
The University of Alabama at Tuscaloosa, USA

S4-1122 09:30-10:00 **Magnetic Anisotropy of Epitaxially Strained Cobalt Ferrite Thin Films**
Hideto Yanagihara, Hiroshige Onoda, Takeshi Tainosho, Jun-ichiro Inoue
University of Tsukuba, Japan

S4-1499 10:00-10:30 **Temperature Dependence of the Squareness Ratio of Ferrite Sintered Magnets**
Gaku Obara, Yuta Kakimi, Naoyuki Takahashi
Meiji University, Japan

S4-1601 10:30-11:00 **Estimation of Occupation Sites of Metal Ions in Hexagonal Ferrites Using X-ray and Neutron Beam**
Takashi Nakagawa, Satoshi Seino, Takao Yamamoto
Osaka University, Japan

S4-2015 11:00-11:30 **Microscopic Origin of the Local Anisotropy in La and Co Substituted M-type Hexaferrites**
Yoon Young Koh[1], Jae-Young Kim[2]
[1]Max Planck POSTECH Center for Complex Phase Materials, Korea, [2]Institute for Basic Science, Korea

S4-2059 11:30-12:00 **Spectroscopic Approach for Y-type Hexaferrite : Site Specific Analysis**
Kyung-Tae Ko
Max Planck-POSTECH/Hsinchu Center, Korea

S2. Bio-initiative Spintronics

June 5 (Tue.) *Ballroom 2 (2F)*

Chairs Paolo Vavassori (CIC nanoGUNE, Spain)
Ratnasingham Sooryakumar (The Ohio State University, USA)

S2-2039 14:30-15:00 **Shapeable Microelectronics**
Daniil Karnaushenko
Leibniz Institute for Solid State and Materials Research, Germany

S2-2044 15:00-15:30 **Non-linear Magnetophoretic Separation Using Micro-magnet Arrays**
Gil Lee
University College Dublin, Ireland

S2-0389 15:30-16:00
Hydrodynamics and Actuation of Magnetic Bacteria at Solid-liquid Interfaces: Single Cells to Swarms
Ratnasingham Sooryakumar
The Ohio State University, USA

S2-1303 16:00-16:30
Microwires-based Manipulation of Magnetically Labeled Cells
Valeria Rodionova
Immanuel Kant Baltic Federal University, Russia

S2-2010 16:30-17:00
Bio-medical Applications of Magnetic Nanostructures
Paolo Vavassori
CIC nanoGUNE, Spain

S2-1805 17:00-17:30
Magneto-nanosensor and Its Biomedical Applications
Jung-Rok Lee
Ewha Womans University, Korea

S2-2034 17:30-18:00
Magnetically Softened Iron Oxide (MSIO) Nanofluid and Its Application for Ocular Neuroprotection in Glaucoma
Jung-Tak Jang, Seongtae Bae
University of South Carolina, USA

G3. Magnetic Recording and Information Technology
G10. Functional Magnetic Devices

June 5 (Tue.) *Ballroom 3 (2F)*

Chairs Takeshi Kato (Nagoya University, Japan)
Dong Young Kim (Andong National University, Korea)

G3-1384 09:00-09:30 **INVITED**
Planar Bit Patterned MnGa Films Fabricated by Ion Irradiation
Takeshi Kato, Daiki Oshima, Satoshi Iwata
Nagoya University, Japan

G3-2077 09:30-10:00 **INVITED**
Origin of In-plane Component for $L1_0$-FePt Nanogranular Films Deposited on MgO Single Crystal Substrate
Jian Wang[1], H. Sepehri-Amin[1], Keisuke Masuda[1], Yukiko Takahashi[1], Hiroo Tajiri[2], Tetsuya Nakamura[2], Toshiaki Ina[2], Tomoya Uruga[2], Yoshio Miura[1], Kazuhiro Hono[1]
[1]National Institute for Materials Science, Japan, [2]Japan Synchrotron Radiation Research Institute, Japan

G3-1076 10:00-10:15
Towards Magnetic Memristor: Resistive Switching and Superferromagnetic Ordering Effects in Nanogranular $(CoFeB)_x(AlO_y)_{100-x}$ $(CoFeB)_x(LiNbO_y)_{100-x}$ Nanocomposites
Andrey Emelyanov[1], Kristina Nikiruy[1], Vladimir Rylkov[1], Aleksandr Sitnikov[2], Vyacheslav Demin[1], Aleksandr Granovsky[3]
[1]National Research Centre Kurchatov Institute, Russia, [2]Voronezh State Technical University, Russia, [3]Lomonosov Moscow State University, Russia

G10-1946 10:15-10:45
Navigation Electronic Compass Based on Magnetoelectric Effect of Magnetostriction-piezoelectric Composites
Thi Huong Giang Do[1], Van Tuan Nguyen[2], Ba Bien Nguyen[1], Anh Tuan Phung[3], Huu Duc Nguyen[1]
[1]Vietnam National University, Hanoi, Vietnam, [2]Le Quy Don University, Vietnam, [3]Hanoi University of Science and Technology, Vietnam

G10-1578 10:45-11:00
Effect of Complex Permeability on Circuit Parameters of CPW with Co-Zr-Nb Film
Sho Muroga[1], Yasushi Endo[2], Motoshi Tanaka[1]
[1]Akita University, Japan, [2]Tohoku University, Japan

G10-0312 11:00-11:15
Magneto-optical Properties of Fe_3O_4 Nanoparticles Using Surface Plasmon Resonance (SPR)-Based Biosensor
Supardianningsih, Edi Suharyadi, Kamsul Abraha
Universitas Gadjah Mada, Indonesia

G10-1762 11:15-11:30
Experimental Approach to Rotational Mechanics of a Magnetostrictive Motor about an Arbitrary Axis
Ha Gyun Lee, Young Woo Park, Myounggyu Noh
Chungnam National University, Korea

S3. Next Generation Permanent Magnetic Materials

June 5 (Tue.) *Ballroom 3 (2F)*

Chair Chul-Jin Choi (Korea Institute of Materials Science, Korea)

S3-1957 14:30-15:00
Improvement of the Magnetic Properties of Hexaferrites
Sang-Im Yoo
Seoul National University, Korea

S3-1426 15:00-15:30
Synthesis and Magnetic Properties of Samarium-cobalt One-dimensional Structure Using an Electrospinning Method
Jongryoul Kim, Yong-Ho Choa
Hanyang University, Korea

S3-0744 15:30-16:00
Structural Evolution and Magnetic Properties of Bulk MnAl(C) Magnets Prepared by Melt-spinning Method and High-pressure Compaction
Pingzhan Si[1], Huidong Qian[1], Jihoon Park[1], Chul-Jin Choi[1], Xinyou Wang[1], Yang Yang[1], Hongliang Ge[2]
[1]Korea Institute of Materials Science, Korea, [2]China Jiliang University, China

S3-0695 16:00-16:30
Fabrication of Hard/Soft Magnetic Nanoparticle Nanocomposite Magnet
Young Soo Kang
Sogang University, Korea

S3-1210 16:30-17:00
Micromagnetic Simulations of Magnetization Reversals in Rare-earth Free Permanent Magnets
Namkyu Kim, Ki-Suk Lee
Ulsan National Institute of Science and Technology, Korea

S3-0702 Hard-magnetic Properties of Rare-earth-free IRon-based Nanostructures Synthesized by Solution Chemistry
17:00-17:30
Da Li
Institute of Metal Research, Chinese Academy of Sciences, China

S3-1363 Enhanced Properties of MnBi Synthesized via Novel Fabrication Method
17:30-18:00
Jong-Woo Kim, Y.H. Shin, C.-W. Ahn, J.-J. Choi, G.-T. Hwang, B.-D. Hahn, J Park, K.-C. Chung, C.-J. Choi
Korea Institute of Materials Science, Korea

G11. Magnetic Characterizations

June 5 (Tue.) *Ballroom 4 (2F)*

Chairs
Mi-Young Im (Lawrence Berkeley National Laboratory, USA)
Yasushi Endo (Tohoku University, Japan)

G11-1049 Study on the New Technique of Spin Dynamics Measurement
14:30-15:00
Yasushi Endo
INVITED
Tohoku University, Japan

G11-0264 Non-destructive Imaging of Buried Junctions Using Scanning Electron Microscopy
15:00-15:30
Edward Jackson[1], Jun-young Kim[1], Samik Duttagupta[2], Shunsuke Fukami[2], Hideo Ohno[2], Mingling Sun[2], Takahide Kubota[2], Koki Takanashi[2], Atsufumi Hirohata[1]
INVITED
[1]University of York, UK, [2]Tohoku University, Japan

G11-0842 Heterojunction-induced Magnetic Anisotropy of Ni Wires on $LiNbO_3$ Substrate
15:30-16:00
Akinobu Yamaguchi
INVITED
University of Hyogo, Japan

G11-0192 Direct Imaging of Spin Structures Utilizing Soft X-ray Microscopy
16:00-16:15
Mi-Young Im[1,2], Hee-Sung Han[3], Min Seung Jung[2], Anjan Soumyanarayanan[4], Ki-Suk Lee[3], Jung-Il Hong[2]
[1]Lawrence Berkeley National Laboratory, USA, [2]Daegu Gyeongbuk Institute of Science and Technology, Korea, [3]Ulsan National Institute of Science and Technology, Korea, [4]Data Storage Institute, Singapore

G11-1283 Magnetic Leverage Effects in Amorphous Heterostructures
16:15-16:30
Thomas Hase
University of Warwick, UK

G11-0251 Development Strategy for pMTJ Free Layer with High Thermal Stability at Operating Temperatures
16:30-16:45
Wai Cheung Law[1,2], Tian Li Jin[1], Dao Hwee Wong[1,2], Ganesh Kolliyil Rajan[2], Wei Liang Gan[1], Chim Seng Seet[2], Alex See[2], S. N. Piramanayagam[1], Wen Siang Lew[1]
[1]Nanyang Technological University, Singapore, [2]Globalfoundries Singapore, Singapore

G11-0875 Direct Observation of Domain Wall Using Scanning Electron Microscopy with Polarization Analysis (SEMPA)
16:45-17:00
D.H. Kim, Sangsun Lee, Jungbum Yoon, Kyoung-Woong Moon, Dongseuk Kim, Changsoo Kim, Byoung Sun Chun, Wondong Kim, Chan Yong Hwang
Korea Research Institute of Standards and Science, Korea

G11-0879 Novel Scanning Magnetometry Based on Quantum Defects in Diamond
17:00-17:15 Donghun Lee, Myeongwon Lee
Korea University, Korea

G11-0402 A Study on Effective Deperming Protocol Considering Hysteresis Characteristics and Demagnetizing Factor in Ferromagnetic Material
17:15-17:30 Sang Hyeon Im, Gwan Soo Park
Pusan National University, Korea

G11-1410 Study of Coprecipitation Production at Nano Ferrite (MnxZn1-xFe2O4) with Waste and Electromagnetic Properties
17:30-17:15 Yenchun Liu, Jarnchih Hsu
WuFeng University, Taiwan

G11-0182 Singlet Ground State in the Spin-1/2 Weakly Coupled Dimer Compound $NH_4[(V_2O_3)_2(4,4'\text{-bpy})_2(H_2PO_4)(PO_4)_2]\ 0.5H_2O$
17:45-18:00 Arjun Unnikrishnan[1], Vinod Kumar[2], P. K. Anjana[1], A. Thirumurugan[1], J. Sichelschmidt[3], Avinash V. Mahajan[4], Ramesh Chandra Nath[1]
[1]Indian Institute of Science Education and Research Thiruvananthapuram, India, [2]Indian Institute of Technology Bombay, India, [3]Max Planck Institute for Chemical Physics of Solids, Germany, [4]Indian Institute of Science Education and Research Bombay, India

G1-2. Spintronics

June 5 (Tue.) *Tamra (8F)*

Chairs Wen Siang Lew (Nanyang Technological University, Singapore)
Hyun Cheol Koo (Korea Institute of Science and Technology, Korea)

G1-0206 Graphene-based Spintronic Devices: From a Field-effect Transistor to a Spin-to-charge Converter
09:00-09:30 Luis E. Hueso, Wenying Yan, Oihana Txoperena, Edurne Sagasta, Mario Ribeiro, Felix Casanova
INVITED *CIC nanoGUNE, Spain*

G1-1025 Ultrathin Manganese Alloys with Perpendicular Magnetic Anisotropy for Spintronic Devices
09:30-10:00 Shigemi Mizukami
INVITED *Tohoku University, Japan*

G1-0228 Inverse Spin Hall Effect in Half-heusler NiMnSb Alloy Films
10:00-10:30 Zhenchao Wen, Zhiyong Qiu, Takeshi Seki, Dazhi Hou, Takahide Kubota, Eiji Saitoh, Koki Takanashi
Tohoku University, Japan

G1-1011 Effect of Fe Doping on the Magnetic Properties of $SrRuO_3$ Epitaxial Thin Film
10:30-10:45 Umasankar Dash, Chang Uk Jung
Hankuk University of Foreign Studies, Korea

G1-1621 Electrical Tuning of Magneto-conductance in N-type Ferromagnetic Semiconductor (In,Fe)As-based Esaki Diodes
10:45-11:00 Le Duc Anh[1], Pham Nam Hai[2], Masaaki Tanaka[1]
[1]The University of Tokyo, Japan, [2]Tokyo Institute of Technology, Japan

G1-0562 Electrical and Optical Characterisation of Fe/n-GaAs Non-local Spin Valve
11:00-11:15 Jun-young Kim[1], Marjan Samiepour[1], Jeongchun Ryu[2], Daisuke Iizasa[2], Takahito Saito[2], Makoto Kohda[2], Junsaku Nitta[2], Harvey E. Beere[3], David A. Ritchie[3], Atsufumi Hirohata[1]
[1]University of York, UK, [2]Tohoku University, Japan, [3]University of Cambridge, UK

G1-1974 Electric Field Induced Change in Magnetization Direction in 3d/PZT Nanostructured Composites
11:15-11:30 Nguyen Thi Minh Hong, Dang Dinh Long, Pham Duc Thang, Le Viet Cuong
Vietnam National University of Engineering and Technology, Vietnam

G1-3. Spintronics

June 5 (Tue.) *Tamra (8F)*

Chairs Ming-Hao Liu (National Cheng Kung University, Taiwan)
Byoung-Chul Min (Korea Institute of Science and Technology, Korea)

G1-2058 Spin Caloritronics in Nanostructured Materials
14:30-15:00 Masaki Mizuguchi
INVITED *Tohoku University, Japan*

G1-0972 Spin-orbit Torque Switching and Its Applications – From High-speed Memory to Artificial Neural Network –
15:00-15:30 Shunsuke Fukami, Chaoliang Zhang, William Borders, Aleksandr Kurenkov, Samik DuttaGupta, Hideo Ohno
INVITED *Tohoku University, Japan*

G1-1194 Development of Multi-terminal Spin Valve Device Exhibiting Three States
15:30-15:45 Joo-hyeon Lee[1, 2], Hyun Cheol Koo[1, 2], Joonyeon Chang[1], Suk Hee Han[1], Hyung-jun Kim[1], Supriyo Datta[3], Shehrin Sayed[3], Seokmin Hong[1, 3]
[1]Korea Institute of Science and Technology, Korea, [2]KU-KIST Graduate School of Converging Science and Technology, Korea University, Korea, [3]Purdue University, USA

G1-0656 FORC Analysis of Magnetic Relaxation in Ferromagnetic Bilayers with Perpendicular Anisotropy
15:45-16:00 Artem Talantsev[1, 2], Yan Lu[3], Thibaud Fache[3], M. Lavanant[3], Abbass Hamadeh[3], Oksana Koplak[1, 4], Roman Morgunov[1, 4], Stephane Mangin[3]
[1]Institute of Problems of Chemical Physics, Russia, [2]Daegu Gyeongbuk Institute of Science & Technology, Korea, [3]Institute Jean Lamour, France, [4]Tambov State Technical University, Russia

G1-0941 Voltage-assisted Magnetic Switching in MgO/CoFeB-based Magnetic Tunnel Junctions by Way of Interface Engineering
16:00-16:30 Jongill Hong, Jungho Ko
INVITED *Yonsei University, Korea*

G1-0521 Voltage-control Spintronics Memory (VoCSM) with Low Write Current Using High-Selectivity Patterning Process
16:30-16:45 Mariko Shimizu, Yuuichi Ohsawa, Hiroaki Yoda, Satoshi Shirotori, Naoharu Shimomura, Yushi Kato, Soichi Oikawa, Hideyuki Sugiyama, Altansargai Buyandalai, Tomoaki Inokuchi, Katsuhiko Koui, Mizue Ishikawa, Kazutaka Ikegami, Atsushi Kurobe
Toshiba Corporation, Japan

G1-0998 Direct Observation of Magnetic Droplets in All-perpendicular Spin Torque Nano-oscillators
16:45-17:00 Sunjae Chung[1, 2, 3], Q. Tuan Le[1, 2], Martina Ahlberg[1, 4], Ahmad A. Awad[1, 4], Markus Weigand[5], Iuliia Bykova[5], Roman Khymyn[1], Mykola Dvornik[1], Hamid Mazraati[2, 4], Afshin Houshang[1, 4], Sheng Jiang[2], T. N. Anh Nguyen[1, 2, 6], Eberhard Goering[5], Gisela Schütz[5], Joachim Gräfe[5], Johan Åkerman[1, 2, 4]
[1]University of Gothenburg, Sweden, [2]KTH Royal Institute of Technology, Sweden, [3]University Uppsala, Sweden, [4]NanOsc AB, Sweden, [5]Max Planck Institute for Intelligent Systems, Germany, [6]Vietnam Academy of Science and Technology, Vietnam

G1-0408 Magnetization Angle Dependence of Spin-orbit Torque Probed by In-plane Direct Current Approach
17:00-17:15 Seungmo Yang, Jinhyung Choi, Wonsub Shin, Jinpyo Hong
Hanyang University, Korea

G1-1483 Hetero-interface Effect on Gilbert Damping in Nonmagnetic Metal/Permalloy/Nonmagnetic Metal Trilayers
17:15-17:30 Bosung Kim[1], Young-Jun Cho[1], Biswanath Bhoi[1], Seung-Young Park[2], Sang-Koog Kim[1]
[1]Seoul National University, Korea, [2]Korea Basic Science Institute, Korea

S15. Modulated Spin and Magnetic Properties

June 5 (Tue.) *Halla (8F)*

Chair Kyung-Jin Lee (Korea University, Korea)

S15-1370 Control of Spin Phases in Aharonov-casher Spin Interferometers
09:00-09:30 Junsaku Nitta
Tohoku University, Japan

S15-1435 Spin Absorption Effects into Ferromagnetic Metal and Superconductor
09:30-10:00 Takashi Kimura
Kyushu University, Japan

S15-2066 Voltage Control of Magnetic Properties and Its Application to the MRAM and AI Chips
10:00-10:30 Yoshishige Suzuki
Osaka University, Japan

S15-1364 Chiral Spintronics
10:30-11:00 See-Hun Yang
IBM Research - Almaden, USA

S15-1504 Physical Meaning of Line Width of the Switching Time Distribution in Ferromagnetic Nano-structure
11:00-11:30 Chun-Yeol You[1], Jung-Hwan Moon[2]
[1]Daegu Gyeongbuk Institute of Science and Technology, Korea, [2]Korea University, Korea

S15-1906 Various Edelstein Effects in Inversion Asymmetric Crystals
11:30-12:00 Shuichi Murakami
Tokyo Institute of Technology, Japan

S7-1. Antiferromagnetic and Ferrimagnetic Spintronics

June 5 (Tue.) *Halla (8F)*

Chair Masamitsu Hayashi (The University of Tokyo, Japan)

S7-0782 Spin Dynamics in Antiferromagnets and Ferrimagnets
14:30-15:00 Teruo Ono
Kyoto University, Japan

S7-0566 Unconventional Spin-orbit Torques and Their Applications
15:00-15:30 Hyunsoo Yang
National University of Singapore, Singapore

S7-0923 Spin-orbit Torque in Antiferromagnets
15:30-16:00 Cheng Song, Xianzhe Chen, Xiaofeng Zhou, Guoyi Shi, Feng Pan
Tsinghua University, China

S7-0867 Spin-orbit Physics at Transition Metal Interfaces
16:00-16:30 Aurelien Manchon, Akshay Salimath, Sumit Ghosh, Slimane Laref
King Abdullah University of Science and Technology, Saudi Arabia

S7-0755 Spin-orbit Magnetoresistance in Metallic Thin Films on Magnetic Insulators
16:30-17:00 Jiang Xiao[1], Di Wu[2]
[1]Fudan University, China, [2]Nanjing University, China

S7-0775 Antiferromagnetic Spin Dynamics in Antiferromagnets and Ferrimagnets
17:00-17:30 Kyung-Jin Lee
Korea University, Korea

G5. Fundamental Properties of Materials

June 5 (Tue.) *Ara (8F)*

Chairs Vinh Hung Tran (Polish Academy of Sciences, Poland)
Kee Hoon Kim (Seoul National University, Korea)

G5-1302 Magnetic Domains in Ni-Mn-Ga Alloys by Kerr Microscopy
09:00-09:15 Alexej Perevertov[1], Oleg Heczko[1], Rudolf Schaefer[2, 3]
[1]Institute of Physics of the Czech Academy of Sciences, Czech Republic, [2]Leibniz Institute for Solid State and Materials Research Dresden, Germany, [3]TU Dresden, Germany

G5-0788 Strain Dependent Magnetic Anisotropy in FePt Alloy
09:15-09:30 Qurat-ul Ain, S.H. Rhim, S. C. Hong
University of Ulsan, Korea

G5-0467 Sign Inversion of Planar Hall Resistance in Fe Film
09:30-09:45 Seong Hoon Choi, Sanghoon Lee
Korea University, Korea

G5-1059 Non-empirical Density Functional Theory +U Approach for Electronic and Magnetic Properties of Spintronic Materials
09:45-10:00 Kenji Nawa[1], Kohji Nakamura[2], Tamio Oguchi[3], Michael Weinert[4], Yoshio Miura[1, 5]
[1]National Institute for Materials Science, Japan, [2]Mie University, Japan, [3]Osaka University, Japan, [4]University of Wisconsin-Milwaukee, USA, [5]Kyoto Institute of Technology, Japan

G5-0946 Relaxor Behaviors in $xBaTiO_3 – (1-x)CoFe_2O_4$ Materials
10:00-10:15 Thang Bach Phan[1], Dung My Thi Cao[2], Hoa Nhu Thi Tran[3], Hanh Kieu Thi Ta[2], Ngoc Kim Pham[2], Thu Bao Nguyen Le[4], Heongkyu Ju[3]
[1]Vietnam National University, Ho Chi Minh City, Vietnam, [2]University of Science, Vietnam National University, Ho Chi Minh City, Vietnam, [3]Gachon University, Korea, [4]University of Information Technology, Vietnam National University, Ho Chi Minh City, Vietnam

G5-1331 Electronic Structure of 1144-type FeAs-based Superconductors
10:15-10:30 Thi Ly Mai, Vinh Hung Tran
Polish Academy of Sciences, Poland

G5-1394 Synchrotron X-ray Absorption Spectroscopy (XAS): Studies on Structural and Magnetic Properties of T'-$Pr_{2-x}Ce_xCuO_4$ Nanocrystals
10:30-10:45 Resky Irfanita[1], Putu Eka Dharma Putra[1], Bambang Triono[1], Malik Anjelh Baqiya[1], D Darminto[1], Chatree Saiyasombat[2], Krongthong Kamonsuangkasem[2]
[1]Institute Teknologi Sepuluh Nopember, Indonesia, [2]Synchrotron Light Research Intitute, Thailand

S14. Ab initio Theory in Magnetism 2 – Memorial for Arthur J. Freeman

June 5 (Tue.) *Ara (8F)*

Chairs S. H. "Sonny" Rhim (University of Ulsan, Korea)
Joo-Hyoung Lee (Gwangju Institute of Science and Technology, Korea)

S14-0407 Towards Tunable Magnetism from First-principles Studies
14:30-15:00 Dorj Odkhuu[1], Purev Taivansaikhan[1], Nicholas Kioussis[2], Tumurbaatar Tsevelmaa[3], Sonny H Rhim[3], Soon Cheol Hong[3]
[1]Incheon National University, Korea, [2]California State University Northridge, USA, [3]University of Ulsan, Korea

S14-1125 Effects of Magnetic Dopants and Interfacial Oxygen Vacancies in FeSe-based Systems
15:00-15:30 Mingxing Chen[1, 2]
[1]Hunan Normal University, China, [2]University of Wisconsin-Milwaukee, USA

S14-1237 Establishing J_{eff}=3/2 Ground State in a Lacunar Spinel $GaTa_4Se_8$
15:30-16:00 Myung-Joon Han
Korea Advanced Institute of Science and Technology, Korea

S14-1013 16:00-16:30
Ab Initio Treatment of Magnetocrystalline Anisotropy, Exchange Interaction, and Dzyaloshinskii-moriya Interaction of Transition-metal Thin Films
Kohji Nakamura, Toru Akiyama, Tomonori Ito
Mie University, Japan

S14-1362 16:30-17:00
First-principles Study on Multiferroic Transition-metal Oxides
Kunihiko Yamauchi
Osaka University, Japan

S14-2156 17:00-17:30
Pressure-induced Nodal-loop Semimetal and Topological Phase Transition in a Single-component Molecular Crystal, [Pd(dddt)$_2$]
Takao Tsumuraya[1, 2], Hikaru Sawahata[3], Fumiyuki Ishii[3], Hiori Kino[4], Reizo Kato[2], Tsuyoshi Miyazaki[4]
[1]Kumamoto University, Japan, [2]RIKEN, Japan, [3]Kanazawa University, Japan, [4]National Institute for Materials Science, Japan

G2-2. Nanostructured Magnetic Materials

June 5 (Tue.) *Ora (8F)*

Chairs Tao Zhu (Institute of Physics, Chinese Academy of Sciences, China)
Je-Geun Park (Seoul National University, Korea)

G2-0845 09:00-09:30 **INVITED**
Novel Performance in $SrRuO_3$ Thin Films with Emergent Phase Separation
Jinxing Zhang
Beijing Normal University, China

G2-0690 09:30-10:00 **INVITED**
New Opportunities for Magnetic Van der Waals Materials
Je-Geun Park
Seoul National University, Korea

G2-1020 10:00-10:15
High Thermal Stability in W/Zr/CoFeB/MgO Stack with Perpendicular Magnetic Anisotropy
Fenfen Chang[1, 2], Tao Zhu[1]
[1]Institute of Physics, Chinese Academy of Sciences, China, [2]Insitute of High Energy Physics, Chinese Academy of Sciences, China

G2-0796 10:15-10:30
Non-local Spin Diffusion Driven by Giant Spin Hall Effect at Oxide Heterointerfaces
Mi-Jin Jin[1], Seon Young Moon[2], Shin-Ik Kim[2], Daeseung Choe[1], Jungmin Park[1], Junhyeon Jo[1], Inseon Oh[1], Hyun-Cheol Koo[2], Byung-Chul Min[2], Hyun-Woo Lee[3], Seung-Hyub Baek[2], Jung-Woo Yoo[1]
[1]Ulsan National Institute of Science and Technology, Korea, [2]Korea Institute of Science and Technology, Korea, [3]Pohang University of Science and Technology, Korea

G2-0444 10:30-10:45
Probing Magnetic and Magnetoplasmonics Properties of Ag/Fe Nano-dot Arrays
Wan-Chen Chuang[1], Sheng-Zhe Ciou[2], Henry Han[2], Daniel Marko[3], Jiann-Yeu Chen[1], Jong-Ching Wu[2], Gary Paterson[4], Robert Stamps[5], Bassel Alkadour[5], Johan Van Lierop[5], Ko-Wei Lin[1], David Schmool[3]
[1]National Chung Hsing University, Taiwan, [2]National Chunghua University of Education, Taiwan, [3]University of Versailles, France, [4]University of Glasgow, UK, [5]University of Manitoba, Canada

G2-0617 Various Physical Properties at the Interface between Heavy Metals and Ferromagnets Probed by Brillouin Light Scattering
10:45-11:00
June Seo Kim
Daegu Gyeongbuk Institute of Science & Technology, Korea

G2-1048 Magnetic Field Effect on Photocurrent of Co-coating ZnO Nanowires
11:00-11:15
Dong Lin Li, Huai Sheng Hsu, Hua Shu Hsu
National Pingtung University, Taiwan

G2-0483 Effect of Annealing on the Magnetic Properties of GaMnAsP/GaAsP Multilayers
11:15-11:30
Phunvira Chongthanaphisut, Sanghoon Lee
Korea University, Korea

G2-0914 Facile Synthesis of Fe_3O_4@C@Ag Magnetic Nanocomposites for Enhanced Adsorption of Environmental Pollutants from Aqueous Solution
11:30-11:45
Van Tuan Hoang[1], Ngoc Phan Vu[1], Quang Huy Tran[2], Anh-Tuan Le[1]
[1]Hanoi University of Science and Technology, Vietnam, [2]National Institute of Hygiene and Epidemiology, Vietnam

G2-0545 Perpendicular Exchange Bias in Co/Pt and Co/Pd Antidot Arrays
11:45-12:00
Anh Nguyen
Vietnam Academy of Science and Technology, Vietnam

G2-3. Nanostructured Magnetic Materials

June 5 (Tue.) *Ora (8F)*

Chairs Andreas Berger (CIC nanoGUNE, Spain)
Jung-Il Hong (Daegu Gyeongbuk Institute of Science and Technology, Korea)

G2-0345 Investigations of Magnetic Materials with Predefined Exchange Coupling Strength Profiles
14:30-15:00
INVITED
Lorenzo Fallarino[1, 2], Patricia Riego[1, 3], Brian Kirby[4], Casey Miller[5], Andreas Berger[1]
[1]CIC nanoGUNE, Spain, [2]Helmholtz-Zentrum Dresden-Rossendorf, Germany, [3]Universidad del País Vasco, Spain, [4]National Institute of Standards and Technology, USA, [5]Rochester Institute of Technology, USA

G2-0280 Domain Wall Pinning Using Local Compositional Modification for Domain Wall Memory
15:00-15:30
INVITED
SN Piramanayagam, Tianli Jin, Wen Siang Lew
Nanyang Technological University, Singapore

G2-1007 The Resistive Switching Characteristics of Fe_3O_4 Magnetic Nanoparticles
15:30-15:45
Kim Ngoc Pham[1], Thi Kieu Hanh Ta[1], Ngoc Xuan Dat Mai[2], Bach Thang Phan[2]
[1]University of Science, Vietnam National University, Ho Chi Minh City, Vietnam, [2]Vietnam National University, Vietnam

G2-0213 Two Dimensional Magnetic Semiconductor in Feroxhyte
15:45-16:00
Imran Khan, Jisang Hong
Pukyong National University, Korea

G2-0374 Nanoscale Compositional Modification in Co/Pd Multilayers for Pinning Domain Walls
16:00-16:15 Tianli Jin, Durgesh Kumar, Weiliang Gan, Mojtaba Ranjbar, Wensiang Lew, S. N. Piramanayagam
Nanyang Technological University, Singapore

G2-1042 Magneto-optical Properties of Graphitic Carbon Nitride
16:15-16:30 Feng Wei Guo[1], Dmitry Zherebtsov[2], Hua Shu Hsu[1]
[1]National Pingtung University, Taiwan, [2]South Ural State University, Russia

G2-0479 Magneto-transport Properties of GaMnAs Based Trilayers with Opposite Signs of Anisotropic Magnetoresistance
16:30-16:45 Kyung Jae Lee, Sanghoon Lee
Korea University, Korea

S8. Magnetic Microscopy for nm-scale Spin Structure

June 6 (Wed.) *Ballroom 2 (2F)*

Chair Chanyong Hwang (Korea Research Institute of Standards and Science, Korea)

S8-1419 09:00-09:30
Lateral and Temporal High-resolution Scanning Electron Microscopy with Polarization Analysis
Fabian Kloodt-Twesten, Susanne Kuhrau, Robert Froemter, Hans Peter Oepen
University Hamburg, Germany

S8-1966 09:30-10:00
Spin-polarized Scanning Electron Microscopy and Its Application
Teruo Kohashi[1], Hideo Matsuyama[2]
[1]Hitachi, Ltd., Japan, [2]Hokkaido University, Japan

S8-1997 10:00-10:30
Magnetic Domain Imaging by Spin Polarized Low Energy Electron Microscopy
Yizheng Wu
Fudan University, China

S8-1572 10:30-11:00
In-situ Lorentz TEM Observations of Magnetic Skyrmions in Chiral-lattice Magnets
Xiuzhen Yu
RIKEN Center for Emergent Matter Science, Japan

S8-0743 11:00-11:30
Magnetic X-ray Spectromicroscopy of Non-trivial Spin Textures
Peter Fischer[1, 2]
[1]Lawrence Berkeley National Laboratory, USA, [2]University of California, USA

S8-1996 11:30-12:00
Ultrafast and Very Small – Discover Nanoscale Magnetism with Picosecond Time Resolution
Hendrik Ohldag
SLAC National Accelerator Laboratory, USA

S11. Superconducting Magnet Technology and Applications

June 6 (Wed.) *Ballroom 3 (2F)*

Chair Haigun Lee (Korea University, Korea)

S11-2006 09:00-09:30
Superconductor Magnet Technology for High Field and Large Power Applications: From Dream to Reality
Seungyong Hahn
Seoul National University, Korea

S11-1999 09:30-10:00
Technology Status and Application of HTS Rotating Machines for Electric Propulsion System
Ho Min Kim, Ji Hyung Kim, Huu Luong Quach
Jeju National University, Korea

S11-1866 The Feasibility of High Field Magnet Using Magnetic Field Amplification
10:00-10:30 Seyong Choi
Kangwon National University, Korea

S11-1193 Progress of 9.4 T Metal-clad No-insulation All-REBCO NMR Magnet in Development
10:30-11:00 SangGap Lee[1], Seungyong Hahn[2,3], Jaemin Kim[4], Jae Young Jang[1], Young Jin Hwang[1], Jun Hee Han[1], Hunju Lee[4], Sehwan In[5], Hankil Yeom[5], Min Cheol Ahn[6]
[1]Korea Basic Science Institute, Korea, [2]Seoul National University, Korea, [3]National High Magnetic Field Laboratory, USA, [4]SuNAM Co., Ltd., Korea, [5]Korea Institute of Machinery & Materials, Korea, [6]Kunsan National University, Korea

S11-0968 Ferromagnetic Shimming of a High Temperature Superconducting Magnet for NMR Applications
11:00-11:30 Min Cheol Ahn[1], Hongmin Yang[1], Jae Young Jang[2], Young Jin Hwang[2], SangGap Lee[2]
[1]Kunsan National University, Korea, [2]Korea Basic Science Institute, Korea

S11-0858 AC Loss Analysis of Superconducting Coil Wound with High Temperature Superconducting Conductor on Round Core (CORC)
11:30-12:00 Woo-Seok Kim[1], Ji-Kwang Lee[2], Seyeon Lee[1], Kyeongdal Choi[1]
[1]Korea Polytechnic University, Korea, [2]Woosuk University, Korea

G7-1. Soft/Hard Magnetic Materials and Their Applications

June 6 (Wed.) *Ballroom 4 (2F)*

Chairs Masahiro Yamaguchi (Tohoku University, Japan)
Wooyoung Lee (Yonsei University, Korea)

G7-1241 Hexaferrite Composite Sheet to be Embedded in IC Chip for SHF-range Noise Suppression
09:00-09:30 Ranajit Sai, Mitsuharu Sato, Yasunori Miyazawa, Akihiro Takahashi, Masahiro Yamaguchi
INVITED *Tohoku University, Japan*

G7-1085 Sensor Application of Inverse Magnetostriction Effect of Soft Magnetostrictive Film
09:30-10:00 Shuichiro Hashi, Yuito Kubo, Kaoru Arai, Kazushi Ishiyama
INVITED *Tohoku University, Japan*

G7-1041 Magnetic Domain Observation of Permanent Magnet with a Kerr Microscope
10:00-10:30 Masaki Takezawa, Hiroyuki Taneda, Yuji Morimoto
INVITED *Kyushu Institute of Technology, Japan*

G7-1766 Effects of Pre-annealing of Initial Alloy on Microstructure and Magnetic Properties of Nd-Fe-B HDDR Powder during Hot-deformation
10:30-10:45 Jae-Gyeong Yoo[1], Youn-Kyoung Baek[1], Dongyun Lee[2], Hee-Ryong Cha[3], Hae-Woong Kwon[4], Jung-Goo Lee[1]
[1]Korea Institute of Materials Science, Korea, [2]Pusan National University, Korea, [3]National Institute of Advanced Industrial Science and Technology, Japan, [4]Pukyong National University, Korea

G7-1685 Novel High Coercivity $Fe_{16-x}Al_xN_2$ Alloy
10:45-11:00 Jinho Byun[1], Taewon Min[1], Young-Kyoung Baek[2], HyoungJeen Jeen[1], Jaekwang Lee[1]
[1]Pusan National University, Korea, [2]Korea Institute of Materials Science, Korea

G7-1600 Study on Magnetic Force Calculation of Spherical Permanent Magnets
11:00-11:15 Yuyang Zhang, Yonggang Leng, Dan Tan, Jinjun Liu
Tianjin University, China

G7-1555 A Facile Synthesis of High-coercivity Iron Oxides via an Aerosol Based Route
11:15-11:30 Youn-Kyoung Baek, Jung-Goo Lee, Su Gyeong Kim, Young Ju Park
Korea Institute of Materials Science, Korea

G7-1130 The Effects of Fe–/Ni–doping on the Magnetic Properties of MnBi
11:30-11:45 Yang Yang[1, 2], Pingzhan Si[1], Jong-Woo Kim[1], Huidong Qian[1], Xinyou Wang[1], Jihoon Park[1], Chul–Jin Choi[1]
[1]Korea Institute of Materials Science, Korea, [2]China Jiliang University, China

G7-1069 Electronic Structures of New Nanocrystalline Fe-Co-B-P-Cu Soft Magnet
11:45-12:00 Minyeong Choi[1], Yang-Ki Hong[1], Woncheol Lee[1], Hoyun Won[1], Seok Bae[2], Dong-Hyuk Choi[2], Seong-Gon Kim[3], Myung-Hwa Jung[4]
[1]The University of Alabama, USA, [2]LG Innotek, Korea, [3]Mississippi State University, USA, [4]Sogang University, Korea

G7-0828 Structure and Magnetic Properties of Bulk Nanocrystalline MnAl–C Magnets Prepared from Mn Nanoparticles
12:00-12:15 Huidong Qian[1, 2], Pingzhan Si[1], Jihoon Park[1], Yang Yang[1], Xinyou Wang[1], Kyung Mox Cho[2], Chuljin Choi[1]
[1]Korea Institute of Materials Science, Korea, [2]Pusan National University, Korea

G7-1316 Magnetic Nanoparticles Based on Transition Metals: Synthesis and Hard Magnetic Properties
12:15-12:30 Nguyen Hoang Luong, Nguyen Hoang Nam
University of Science, Vietnam National University, Hanoi, Vietnam

G1-4. Spintronics

June 6 (Wed.) *Tamra (8F)*

Chairs Luis E. Hueso (CIC nanoGUNE, Spain)
Tae Hee Kim (Ewha Womans University, Korea)

G1-0869 Quantification of Spin Accumulation by Harmonics Hall Resistance Measurements
09:00-09:30 Wen Siang Lew, Feilong Luo
INVITED *Nanyang Technological University, Singapore*

G1-1615 Anomalous Ettingshausen Effect in a Ferromagnetic FePt Thin Film
09:30-10:00 Takeshi Seki[1], Ryo Iguchi[2], Koki Takanashi[1], Ken-ichi Uchida[2]
INVITED *[1]Tohoku University, Japan, [2]National Institute for Materials Science, Japan*

G1-0199 Nontrivial Behaviors of Anomalous Nernst Effect in Ferromagnetic Thin Films
10:00-10:15 Tsao-Chi Chuang, Po-Lung Su, Po-Hsun Wu, Ssu-Yen Huang
National Taiwan University, Taiwan

G1-0593 Ultrafast Magnetism and THz Spintronics
10:15-10:45 Markus Münzenberg, Jakob Walowski
INVITED *Greifswald University, Germany*

G1-1373 Interface-induced Spin Hall Magnetoresistance Enhancement in Pt-based Tri-layer Structure
10:45-11:00 Jung-Chun-Andrew Huang
National Cheng Kung University, Taiwan

G1-0956 Negative Anisotropic Magnetoresistance by Interfacial Spin-orbit Coupling
11:00-11:15 Dong-Soo Han[1], Kyoung-Whan Kim[1], Yuxiang Yin[2], Kyujoon Lee[1], Henk J. M. Swagten[3], Jairo Sinova[1], Mathias Kläui[1]
[1]Johannes Gutenberg Universität Mainz, Germany, [2]Eindhoven University of Technology, Netherlands, [3]Eindhoven University of Technology, Netherlands

G1-0644 Spin Colossal Magnetoresistance
11:15-11:30 Zhiyong Qiu
Dalian University of Technology, China

G1-0475 Fabrication of Sm-rich $SmFe_2$ Thin Films with Giant Negative Magnetostriction
11:30-11:45 Masato Tomita, Yugo Ishitani, Shiori Ishiyama, Yota Takamura, Shigeki Nakagawa
Tokyo Institute of Technology, Japan

S9. Spin Dynamics

June 6 (Wed.) *Tamra (8F)*

Chair Hans Peter Oepen (University Hamburg, Germany)

S9-0585 Supercurrents in Magnonic Macroscopic Quantum States
14:30-15:00 Burkard Hillebrands
TU Kaiserslautern, Germany

S9-2054 Excitation and Control of Spin Waves Using Fano Resonances and Graded Magnonic Index
15:00-15:30 Volodymyr Kruglyak[1], Fedor Mushenok[1], Carl Davies[1], Yat-Yin Au[1], Natalie Whitehead[1], Simon Horsley[1], Tom Philbin[1], Andrei Shytov[1], René Dost[2], Dan Allwood[2], Beverley Inkson[2], Vlad Poimanov[3], Andrey Kuchko[4]
[1]University of Exeter, UK, [2]University of Sheffield, UK, [3]Donetsk National University, Ukraine, [4]Institute of Magnetism, Ukraine

S9-1472 Hybridizing Ferromagnetic Magnons to Microwave Photons in Planar Hybrid Inverted Split-ring Resonator/YIG Film System
15:30-16:00 Biswanath Bhoi, Bosung Kim, Junhoe Kim, Young-Jun Cho, Sang-Koog Kim
Seoul National University, Korea

S9-1334 High Frequency Dynamics of Artificial Spin Ice
16:00-16:30 Axel Hoffmann[1], Matthias B. Jungfleisch[1], Wei Zhang[2], Ezio Iacocca[3], Joseph Sklenar[4], Junjia Ding[1], Wanjun Jiang[5], Sheng Zhang[1], Jung Sik Park[4], John E. Pearson[1], Valentine Novosad[1], John B. Ketterson[6], Peter Schiffer[7], Olle Heinonen[1]
[1]Argonne National Laboratory, USA, [2]Oakland University, USA, [3]University of Colorado at Boulder, USA, [4]University of Illinois at Urbana-Champaign, USA, [5]Tsinghua University, China, [6]Northwestern University, USA, [7]Yale University, USA

S9-0612 Skyrmion Dynamics – From Thermal Diffusion to Ultra-fast Motion
16:30-17:00 Mathias Klaeui
Johannes Gutenberg University Mainz, Germany

S9-1403 Skyrmion Dynamics in a Frustrated Ferromagnetic Film
17:00-17:30 Yan Zhou
The Chinese University of Hong Kong, Hong Kong

S7-2. Spin and Heat Conversion

June 6 (Wed.) *Halla (8F)*

Chair Jiang Xiao (Fudan University, China)

S7-1348 Transverse Spin Nernst Magnetoresistance in Ferromagnet/Non-magnet Bilayers
09:00-09:30 Byong-Guk Park
Korea Advanced Institute of Science and Technology, Korea

S7-1339 Charge and Heat-spin Conversions in Spin Orbit Systems
09:30-10:00 Masamitsu Hayashi[1,2]
[1]The University of Tokyo, Japan, [2]National Institute for Materials Science, Japan

S7-1143 Strong Interlayer Magnon-magnon Coupling in YIG-based Ferromagnetic Nanostructures
10:00-10:30 Haiming Yu
Beihang University, China

S7-0785 Field-driven Antiferromagnetic Domain Wall Dynamics in Ferrimagnetic GdFeCo
10:30-11:00 Kab-Jin Kim
Korea Advanced Institute of Science and Technology, Korea

S7-0580 Optical Spin-orbit Torque Induced by Longitudinal Photo-spin Current
11:00-11:30 Gyungmin Choi
Sungkyunkwan University, Korea

S7-0381 Detection and Generation of Thermal Spin Current
11:30-12:00 Ssu-Yen Huang
National Taiwan University, Taiwan

S7-3. Magnetic Domain Walls and Skyrmions

June 6 (Wed.) *Halla (8F)*

Chair Kab-Jin Kim (Korea Advanced Institute of Science and Technology, Korea)

S7-0776 14:30-15:00 **Measurement Schemes of Dzyaloshinskii-moriya Interaction Based on Domain-wall Dynamics in Ferromagnetic Thin Films**
Dae-Yun Kim[1], Duck-Ho Kim[1], Yune-Seok Nam[1], Soong-Geun Je[1], Joo-Sung Kim[1], Yong-Keun Park[1,2], Min-Ho Park[1], Hyun-Seok Hwang[1], Byoung-Chul Min[2], Sug-Bong Choe[1]
[1]Seoul National University, Korea, [2]Korea Institute of Science and Technology, Korea

S7-1308 15:00-15:30 **Correlation between Charge Asphericity and Dzyaloshinskii-moriya Interaction**
Sanghoon Kim
Kyoto University, Japan

S7-0698 15:30-16:00 **Experimental Observation of Chiral Magnetic Bobbers in B20-type FeGe**
Haifeng Du[1], Fengshan Zheng[2], Filipp N. Rybakov[3], Aleksandr B. Borisov[4], Dongsheng Song[5], Shasha Wang[1], Zi-An Li[2], Nikolai S. Kiselev[6], Jan Caron[2], András Kovács[2], Mingliang Tian[1], Yuheng Zhang[1], Stefan Blügel[6], Rafal E. Dunin-Borkowski[2]
[1]High Magnetic Field Laboratory, Chinese Academy of Science, [2]Forschungszentrum Jülich, Germany, [3]KTH-Royal Institute of Technology, Sweden, [4]M.N. Miheev Institute of Metal Physics of Ural Branch of Russian Academy of Sciences, Russia, [5]Tsinghua University, China, [6]Forschungszentrum Jülich and JARA, Germany

S7-0636 16:00-16:30 **Electrical Field Induced Directional Motion of Skyrmionic Bubbles in a Micro-racetrack**
Xiaoxi Liu
Shinshu University, Japan

S7-0602 16:30-17:00 **Topological Manipulation of Magnetic Skyrmions at Room Temperature**
Seonghoon Woo
Korea Institute of Science and Technology, Korea

S7-0597 17:00-17:30 **Self-feedback of Magnetization Dynamics in Chiral Magnets**
Kyoung-Whan Kim[1], Hyun-Woo Lee[2], Kyung-Jin Lee[3,4], Karin Everschor-Sitte[1], Olena Gomonay[1], Jairo Sinova[1]
[1]Johannes Gutenberg Universität Mainz, Germany, [2]Pohang University of Science and Technology, Korea, [3]Korea University, Korea, [4]KU-KIST Graduate School of Converging Science and Technology, Korea University, Korea

G8-1. Energy Applications of Magnetic Materials

June 6 (Wed.) *Ara (8F)*

Chairs Yunchong Wang (Zhejiang University, China)
Shanming Wang (Tsinghua University, China)

G8-1620 09:00-09:30 **INVITED** **Refunction Techniques of Electrical Steel Sheets for High Efficiency Motors**
Yuji Tsuchida[1], Masato Enokizono[2]
[1]Oita University, Japan, [2]Vector Magnetic Characteristic Technical Laboratory, Japan

G8-0664 Magnetic Properties of Soft Magnetic Materials with Motor Control Excitation
09:30-10:00 Kyyoul Yun
INVITED *Gifu University, Japan*

G8-1862 Comparative Study on Single Pulse and Dual Pulses Variable Width Control Strategies for
10:00-10:15 High-speed PM BLDC Motor Drive
Jian-Xin Shen, Xue-Fei Qin, Ke-Ke Zhang, Ting Han
Zhejiang University, China

G8-1592 Design and Analysis of a Split-stator 2DoF Submerged Drilling Motor
10:15-10:30 Lujia Xie[1,2], Yihua Hu[1], Jikai Si[2], Kai Ni[1]
[1]University of Liverpool, UK, [2]Henan Polytechnic University, China

G8-1123 Spin Seebeck Effect in a Pt/bulk-YIG Structure Fabricated by a Sol-gel Method
10:30-10:45 Min-Sun Jang, Ki-Suk Lee
Ulsan National Institute of Science and Technology, Korea

G8-2118 Magnetic Field Distribution Analysis and Metal Magnetic Memory(MMM) Testing Results
10:45-11:00 around Artifcial Cracks under Loads
Gye-jo Jung, Su-ji Han, Young-min Lee
Korea Electric Power Research Institute, Korea

G8-1874 Vibration Reduction of Large and Low-speed Motor by Structure Optimization
11:00-11:15 Liu Hailong
Wuhan University, China

G8-1845 Loss and Thermal Characteristic of Cage Asynchronous Motor under Different Operating Conditions
11:15-11:30 Shuye Ding, Xin Jiang, Min Zhu, Zhenya Zhang
Nanjing Normal University, China

Vietnam Magnetics Society – International Cooperation for Further Development

16:00-17:30, June 6(Wed.) *Ara (8F)*

Organizer Nguyen Huu Duc (Vietnam National University, Vietnam)

To introduce the Vietnam Magnetics Society and its members and encourage cooperation opportunities,
It will include presentations:
- General Introduction about VMS
- VMS Oversea
- Activities of VMS in Hanoi
- Activities of VMS in Ho Chi Minh city

G6-1. Novel Magnetic Phenomena

June 6 (Wed.) *Ora (8F)*

Chairs Volodymyr Chernenko (BCMaterials & University of the Basque Country, Spain)
Jhinhwan Lee (Korea Advanced Institute of Science and Technology, Korea)

G6-0934 Electric Field Control of Perpendicular Magnetic Anisotropy in Multiferroic Heterostructures
09:00-09:30 Tomoyasu Taniyama
INVITED *Nagoya University, Japan*

G6-0157 Ferromagnetic Shape Memory Effect in NiMnGa/Polymer Composites
09:30-10:00 Volodymyr Chernenko[1,2], Pimpet Sratongon[2], Hideki Hosoda[2]
INVITED *[1]BCMaterials & University of the Basque Country, Spain, [2]Tokyo Institute of Technology, Japan*

G6-1545 Electric Field Effect on Magnetism in Co/Pt Bilayers
10:00-10:30 Daichi Chiba
INVITED *The University of Tokyo, Japan*

G6-1617 Control of Magnetoelectric Coupling at Room Temperature by Spin Anisotropy and Frustration in the Co_2Y-type Hexaferrite Single Crystals
10:30-10:45 Chang Bae Park, Kee Hoon Kim
Seoul National University, Korea

G6-0966 Magnetic and Magnetocaloric Behaviors in $Gd_{50}Al_{25}Co_{25}$/FeNi Core/Shell Structured Microwires
10:45-11:00 Duc Thi My Nguyen[1,2], Manh-Huong Phan[2]
[1]Hanoi National University, Vietnam, [2]University of South Florida, USA

G6-1515 Charge Ordering, Ferroelectric, and Magnetic Domains in LuFe2O4 Observed by Scanning Probe Microscopy
11:00-11:15 Yoon Hee Jeong
Pohang University of Science and Technology, Korea

G6-0202 Glassy Dynamics of Single Crystalline M-type Lead Substituted Barium Hexaferrite $Ba_{0.3}Pb_{0.7}Fe_{12}O_{19}$
11:15-11:30 Liudmila Alyabyeva[1], Victor Torgashev[2], Elena Zhukova[1], Denis Vinnik[3], Anatoliy Prokhorov[1,4], Svetlana Gudkova[1,3], David Rivas Góngora[5], Tomislav Ivek[5], Silvia Tomić[5], Nikolina Novosel[5], Damir Starešinić[5], Damir Dominko[5], Zvonko Jagličić[6], Martin Dressel[1,7], Boris Gorshunov[1]
[1]Moscow Institute of Physics and Technology, Russia, [2]Southern Federal University, Russia, [3]South Ural State University, Russia, [4]A.M. Prokhorov General Physics Institute, Russia, [5]Institut za fiziku, Croatia, [6]University of Ljubljana, Slovenia, [7]Universitat Stuttgart, Germany

G6-2. Novel Magnetic Phenomena

June 6 (Wed.) *Ora (8F)*

Chairs Hiromi Yuasa (Kyushu University, Japan)
Yoon Hee Jeong (Pohang Univ of Science and Technology, Korea)

G6-1514 14:30-15:00 **INVITED**
Controlling Superconductivity with Spin Currents
Jhinhwan Lee
Korea Advanced Institute of Science and Technology, Korea

G6-1948 15:00-15:30 **INVITED**
From Electronics to Straintronics and Low-energy Memory Devices
Huu Duc Nguyen, Thi Huong Giang Do
University of Engineering and Technology, Vietnam National University, Hanoi, Vietnam

G6-1873 15:30-16:00 **INVITED**
Spin Seebeck Voltage Enhancement by Inserted Layers between YIG and Nonmagnetic Layers
Hiromi Yuasa[1,2]
[1]Kyushu University, Japan, [2]JST PRESTO, Japan

G6-0807 16:00-16:15
Electrical Control of Unidirectional Anisotropy in Exchange Biased AFM/FM Bilayers by Piezoelectric Strains
Hyun-Joong Kim, Jung-Il Hong
Daegu Gyeongbuk Institute of Science and Technology, Korea

G6-0392 16:15-16:30
Electric Field Control of Magnetic and Transport Properties at the Interfaces of 3d Transition Metals and MgO Substrates
Abdul Muizz Pradipto, Toru Akiyama, Tomonori Ito, Kohji Nakamura
Mie University, Japan

G6-1053 16:30-16:45
Magnetic and Thermal Properties of a New One-dimensional Antiferromagnetic Chain Compounds $NiTe_2O_5$
Junhan Lee[1], Marie Kratochvílová[2], Zahra Yamani[3], Daehwan Park[1], Hong Eun Choi[1], Je-Geun Park[2], Yoon Seok Oh[1]
[1]Ulsan National Institute of Science and Technology, Korea, [2]Seoul National University, Korea, [3]Canadian Neutron Beam Centre, Canada

G6-1624 16:45-17:00
Gd-doped $BiFeO_3$ Single-crystalline Nanowires: Phase Transition from *R3c* to *Pn2₁a* and Ferromagnetic Enhancement in High-coercivity
Sandeep Patel[1, 2], Jae-Hyeok Lee[2], Min-Kwan Kim[2], Biswanath Bhoi[2], Sang-Koog Kim[2]
[1]S.R.P.S.College Muzaffarpur, India, [2]Seoul National University, Korea

S12. Soft Magnetic Materials

June 7 (Thur.) *Ballroom 2 (2F)*

Chair Haein Yim (Sookmyung Women's University, Korea)

S12-1379 09:00-09:30 Nanocrystallization of Fe-base Alloys under Tensile Stress
Giselher Herzer
VACUUMSCHMELZE GmbH & Co. KG, Germany

S12-2018 09:30-10:00 Development of New Rapidly Quenched Bilayer Ribbons with Tailorable Soft Magnetic Properties
Ivan Skorvanek[1], Branislav Kunca[1], Frantisek Andrejka[1], Peter Svec[2], Jozef Marcin[1], Peter Svec Sr.[2]
[1]Institute of Experimental Physics, Slovak Academy of Sciences, Slovakia, [2]Institute of Physics, Slovak Academy of Sciences, Slovakia

S12-1780 10:00-10:30 Fe-based Nanocrystalline Alloys with High Bs for High-current/High-efficiency Power Inductor
Sang-Kyun Kwon, Han-Wool Ryu, Byong-Cheol Moon, Chang-Hak Choi
Samsung Electro-Mechanics Co., Ltd., Korea

S12-2017 10:30-11:00 Recent Development of Non-oriented Electrical Steel Sheet for Eco-friendly Vehicles in POSCO
Jaesong Kim, Jong-Tae Park
POSCO, Korea

S12-2063 11:00-11:30 Application of Non-metal Doped Magnetic Oxide Nanomaterials in High Efficient Magnetically Recyclable Visible Light Photocatalysts
Chunli Liu, Yuefa Jia
Hankuk University of Foreign Studies, Korea

S12-2074 11:30-12:00 High Performance Soft Magnetic Materials for Motors, Inductors, Charging, and Speaker Applications
Jaydip Das, Tapan Shah, Chins Chinnasamy, Eric Fitterling, Sam Kernion, Ned Galka
Carpenter Technology Corporation, USA

S10. Smart Control of Ferroic Orders, Vortices and Topology

June 7 (Thur.) *Ballroom 3 (2F)*

Chair Kee Hoon Kim (Seoul National University, Korea)

S10-1962 09:00-09:30 Multiferroics and Electric Activity of Different Magnetic Textures
Daniel Khomskii
Koeln University, Germany

S10-0786 09:30-10:00 Nonreciprocal Propagation of Microwaves, Magnons, and Acoustic Waves in Noncentrosymmetric Magnets
Yoshinori Onose
Tohoku University, Japan

S10-0687 Van der Waals Heteroepitaxy for Flexible Spintronic Applications
10:00-10:30 Ying-Hao Chu
National Chiao Tung University, Taiwan

S10-0610 Contrasting Magnetoelectric Behavior in Multiferroic Hexaferrites as Understood by Crystal Symmetry Analyses
10:30-11:00 Yisheng Chai[1,2], SaeHwan Chun[2], Junzhuang Cong[3], Keehoon Kim[2]
[1]Chongqing University, China, [2]Seoul National University, Korea, [3]Institute of Physics, Chinese Academy of Sciences, China

S10-0576 Configurable Topological Multiferroic Textures and Winding Number Analysis
11:00-11:30 Chan-Ho Yang
Korea Advanced Institute of Science and Technology, Korea

G7-2. Soft/Hard Magnetic Materials and Their Applications

June 7 (Thur.) *Ballroom 4 (2F)*

Chairs Takashi Hasegawa (Akita University, Japan)
Hae-Woong Kwon (Pukyong National University, Korea)

G7-0947 First-order Reversal Curve (FORC) Analysis on Nd-Fe-B Magnets
09:00-09:30 Satoshi Okamoto, Kazunori Miyazawa, Takahiro Yomogita, Nobuaki Kikuchi, Osamu Kitakami
INVITED *Tohoku University, Japan*

G7-0791 Uniaxial Magnetic Anisotropy of Tetragonally Distorted FeCo-based Alloy Films
09:30-10:00 Takashi Hasegawa, Masato Sakamoto, Takuya Niibori, Yasuko Nakamura, Mitsuaki Oikawa,
INVITED Yusuke Takemasa, Daichi Yamamoto
Akita University, Japan

G7-0631 Issues and Solutions of Magnetic Cores Comprising Fe-Cu-Mo-Si-B High Bs Nanocrystalline Alloy Ribbon
10:00-10:30 Motoki Ohta[1], Ryusuke Hasegawa[2]
INVITED *[1]Hitachi Metals, Ltd., Japan, [2]Metglas® Inc., USA*

G7-0799 Improving the Magnetic Properties of $Nd_{9.5}Fe_{76}Co_5Ti_3B_{6.5}$ Permanent Alloys via Magnetic Field Annealing
10:30-10:45 Xueling Hou, Bing Bin, Jianxin Wang, Xiaochen Wang, Lingfeng Xu, Hui Xu
Shanghai University, China

G7-0661 Computational Materials Science with Special Emphasis on Magnetic Materials
10:45-11:00 Yang-ki Hong[1], Minyeong Choi[1], Hoyun Won[1], Woncheol Lee[1], Chang-Dong Yeo[2], Bae Seok[3], Sumin Kim[4], Wooyoung Lee[4]
[1]The University of Alabama at Tuscaloosa, USA, [2]Texas Tech University, USA, [3]LG Innotek, Korea, [4]Yonsei University, Korea

G7-0618 Ab-Inito Simulation of Ga-doped Nd-Fe-B Magnets
11:00-11:15 Yasutomi Tatetsu, Yoshihiro Gohda
Tokyo Institute of Technology, Japan

G7-0559 Synthesis of Nd-Pr-Fe-B Particles from Solution Obtained by Leaching of Monazite Ores
11:15-11:30 Syed Kamran Haider[1, 2, 3], Vitalli Galkin[1, 4], Young Soo Kang[3], Dongsoo Kim[1, 2]
[1]Korea Institute of Geoscience and Mineral Resources, Korea, [2]Korea Institute of Materials Science, Korea, [3]Sogang University, Korea, [4]Peter the Great Saint Petersburg Polytechnic University, Russia

G7-0396 Synthesis, Microstructure and Magnetic Properties of Ti doped Fe-6.5wt%Si Soft Magnetic Composites
11:30-11:45 Jian Wang[1, 2], Xin Liu[1, 2]
[1]Guangdong Institute of Materials and Processing, Guangdong Academy of Sciences, China, [2]National Engineering Research Center of Powder Metallurgy of Titanium & Rare Metals, China

G7-0317 Effect of Annealing Temperature on Crystal Structure and Magnetic Properties of $CoZnFe_2O_4$ Magnetic Nanoparticles
11:45-12:00 Heri Kiswanto[1], Edi Suharyadi[1], Takeshi Kato[2], Satoshi Iwata[2]
[1]Universitas Gadjah Mada, Indonesia, [2]Nagoya University, Japan

G7-0287 Crystal Structures and Magnetic Properties of Silica-encapsulated $CoZnFe_2O_4$ Magnetic Nanoparticles
12:00-12:15 La Ode Rusman[1], Heri Kiswanto[1], Amjad Tri Puspitasari[1], Edi Suharyadi[1], Takeshi Kato[2], Sitoshi Iwata[2]
[1]Universitas Gadjah Mada, Indonesia, [2]Nagoya University, Japan

G7-0655 Domain Wall Parameters in (Pr,Dy)(FeCo)B Sintered Magnets
12:15-12:30 Ekaterina Igorevna Kunitsyna[1, 2], Victor Kucheryaev[3], Dmitriy Korolev[3], Vadim Piskorski[3], Ruslan Valeev[3], Oksana Koplak[1], Roman Morgunov[1, 2]
[1]Institute of Problems of Chemical Physics, Russia, [2]Tambov State Technical University, Russia, [3]Institute of Aviation Materials, Russia

G4. Magnetization Dynamics

June 7 (Thur.) *Tamra (8F)*

Chair Gyung-Min Choi (Sungkyunkwan University, Korea)

G4-2011 Ultrafast Magnetization Switching and Ultrafast Spin Dependent Phenomena
09:00-09:30 Arata Tsukamoto
INVITED *Nihon University, Japan*

G4-1399 Edge-mode Spin-wave Nonreciprocity for Magnonic Logic Functions
09:30-10:00 Koji Sekiguchi
INVITED *Keio University, Japan*

G4-0204 Interfacial Phenomena in Ferromagnetic/Non-magnetic Thin-films: Damping, Spin-mixing Conductance, DMI and Proximity Induced Magnetisation
10:00-10:30 Del Atkinson
INVITED *Durham University, UK*

G4-0230 Large Modulation of Magnetic Vortex Dynamic Properties in Square Shape Ferromagnetic Dots
10:30-10:45 Xiaomin Cui[1], Satoshi Yakata[2], Takashi Kimura[3]
[1]Northwestern Polytechnical University, China, [2]Fukuoka Institute of Technology, Japan, [3]Kyushu University, Japan

G4-0951 Finding the Spinwave Eigenmodes of Patterned Magnetic System
10:45-11:00 Indra Purnama, Chun-Yeol You
Daegu Gyeongbuk Institute of Science and Technology, Korea

G4-0761 Fast and Efficient STT Switching in MTJ Using Additional Transient Pulse Current
11:00-11:15 Sachin Pathak, Jongin Cha, Kangwook Jo, Hongil Yoon, Jongill Hong
Yonsei University, Korea

G4-1006 The 3D Spin-wave Modes of the Magnetic Vortex in a Thick Circular Nanodisk
11:15-11:30 Hee-Sung Han, Sooseok Lee, Dae-Han Jung, Namkyu Kim, Ki-Suk Lee
Ulsan National Institute of Science and Technology, Korea

G4-1475 Intrinsic Spin-wave Modes and Domain-wall Motions in Soft Magnetic Nanotubes Driven by Circular-rotating Magnetic Fields
11:30-11:45 Jaehak Yang, Junhoe Kim, Bosung Kim, Young-Jun Cho, Jae-Hyeok Lee, Sang-Koog Kim
Seoul National University, Korea

G4-1469 Nutation-like-mode Excitation of Coupled Vortex Cores in Magnetic Spherical Shells
11:45-12:00 Jae-Hyeok Lee, Junhoe Kim, Min-Kwan Kim, Jaegun Sim, Sang-Koog Kim
Seoul National University, Korea

G4-1473 Coupled Breathing Modes in One- and Two-dimensional Skyrmion Lattices
12:00-12:15 Junhoe Kim, Jaehak Yang, Young-Jun Cho, Jong-Hyuk Lee, Bosung Kim, Sang-Koog Kim
Seoul National University, Korea

S7-4. Spin and Charge Conversion

June 7 (Thur.) *Halla (8F)*

Chair Sanghoon Kim (University of Ulsan, Korea)

S7-0837 Spin and Orbital Hall Effect from Orbital-dependent Level Splitting
09:00-09:30 Dongwook Go[1], Changyoung Kim[2], Hyun-Woo Lee[1]
[1]Pohang University of Science and Technology, Korea, [2]Seoul National University, Korea

S7-0816 Magneto-electric Control of Antiferromagnetic Domain
09:30-10:00 Yu Shiratsuchi[1], Thi Van Anh Nguyen[1], Kentaro Toyoki[2], Yohinori Kotani[2], Tetsuya Nakamura[2], Ryoichi Nakatani[1]
[1]Osaka University, Japan, [2]Japan Synchrotron Radiation Research Institute, Japan

S7-0804 Spintronics at Ferromagnet-topological Insulator Interface
10:00-10:30 Wei Han
Peking University, China

S7-0630 10:30-11:00 Efficient Charge-spin Interconversion Phenomena in Various Nonmagnetic Metal/Oxide Interfaces
Kouta Kondou[1], Hanshen Tsai[2], YoshiChika Otani[1, 2]
[1]RIKEN, Japan, [2]University of Tokyo, Japan

S7-0592 11:00-11:30 From Nano-sized, Micron-Sized, to Un-Patterned Samples: Spin-Orbit Torque Characterization Made Easy
Chi-Feng Pai
National Taiwan University, Taiwan

S7-0976 11:30-12:00 Efficient Magnetization Switching by AC Spin-orbit Torques
Gyungchoon Go[1], Seung-Jae Lee[2], Kyung-Jin Lee[1, 2]
[1]Korea University, Korea, [2]KU-KIST Graduate School of Converging Science and Technology, Korea University, Korea

G8-2. Energy Applications of Magnetic Materials

June 7 (Thur.) *Ara (8F)*

Chairs Yunchong Wang (Zhejiang University, China)
Shanming Wang (Tsinghua University, China)

G8-1448 09:00-09:15 Numerical Calculation of Stator End Leakage Reactance of Permanent Magnet Machines with Concentric Winding
Xiaoqin Zheng, Xinzhen Wu, Ronggang Ni
Qingdao University, China

G8-1423 09:15-09:30 Design and Analysis of a New Dual-permanent-magnet-excited Machine for Low-speed Large-torque Applications
Yujun Shi, Linni Jian, Jin Wei
Southern University of Science and Technology, China

G8-1789 09:30-09:45 Research on the Operating Performance of Cryogenic Permanent Magnet Synchronous Motor Submerged in Liquefied Natural Gas
Chao Guo, Shuodao Huang, Jiabao Wang, Yaojing Feng
Hunan University, China

G8-1703 09:45-10:00 MPPT of Low-grade Waste Energy ORC Power Generation with Turbo-expander Permanent Magnet Synchronous Generator under Disturbance Energy
Jiabao Wang, Shuodao Huang, Chao Guo
Hunan University, China

G8-1671 10:00-10:15 High-speed PM BLDC Motor Drive with Various PWM Strategies
Jian-Xin Shen, Ke-Ke Zhang, Xue-Fei Qin, Ting Han
Zhejiang University, China

G8-1605 Dynamic Magnetic-coupling Effect of Two-degrees-of-freedom Direct Drive Induction Motor
10:15-10:30 Jikai Si[1], Peixin Wang[1], Wei Hua[2], Yihua Hu[3], Haichao Feng[1]
[1]Henan Polytechnic University, China, [2]Southeast University, China, [3]University of Liverpool, UK

G8-1590 Comparison of Primary Wound Field Flux-switching Linear Motors with Different Stator and Mover Pole Pitches
10:30-10:45 Yi Jin, Ruiwu Cao, Ning Jiang
Nanjing University of Aeronautics and Astronautics, China

G8-1825 Quantitative Discrimination of Uniform Eccentricity in Wound Rotor Induction Motor
10:45-11:00 Yang Zhou, Xiaohua Bao, Wei Xu
Hefei University of Technology, China

G8-1706 Electromagnetic Vibration Analysis and Reduction of Inverted-fed Motor
11:00-11:15 Liu Hailong
Wuhan University, China

G8-1835 Thermal Investigation for Surface Permanent Magnet Synchronous Motors Based on Lumped-parameter Thermal-network
11:15-11:30 Shuye Ding[1], Min Zhu[1], Xin Jiang[1], Zhenya Zhang[1], Shuhua Fang[2]
[1]Nanjing Normal University, China, [2]Southeast University, China

G1-1. Spintronics

16:30-18:00, June 4 (Mon.) *Lobby (8F)*

Chair Seung-Young Park (Korea Basic Science Institute, Korea)

G1-1171 Electrical Transport along the Surface of InAs Nanowire
Taeyueb Kim[1], Jeehoon Jeon[2,3], Sangsu Kim[2], Sungjung Joo[1], Min Hyeok Jo[4], Jae Cheol Shin[4], Jinki Hong[2]
[1]Korea Research Institute of Standards and Science, Korea, [2]Korea University, Korea, [3]Korea Institute of Science and Technology, Korea, [4]Yeungnam University, Korea

G1-1175 Manipulation of Incoherent Spin Current in Lateral Spin Valves
Shaojie Hu[1], Xiaomin Cui[2], Tai Min[1], Takashi Kimura[3]
[1]Xi'an Jiaotong University, China, [2]Northwestern Polytechnical University, China, [3]Kyushu University, Japan

G1-1264 Terahertz Time-domain Spectroscopy Study of Ferromagnetic Thin Films
Lin Huang[1], Dong-Hyun Kim[1], Sang-Hyuk Lee[1], Seon-Dae Kim[1], Jaehun Park[2]
[1]Chungbuk National University, Korea, [2]Pohang University of Science and Technology, Korea

G1-1266 Detection Magnetism State of Permalloy Wire Used Inverse Spin Hall Effect
Kao-Fan Lai, Chun-chia Chang, Ning-Fang Liang, Deng-Shiang Shiu, Lance Horng
National Changhua University of Education, Taiwan

G1-1503 Memristive Behavior of Field-driven Domain Wall Motion in Multiple Hall Bar Structures
Hee-Kyeong Hwang, Jaesuk Kwon, Ki-Seung Lee, Jung-Il Hong, Chun-Yeol You
Daegu Gyeongbuk Institute of Science and Technology, Korea

G1-1525 Current-induced Memristive Magnetization Switching Relevant to the Multiple Domain Walls in Perpendicularly Magnetized Micro-wire
Jaesuk Kwon, Hee-Kyeong Hwang, Jung-Il Hong, Chun-Yeol You
Daegu Gyeongbuk Institute of Science and Technology, Korea

G1-1553 Spin-orbit Torques Induced by Ferromagnet/Normal Metal Interface
Young-Wan Oh[1], Seung-heon Baek[1], Vivek P Amin[2], Gyungchoon Go[3], Seung-Jae Lee[3], Mark D Stiles[2], Byong-Guk Park[1], Kyung-Jin Lee[3]
[1]Korea Advanced Institute of Science and Technology, Korea, [2]National Institute of Standards and Technology, USA, [3]Korea University, Korea

G1-1610 Comparison of Spin-torque Efficiency Measured by Domain-wall Velocity and Depinning Field
Yune-Seok Nam[1], Yong-Keun Park[1], Min-Ho Park[1], Joo-Sung Kim[1], Byoung-Chul Min[2], Sug-Bong Choe[1]
[1]Seoul National University, Korea, [2]Korea Institute of Science and Technology, Korea

G1-1687 Annealing Temperature Dependence on Spin Pumping Efficiency at the CoFeB/Pt Interface
Nyun Jong Lee[1], Sang-Il Kim[1], Dongjoon Lee[2], Oukjae Lee[3], Seung-Young Park[1]
[1]Korea Basic Science Institute, Korea, [2]KU-KIST Graduated School of Converging Science and Technology, Korea, [3]Korea Institute of Science and Technology, Korea

G1-1715 Electrical Spin Injection and Detection in a GaAs(110) Channel

Hansung Kim[1, 2], Hee Gyum Park[2, 3], Jae-Phil Shim[2], Seong Kwang Kim[2, 4], Hyeong-Rak Lim[2], Hyun Cheol Koo[1, 2], Hyung-jun Kim[2, 3]

[1]KU-KIST Graduate School of Converging Science and Technology, Korea University, Korea, [2]Korea Institute of Science and Technology, Korea, [3]KIST School, Korea University of Science & Technology, Korea, [4]Kookmin University, Korea

G1-1748 Effects of Reconstructed Substrate Surface on Magnetic Anisotropy and Magnetoresistance of Magnetite Film

Santosh Ghimire, Young Jin Lee, Joonghoe Dho

Kyungpook National University, Korea

G1-1870 Anisotropic Magnetoresistance Induced by Edelstein Effect in an InAs 2DEG

Won Young Choi[1], Hyun Cheol Koo[1], Hyung-jun Kim[1], Joonyeon Chang[1], Kyung-Jin Lee[2], Gyungchoon Go[2]

[1]Korea Institute of Science and Technology, Korea, [2]Korea University, Korea

G1-1883 Planar Motion Control of a Skymion Pair Using Spin Transfer Torque

Nam Jun Kim, Changyeon Won

Kyung Hee University, Korea

G1-1923 Spin Relaxation in Spin-orbital Coupling (Gold Adatom) Graphene Simulate with NEGF Approximation

Shun Jhou Jhan, Tsung Wei Huang, Ching Ray Chang

National Taiwan University, Taiwan

G1-2070 Implementation of Fokker-planck Equation Simulator for Spin Transfer Torque Device

Eunchong Baek, Chun-Yeol You

Daegu Gyeongbuk Institute of Science and Technology, Korea

G1-2139 Atomic Orbital Dependent Spin Rashba Field and Anomalous Spin Precession

Jeonghun Sohn, Hyun-woo Lee

Pohang University of Science and Technology, Korea

G1-2148 Temperature Dependent Unidirectional Magnetoresistance in a $Co_{80}Gd_{20}$/Pt Bilayer

Soogil Lee[1], Jae-Wook Lee[1], Jeong-Mok Kim[1], Sanghoon Kim[2], Nyun Jong Lee[3], Seung-Young Park[3], Byong-Guk Park[1], Kab-Jin Kim[1]

[1]Korea Advanced Institute of Science and Technology, Korea, [2]University of Ulsan, Korea, [3]Korea Basic Science Institute, Korea

G1-2153 The Effect of Defective Surface on Dynamics of a Magnetic Skyrmion

Namkyu Kim, Hee-Sung Han, Daehan Jung, Ki-Suk Lee

Ulsan National Institute of Science and Technology, Korea

G1-2176 Forward Volume Spin Wave Modulation Using One-dimensional Magnonic Crystal

Taichi Goto[1,2], Nakamura Yuichi[1], Hironaga Uchida[1], Mitsuteru Inoue[1]

[1]Toyohashi University of Technology, Japan, [2]JST PRESTO, Japan

G1-2180 Effect of Magnetoelastic Anisotropy Modulation on Spin Wave Propagation Properties of Yttrium Iron Garnet Films

Takuya Yoshimoto[1], Taichi Goto[1, 2], Bungo Iwamoto[1], Yuichi Nakamura[1], Hironaga Uchida[1], Caroline A. Ross[3], Mitsuteru Inoue[1]

[1]Toyohashi University of Technology, Japan, [2]JST PRESTO, Japan, [3]Massachusetts Institute of Technology, USA

G2-1. Nanostructured Magnetic Materials

16:30-18:00, June 4 (Mon.) *Lobby (8F)*

Chair Kyoung-Woong Moon (Korea Research Institute of Standards and Science, Korea)

G2-1036 Angular Dependence of Low Field Microwave Absorption in NiFe Thin Film

Dong Young Kim[1], Seok Soo Yoon[1], Shintaro Hinata[2], Shin Saito[2]

[1]Andong National University, Korea, [2]Tohoku University, Japan

G2-1061 Van der Waals Heterostructure Based on TMPX3 for Forming Antiferromagnetic Tunnel Junction using Dry Transfer Technique

Sungmin Lee[1], Hiroshi Idzuchi[2], Young Jae Shin[2], Philip Kim[2], Je-Geun Park[1]

[1]Seoul National University, Korea, [2]Harvard University, USA

G2-1092 Cooling Partial Pressure Dependent Phase Transition Characteristics of FeRh/MgO(100) Films

Sehwan Song, Jiwoong Kim, Dooyong Lee, Sungkyun Park

Pusan National University, Korea

G2-1104 Magnetic and Optical Properties of 111-oriented Spinel Fe-oxide Films

Jiwoong Kim, Dooyong Lee, Sehwan Song, Sungkyun Park

Pusan National University, Korea

G2-1148 Preparation and Magnetic Properties of $Ca_2Fe_2O_5$ Nanoparticles

The-Long Phan, Ngo Tran, Deok Hyeon Kim, P. S. Tola, Bo Wha Lee

Hankuk University of Foreign Studies, Korea

G2-1179 Symmetry Breaking in 3D Magnetic Vortex Core Structure

Sooseok Lee[1], Hee-Sung Han[1], Namkyu Kim[1], Mi-Young Im[2], Jung-Il Hong[3], Ki-Suk Lee[1]

[1]Ulsan National Institute of Science and Technology, Korea, [2]Lawrence Berkeley National Laboratory, USA, [3]Daegu Gyeongbuk Institute of Science and Technology, Korea

G2-1227 Optimal Rotor Structure Design of Claw-pole Alternator for Performance Improving Using Static 3D FEM Coupled-circuit Model

Huai Cong Liu, Gang Seok Lee, Sooyoung Cho, Ju Lee

Hanyang University, Korea

G2-1234 Depinning Behaviour of Vortex Domain Wall on Permalloy Wires by Using a MOKE Microscopy

Chin-Han Su, Deng-Shiang Shiu, Lin Lin, Yun Hong, Yi-Ying Liu, Kao-Fan Lai, Yee-Mou Kao, Jong-Ching Wu, Lance Horng

National Changhua University of Education, Taiwan

G2-1236 Design and Analysis of an IE4 Class LS-SynRM Considering Total Loss and Starting Performance
Huai Cong Liu, Gang Seok Lee, Sooyoung Cho, SangJun Ko, Ju Lee
Hanyang University, Korea

G2-1239 Design of Double-path Magnetic Circuit Structure Hybrid Fuel Injector Considering Demagnetization Characteristics
Huai Cong Liu, Gang Seok Lee, SangJun Ko, JunWon Choi, Sungwoo Bae, Ju Lee
Hanyang University, Korea

G2-1273 Vortex Domain Wall Injection in Wider Permalloy Wire
Deng-Shiang Shiu, Yun Hong, Kao-Fan Lai, Jong-Ching Wu, Lance Horng
National Changhua University of Education, Taiwan

G2-1387 Role of Fe-doped Effect in Two-dimensional MoS_2 Magnetic Semiconductor
Cheng-Wei Kao[1], Chun-Chuen Yang[1], Hao-Che Kao[1], Yung-Hsiang Tung[1], Ting-Wei Hsu[1], Wei-Chun Wu[1], Kuen-Song Lin[2]
[1]Chung Yuan Christian University, Taiwan, [2]Yuan Ze University, Taiwan

G2-1439 Effect of Annealing Temperature on Magnetic Properties and Microstructure of $L1_0$ MnGa Thin Films
Chi-Yu Huang[1], Yu-Shen Chen[2], Sea-Fue Wang[1], An-Cheng Sun[2]
[1]National Taipei University of Technology, Taiwan, [2]Yuan-Ze University, Taiwan

G2-1464 Magneto-transport Properties of the $SrTiO_3/LaAlO_3/SrTiO_3$ Trilayer Systems
Jeong-nam Kim[1, 2]
[1]Korea University of Science and Technology, Korea, [2]Korea Research Institute of Standards and Science, Korea

G2-1505 Creating Magnetic Structures in [Co/Ni]/PtMn Multilayers to Influence Exchange Bias Magnetism
Palash Manna[1], Chiung-Hui Liang[2], Yu-Ting Su[2], Ko-Wei Lin[2], Johan Van Lierop[1]
[1]University of Manitoba, Canada, [2]National Chung Hsing University, Taiwan

G2-1632 Samarium Doped Zinc Oxide Thin Films Grown by Pulsed-laser Deposition
Fang-Yuh Lo, Yu-Tso Liao, Jyun-Han Chen, Yu-Ting Lin, Hsiang-Lin Liu, Ming-Yau Chern
National Taiwan Normal University, Taiwan

G2-1664 Four Fold Symmetric Anisotropy in Magnetoresistance at $LaAlO_3/SrTiO_3$ Hetero-interface
Yongsu Kwak[1], Jinhee Kim[2], Jonghyun Song[1]
[1]Chungnam National University, Korea, [2]Korea Research Institute of Standards and Science, Korea

G2-1677 Magnetic Anisotropy of 2D Ferromagnet Interfaced with Ferroelectric Material
Eun Mi Kim[1], Cheng Gong[2], Xiang Zhang[2], Geunsik Lee[1]
[1]Ulsan National Institute of Science and Technology, Korea, [2]University of California, Berkeley, USA

G2-1699 On Chip Manipulation of Particle/Cells on Varied Thickness of the Magnetic Diode for Bio Applications
Keonmok Kim, CheolGi Kim
Deagu Gyeongbuk Institute of Sicence & Technology, Korea

G2-1732 Study of Magnetism and Defect of Hollow CeO_2-Ag Spheres
Pei-Kai Hsu, Eric Nestor Tseng, Yuan-Ching Tsai, Yi-Che Chen, Shih-Yun Chen
National Taiwan University of Science and Technology, Taiwan

G2-1735 Correlation between Lattice Parameter and Critical Temperature in V_2O_3 Thin Films
Jung-Il Hong, Jae-Hyun Ha
Gyeongbuk Institute of Science and Technology, Korea

G2-1804 Unconventional Behavior of Exchange Bias Effect in Mixture Phase with Ferromagnetic Materials in Bilayers
Min-Seung Jung, Jung-Il Hong
Daegu Gyeongbuk Institute of Science and Technology, Korea

G2-1849 Tailoring Magnetism of Ferromagnetic Semiconductors of Single-layer CrXTe$_3$ (X = Si, Ge, and Sn): A First-principles Study
Won Seok Yun, J. D. Lee
Daegu Gyeongbuk Institute of Science and Technology, Korea

G2-1950 Chemical Design and Synthesis of Magnetic Nanostructures
Kai Zhu, Yanglong Hou
Peking University, China

G2-2086 Growth and Simultaneous Valleys Manipulation of Two-dimensional $MoSe_2$-WSe_2 Lateral Heterostructure
Farman Ullah[1], Zeeshan Thair[1], Joon I. Jang[2], Maseng-Je Seong[3], Yong Soo Kim[1]
[1]University of Ulsan, Korea, [2]Sogang University, Korea, [3]Chung-Ang University, Korea

G2-2165 Effects of Nonlinear Characteristics on Temperature in Magnetic Nanoparticles due to Hysteresis-generated Heat
C. Y. Ho[1,3], B. C. Chen[2], S. L. Fan[1], C. W. Xiong[1], Y. J. Chiou[3]
[1]Dongguan Polytechnic, China, [2]Buddhist Dalin Tzu Chi General Hospital, Taiwan, [3]Hwa Hsia University of Technology, Taiwan

G2-2170 Fabrication of Bragg Mirror onto Magnetooptical Q-switch
Ryohei Morimoto[1], Taichi Goto[1,2], John Pritchard[3], Mani Mina[3], Takunori Taira[4], Yuichi Nakamura[1], Pang Boey Lim[1], Hironaga Uchida[1], Mitsuteru Inoue[1]
[1]Toyohashi University of Technology, Japan, [2]JST PRESTO, Japan, [3]Iowa State University, USA, [4]Institute for Molecular Science, Japan

G2-2172 Reconstruction of Magnetic Hologram Using Multi-layered Medium with Discrete Magnetic Layers
Naoki Hoshiba[1], Taichi Goto[1,2], Yuichi Nakamura[1], Pang Boey Lim[1], Hironaga Uchida[1], Mitsuteru Inoue[1]
[1]Toyohashi University of Technology, Japan, [2]JST PRESTO, Japan

G2-2178 Reproduction of Three Dimensional Image Reconstructed from Magneto-optic Pattern Medium Recorded by Optical System with Microlens Array
Yota Kimura[1], Taichi Goto[1,2], Hiroyuki Takagi[1], Yuichi Nakamura[1], Pang Boey Lim[1], Hironaga Uchida[1], Mitsuteru Inoue[1]
[1]Toyohashi University of Technology, Japan, [2]JST PRESTO, Japan

G5-1. Fundamental Properties of Materials

16:30-18:00, June 4 (Mon.) *Lobby (8F)*

Chair Jisang Hong (Pukyong National University, Korea)

G5-1163 Influence of Mn:Al Ratio on the Structure and Magnetic Properties of Antiperovskite $Al_{1-x}CMn_{3+x}$

Xinyou Wang[1], Pingzhan Si[2], Huidong Qian[2], Yang Yang[2], Chuljin Choi[2], Jihoon Park[2], Xinqing Wang[1], Hongliang Ge[1]

[1]China Jiliang University, China, [2]Korea Institute of Materials Science, Korea

G5-1183 Critical Exponents and Magnetocaloric Effect in $La_{0.7}Sr_{0.3}Mn_{1-x}Ti_xO_3$ (x = 0 and 0.05) Compounds

Le Viet Bau[1], Nguyen Manh An[1], Le Thi Giang[1], Tran Dang Thanh[2], Pham Thanh Phong[3]

[1]Hong Duc University, Vietnam, [2]Vietnamese Academy of Science and Technology, Vietnam, [3]Ton Duc Thang University, Vietnam

G5-1277 Critical Behavior and Magnetocaloric Effect of Ni-doped $La_{0.7}Sr_{0.3}MnO_3$ Ceramics

Tran Dang Thanh[1], Pham Duc Huyen Yen[2], Kieu Xuan Hau[2], Nguyen Thi Dung[3], Le Vi Nhan[4], Le Thi Huong[4], Le Viet Bau[4], Bach Thanh Cong[5], Yu Seong Cho[2]

[1]Vietnam Academy of Science and Technology, Vietnam, [2]Chungbuk National University, Korea, [3]Vietnam Academy of Science and Technology, Vietnam, [4]Hong Duc University, Vietnam, [5]Vietnam National University, Hanoi, Vietnam

G5-1281 Ferromagnetic Interaction in $Ni_{48}X_2Mn_{37}Sn_{13}$ (X = Fe and Co) Alloys

Tran Dang Thanh[1], Wen Zhe Nan[2], Kieu Xuan Hau[2], Vu Manh Quang[1], You Tae Soo[2], Piao Hong Guang[2], Nguyen Huy Dan[1], Bach Thanh Cong[3], Yu Seong Cho[2]

[1]Vietnam Academy of Science and Technology, Vietnam, [2]Chungbuk National University, Korea, [3]Vietnam National University, Hanoi, Vietnam

G5-1285 Temperature and Transverse Field Dependence of the Specific Heat of Materials Described by XZ Anisotropic Exchange Heisenberg Model

Cong Thanh Bach, Niem Tu Nguyen, Giang Huong Bach, Trang Thuy Nguyen

University of Science, Vietnam National University, Hanoi, Vietnam

G5-1407 A Very Large Perpendicular Magnetic Anisotropy in Pt/Co/MgO Trilayers Fabricated by Controlling the MgO Sputtering Power and Its Thickness

Hyung Keun Gweon, Sang Ho Lim

Korea University, Korea

G5-1431 Dielectric Study of Mo Doped Multiferroic BiFeO3

Tahir Murtaza, Javid Ali, Mohd. Shahid Khan

Jamia Millia Islamia, India

G5-1481 Stress-induced Magnetic Properties of Yttrium Iron Garnet ($Y_3Fe_5O_{12}$) Thin Films Fabricated by Pulsed Laser Deposition

Biswanath Bhoi, Bosung Kim, Min Kwan, Jae-Hyeok Lee, Yongsub Kim, Sang-Koog Kim

Seoul National University, Korea

G5-1540 First-principles Study of Electric Field Induced Giant Perpendicular Anisotropic Energy of Two-dimensional VS_2 Monolayer

Huei-Ru Fuh[1, 2], Ke-Chuan Weng[3], Yeu-Chung Lin[1], Tsung-Wei Huang[1], Horng-Tay Jeng[4], Chi-Ho Cheung[1], Ming-Chien Hsu[1], Ching-Ray Chang[1]
[1]National Taiwan University, Taiwan, [2]Yuan Ze University, Taiwan, [3]Institute of Nuclear Energy Research, Taiwan, [4]National Tsing-Hua University, Taiwan

G5-1641 Comparison and Validation of Anisotropic Magnetization Models for Grain-oriented Silicon Steel

Xuan Teng[1], Dong Wang[1], Junquan Chen[1], Yapeng Jiang[1], Xiaoqin Zheng[2]
[1]Naval University of Engineering, China, [2]Qingdao University, China

G5-1649 Magnetism and Magnetocrystalline Anisotropy of C-substituted τ-MnAl

Jin Sik Park, Sonny Rhim, Soon Cheol Hong
University of Ulsan, Korea

G5-1722 Magnetic Anisotropy of Highly $Nd_{3-x}Bi_xFe_{5-y}Ga_yO_{12}$ Studied by FMR Measurements

Takayuki Ishibashi[1], Gengjian Lou[1], Jion Yamakita[1], Masami Nishikawa[1], Nobuyasu Adachi[2], Takeshi Kato[3], Satoshi Iwata[3]
[1]Nagaoka University of Technology, Japan, [2]Nagoya Institute of Technology, Japan, [3]Nagoya University, Japan

G5-1744 Magnetic and Dielectric Properties of $LiFePO_4$ by Mössbauer Spectroscopy

Jae Yeon Seo, Hyunkyung Choi, Jung Tae Lim, Chul Sung Kim
Kookmin University, Korea

G5-1757 Mössbauer Studies of $LiFe_{1/3}Mn_{1/3}Ni_{1/3}PO_4$ Cathode Material

Hyunkyung Choi, Soyeon Barng, Chul Sung Kim
Kookmin University, Korea

G5-1775 Effect of Decomposition Process on Crystallization of Garnet Films Fabricated by Metal Organic Decomposition Method

Yuya Hironaka, Hina Saito, Yoshito Ashizawa, Katsuji Nakagawa
Nihon University, Japan

G5-1840 First Principles Calculation on Magnetism and Magnetocrystalline Anisotropy of FeNi

Mun Bong Hong, Jin Sik Park, Sonny Rhim, Soon Cheol Hong
University of Ulsan, Korea

G5-1989 Electronic Structures of Quasi Two-dimensional Cubic $CsSnBr_3$ Perovskite Nanoplatelets

WJ Fan
Nanyang Technological University, Singapore

G9. Bio-magnetism and Biomedical Applications

16:30-18:00, June 4 (Mon.) *Lobby (8F)*

Chair Sang-Suk Lee (Sangji University, Korea)

G9-0524 Use of GMR-SV Device, Variety Helical Multi-turn μ-coil, and Single μ-channel to Detect the Deformation Properties of Red Blood Cell's Membrane
Jong-Gu Choi[1], Jang-Roh Rhee[2], Sang-Suk Lee[1]
[1]Sangji University, Korea, [2]Sookmyung Women's University, Korea

G9-0641 Study of Noise Reduction Using ICA for MCG -Quantitative Component Selection Method Using Attractor Analysis-
Koichiro Kobayashi
Iwate University, Japan

G9-0751 The Effect of Low-frequency (1 Hz) rTMS on the Cerebellar Cortex in Patients with Ataxia after a Posterior Circulation Stroke : Randomized Control Trial
Hyun Gyu Cha
Joongbu University, Korea

G9-0920 Synthesis of Monodisperse Magnetite Nanoparticles by Modified-solvothermal Method
Shen-Yuan Lee, Yu-Shen Chen, An-Cheng Sun
Yuan Ze University, Taiwan

G9-1005 The Change of Capillaroscopic Features under Pulsed Magnetic Field
Hyun Sook Lee, Yonghyeok Jo
Sangji University, Korea

G9-1531 One-pot Controllable Synthesis of FePt and FePt@Fe_3O_4 Nanoparticles for Bio-application
Yunji Eom, Cheolgi Kim
Daegu Gyeongbuk Institute of Science and Technology, Korea

G9-1536 Bio-selective Logical Separation for Magnetically Driven Magnetic Particles and Cells on the Micro-magnetic Ellipsoid Pathways
Jonghwan Yoon
Daegu Gyeongbuk Institute of Science and Technology, Korea

G9-1563 A Micromagnet Frictionometer Using Magnetic Colloids for Nano-bio Interfaces
Hyeonseol Kim, CheolGi Kim
Deagu Gyeongbuk Institute of Science & Technology, Korea

G9-1577 Fabrication and Analysis of Flexible Magnetic Sensor
Mijin Kim, CheolGi Kim
Deagu Gyeongbuk Institute of Science & Technology, Korea

G9-1676 Lab-on-a-chip Based Electrochemical Device for Simultaneous Detection of Multiple Biomarkers
Kasturi Krishna Chaitanya Satish Babu, CheolGi Kim
Daegu Gyeongbuk Institute of Science and Technology, Korea

G9-1720 Optimization of PHR Sensor's Effective Surface Area for Magnetic Labeling Detection

SungJoon Kim, CheolGi Kim, MiJin Kim, JaeHoon Lee
Daegu Gyeongbuk Institute of Science and Technology, Korea

G9-1968 Study on Enhancement of Magnetic Field Gradient in Micro-sized Magnetic Materials

Viet Cuong Le
University of Engineering and Technology, Vietnam National University, Hanoi, Vietnam

G9-1973 Synthesis and Characteristics of Magnetic Oxide - Quantum Dots Nanocomposite

Tien-Dung Chu[1], Thi-Thuy-Phuong Doan[1], Duy-Truong Quach[1], Pham Duc Thang[2], Dong-Hyun Kim[3]
[1]University of Transport and Communications, Vietnam, [2]University of Engineering and Technology, Hanoi, Vietnam, [3]Chungbuk National University, Korea

G1-2. Spintronics

17:00-18:30, June 5 (Tue.) *Lobby (8F)*

Chair Hyunsoo Yang (National University of Singapore, Singapore)

G1-0327 Coherent Terahertz Spin-wave Emission Associated with Ferrimagnetic Domain Wall Dynamics
Se-Hyeok Oh[1], Kyung-Jin Lee[1], Se Kwon Kim[2], Dong-Kyu Lee[1], Gyungchoon Go[1], Kab-Jin Kim[3,4], Teruo Ono[4], Yaroslav Tserkovnyak[2]
[1]Korea University, Korea, [2]University of California, USA, [3]Korea Advanced Institute of Science and Technology, Korea, [4]Kyoto University, Japan

G1-0516 Effect of Interfacial Spin-transparency on Pt/Ferromagnet
Dong-Joon Lee[1,2], Ouk-Jae Lee[1], Kyung-Jin Lee[1,2]
[1]Korea Institute of Science and Technology, Korea, [2]Korea University, Korea

G1-0539 First-principles Study on Structural Stability and Magnetism in Equiatomic Quaternary Heusler Alloys
Fumiaki Kuroda, Hitoshi Fujii, Tetsuya Fukushima, Tamio Oguchi
Osaka University, Japan

G1-0599 Giant Enhancement of the Intrinsic Spin Hall Conductivity in β-tungsten via Substitutional Doping
Xuelei Sui[1], Nicholas Kioussis[2], Wenhui Duan[3]
[1]Tsinghua University, China, [2]California State University Northridge, USA, [3]Tsinghua University, China

G1-0623 Logic Gates for Digital Control of Single Particles/Cells on Chip
CheolGi Kim, Sandhya Rani Goudu
Daegu Gyeongbuk Institute of Science and Technology, Korea

G1-0628 Empirical Correlation between the Interfacial Dzyaloshinskii-moriya Interaction and Work Function in Metallic Magnetic Trilayers
Yong-Keun Park[1,2], Dae-Yun Kim[1], Joo-Sung Kim[1], Yune-Seok Nam[1], Min-Ho Park[1], Hyeok-Cheol Choi[1], Byoung-Chul Min[2], Sug-Bong Choe[1]
[1]Seoul National University, Korea, [2]Korea Institute of Science and Technology, Korea

G1-0669 Tunable Spin Hall Effect from a Ta Alloy System
Tian-Yue Chen, Chi-Feng Pai
National Taiwan University, Taiwan

G1-0682 Magnetic Skyrmion or Skyrmionium Motion by Attractive or Repulsive Forces of Voltage-controlled Gates
Jungbum Yoon, Kyoung-Woong Moon, Dongseuk Kim, Changsoo Kim, Dae Hyun Kim, Sangsun Lee, Byong Sun Chun, Wondong Kim, Chanyong Hwang
Korea Research Institute of Standards and Science, Korea

G1-0685 Experimental Comparison of Spin-orbit Torques between Domain-wall Motion and Harmonic Measurements

Joo-Sung Kim[1], Yune-Seok Nam[1], Dae-Yun Kim[1], Yong-Keun Park[1, 2], Min-Ho Park[1], Byoung-Chul Min[2], Sug-Bong Choe[1]

[1]Seoul National University, Korea, [2]Korea Institute of Science and Technology, Korea

G1-0769 Magnetic-field-driven Skyrmion Bubble Domains

Kyoung-Woong Moon, Chanyong Hwang

Korea Research Institute of Standards and Science, Korea

G1-0844 Tunable Magnetic Interface of Hybrid Hall Bar Device via Insertion of Organometallic Complex

Jun Hong Park[1, 2], Mario Ribeiro[1, 2], Thi Kim Hang Pham[2], Tae Hee Kim[1, 2]

[1]Institute for Basic Science, Korea, [2]Ewha Womans University, Korea

G1-0883 Control of Spin-hall Effect of Pt via Sputtering Energy Manipulation

Dongseuk Kim[1], Byong Sun Chun[1], Changsoo Kim[1], Kyoung-Woong Moon[1], Jungbum Yoon[1], Dae Hyun Kim[1], Sangsun Lee[1], Wondong Kim[1], Chang-Jin Yoon[2], Jiho Kim[2], Kungwon Rhie[2], B. C. Lee[3], Chanyong Hwang[1]

[1]Korea Research Institute of Standards and Science, Korea, [2]Korea University, Korea, [3]Inha University, Korea

G1-0904 Measurement of Field Like Spin Orbit Torque by Direct Current Tuned Spin Torque Ferromagnetic Resonance

Changsoo Kim, Dongseuk Kim, Byong Sun Chun, Kyoung-Woong Moon, Jungbum Yoon, Dae Hyun Kim, Sangsun Lee, Wondong Kim, Chanyong Hwang

Korea Research Institute of Standards and Science, Korea

G1-0908 Ferromagnetic-layer-thickness Dependence of the Magnetic Domain-wall Dynamics

Dae-Yun Kim[1], Min-Ho Park[1], Yong-Keun Park[1, 2], Ji-Sung Yu[1], Joo-Sung Kim[1], Duck-Ho Kim[1, 3], Byoung-Chul Min[2], Sug-Bong Choe[1]

[1]Seoul National University, Korea, [2]Korea Institute of Science and Technology, Korea, [3]Kyoto University, Japan

G1-1015 Complementary Spin Transistors in an InAs Quantum Well

Youn Ho Park, Jun Woo Choi, Joonyeon Chang, Hyun Cheol Koo

Korea Institute of Science and Technology, Korea

G1-1159 Magneto-conductance of InAs Nanowire Tunable by Gate-voltage

Jeehoon Jeon[1, 2], Taeyueb Kim[3], Sangsu Kim[1], Sungjung Joo[3], Min Hyeok Jo[4], Jae Cheol Shin[4], Hyun Cheol Koo[1, 2], Jinki Hong[1]

[1]Korea University, Korea, [2]Korea Institute of Science and Technology, Korea, [3]Korea Research Institute of Standards and Science, Korea, [4]Yeungnam University, Korea

G1-2122 Magnetoresistance Property of Double-type Ta/CoFe/Cu/CoFe/PtMn/Ta/CoFe/Cu/CoFe/PtMn/Ta Multilayer Films

Jong-Gu Choi[1], Jang-Roh Rhee[2], Sang-Suk Lee[1]

[1]Sangji University, Korea, [2]Sookmyung Women's University, Korea

G1-2124 Atomic Spin-orbit Coupling-induced Interfacial Spin-flip Scattering at a Heavy Metal/Ferromagnet Heterostructure

Mijin Lim, Hyun-Woo Lee
Pohang University of Science and Technology, Korea

G2-2. Nanostructured Magnetic Materials

17:00-18:30, June 5 (Tue.) *Lobby (8F)*

Chair Byong Sun Chun (Korea Research Institute of Standards and Science, Korea)

G2-0151 NiFeCr Capping and Buffer Layers Effect on Planar Hall Voltage Response and Magnetic Anisotropy for NiFe/Au/IrMn Trilayer Structure

Amir Aly Elzwawy[1,2], Artem Dmitrievich Talantsev[1,3], CheolGi Kim[1]
[1]*Daegu Gyeongbuk Institute of Science and Technology, Korea,* [2]*National Research Centre, Egypt,* [3]*Institute of Problems of Chemical Physics, Russia*

G2-0324 Quantum Anomalous Hall Effect and Giant Rashba Spin-orbit Splitting in Compensated n-p Codoped Graphene

Shifei Qi
Shanxi Normal University, China

G2-0326 Magnetic Properties of Microfabricated Mn_xGa Circler Dot Arrays

Yusuke Kikuchi, Hirokazu Makuta, Toshiyuki Shima, Masaaki Doi
Tohoku Gakuin University, Japan

G2-0330 Improvement of Coercivity for Microfabricated FePt Ring Arrays

Takumi Sato, Masaaki Doi, Toshiyuki Shima
Tohoku Gakuin University, Japan

G2-0342 Effect of N_2 Flow Rate Ratio on Magnetic Properties for Mn-GaN Thin Films

Fumitaka Nakagawa, Masaaki Doi, Toshiyuki Shima
Tohoku Gakuin University, Japan

G2-0361 Magnetic and Topological Properties of Graphene-like Heterostructure

Huisheng Zhang, Xiaohong Xu
Shanxi Normal University, China

G2-0492 Magnetic Properties of GaMnAs/GaMnAsP Bilayers with Non-collinear Magnetic Anisotropy

Sanghoon Lee, Suho Choi
Korea University, Korea

G2-0526 Inversed Magnetoresistance Property of Hybrid Type Multilayer of PtMn, IrMn, NiO Based GMR-SV Films with High-Tc Superconductor YBCO Film

Woo-Il Yang, Jong-Gu Choi, Sang-Suk Lee
Sangji University, Korea

G2-0677 Scalable Synthesis of Sheet-like Boron Nitride Nanotube via N_2 Dissociation Mechanism Using Thermal Plasma
Mi Se Chang
Korea Institute of Materials Science, Korea

G2-0704 Hydrogenation Effect in Two Dimensional Mn Dihalides
Jisang Hong, M. Umar Farooq
Pukyong National University, Korea

G2-0746 Laser Ablation Synthesis, Structure, and Exchange Bias of Mn_4C/MnO Powders
Lulu Yao[1], Pingzhan Si[2], Huidong Qian[2], Jinjun Liu[3], Hongliang Ge[1], Jihoon Park[2], Chul-Jin Choi[2]
[1]China Jiliang University, China, [2]Korea Institute of Materials Science, Korea, [3]Ningbo University, China

G2-0767 Barkhausen "Waves" in Ferromagnetic/Antiferromagnetic Bilayers
Artem Talantsev, Amir Elswawy, JaeHoon Lee, SungJoon Kim, CheolGi Kim
Daegu Gyeongbuk Institute of Science and Technology, Korea

G2-0863 Manipulation of Spin=1 Protected by C_3v Symmetry: A Non-equilibrium Green Function Approach
Tsung-Wei Huang, Shun-Jhou Jhan, Ching-Ray Chang
National Taiwan University, Taiwan

G2-0868 Enhancement of Magnetic Anisotropy in Rare-earth Free Multilayer $Fe_{16}N_2/Ag/Fe_{16}N_2$ and $Fe_{16}N_2/Au/Fe_{16}N_2$ Permanent Magnet
Imran Khan, Jisang Hong
Pukyong National University, Korea

G2-1023 Weak Ferromagnetism and Exchange Bias in Antiferromagnetic Cobalt Oxide Nanoparticles Prepared by Arc Discharge in Air
Xianglian Wang[1], Hongliang Ge[1], Quanlin Ye[2], Pingzhan Si[1], Huanjian Chen[1]
[1]China Jiliang University, China, [2]Hangzhou Normal University, China

G2-1140 Structural and Magnetic Properties of $BaFe_xCoO_{19}$ Hexaferrite Nanoparticles
Ngo Tran, Deok Hyeon Kim, Seok Hee Lee, The-Long Phan, Bo Wha Lee
Hankuk University of Foreign Studies, Korea

G3. Magnetic Recording and Information Technology

17:00-18:30, June 5 (Tue.) *Lobby (8F)*

Chair Seok Soo Yoon (Andong National University, Korea)

G3-0159 Improving Two-dimensional Symbol Detection for Staggered Bit-patterned Media Recording
Seongkwon Jeong, Kijun Seo, Juri Kim, Jaejin Lee
Soongsil University, Korea

G5-2. Fundamental Properties of Materials

17:00-18:30, June 5 (Tue.) *Lobby (8F)*

Chair Kee Hoon Kim (Seoul National University, Korea)

G5-0333 Enhancement of Coercive Force of Nd-Fe-B Thin Films by the Diffusion of Capping Layer Materials into Grain Boundary
Yukiya Tamazawa, Masaaki Doi, Toshiyuki Shima
Tohoku Gakuin University, Japan

G5-0338 New Polytypes of MoS_2: Candiates for Spintronics
Sang Wook Han, Soon Cheol Hong
University of Ulsan, Korea

G5-0420 Electrochemical Manipulation of Magnetism and Magnetization Reorientation in $LiFePO_4$ by Li-ion Intercalation
Tumurbaatar Tsevelmaa[1], Dorj Odkhuu[2], Soon Cheol Hong[1]
[1]University of Ulsan, Korea, [2]Incheon National University, Korea

G5-0426 Machine Learning Approach for Data Analysis of Magnetic Orbital Moments and Magnetocrystalline Anisotropy in Transition-metal Thin Films on MgO(001)
Kohei Hayashi[1], Kohei Nozaki[1, 2], Abdul Muizz Pradipto[1], Toru Akiyama[1], Tomonori Ito[1], Tamio Oguchi[2, 3], Kohji Nakamura[1, 2]
[1]Mie University, Japan, [2]National Institute for Materials Science, Japan, [3]Osaka University, Japan

G5-0486 Magnetic Anisotropy of GaMnAsP Ferromagnetic Semiconductor Films Grown on Different Buffer Layers
Sanghoon Lee, JiHoon Chang
Korea University, Korea

G5-0606 Ab Initio Study of Ultrafast Dynamics of Spin-phonon Coupled States of Spin-orbit Coupled Semiconductors
Noejung Park
Ulsan National Institute of Science and Technology, Korea

G5-0821 Synchrotron-radiation Spectroscopy Study of Multiferroic $Ba_{1-x}A_x(Ti,Fe)O_3$(A=La, Bi)
Seungho Seong[1], Hyun Woo Kim[1], Eunsook Lee[1], Deok Hyun Kim[2], Bo Wha Lee[2], Jeongsoo Kang[1]
[1]The Catholic University of Korea, Korea, [2]Hankuk University of Foreign Studies, Korea

G5-0926 RIXS Studies of Metal-insulator Transition with Concomitant Quantum Confinement Effect in $SrRuO_3$ Thin Films
Soonmin Kang, Je-Geun Park
Seoul National University, Korea

G5-0931 Spin-orbit Interaction Driven Magnetic Anisotropy in Dimerized Honeycomb Ruthenate Li_2RuO_3
Seokhwan Yun[1, 2], Youngjung Jo[3], Je-Geun Park[1, 2]
[1]Seoul National University, Korea, [2]Institute for Basic Science, Korea, [3]Kyungpook National University, Korea

G5-1003 Formation of LIPSS(Laser-Induced-Periodic-Surface-Structures) on Metal for Consumer Electronics by Femto-second Laser Process

Tae Hoon Park, Jae Ha Kim, Hyo-Soo Lee
Korea Institute of Industrial Technology, Korea

G5-1027 Influence of Ca-doping on Electronic Structure of $La_{0.7}Sr_{0.3}MnO_3$ Bulk Compound

Duc Huyen Yen Pham
Chungbuk National University, Korea

G5-1080 Spin-orbit Coupling Effect in Frustrated Magnetism of J_{eff}=3/2 Lacunar Spinel $GaTa_4Se_8$

Min Yong Jeong, Jae-Hoon Sim, Myung Joon Han
Korea Advanced Institute of Science and Technology, Korea

G5-1088 Reliability and Applicability of Magnetic Force Linear Response Theory: Numerical Parameters, Predictability, and Orbital Resolution

Hongkee Yoon[1], Taek Jung Kim[1], Jae-Hoon Sim[1], Seung Woo Jang[1], Taisuke Ozaki[2], Myung Joon Han[1]
[1]Korea Advanced Institute of Science and Technology, Korea, [2]University of Tokyo, Japan

G5-1109 Electronic Structure, Magnetic Ground State, and Effective Exchange Interaction of $LaMnO_3$

Seung Woo Jang, Siheon Ryee, Hongkee Yoon, Myung Joon Han
Korea Advanced Institute of Science and Technology, Korea

G5-1110 Quantified Degeneracy and Metal-insulator Transition in Complex Transition-metal Oxides

Jae-Hoon Sim[1], Siheon Ryee[1], Hunpyo Lee[2], Myung Joon Han[1]
[1]Korea Advanced Institute of Science and Technology, Korea, [2]Kangwon National University, Korea

G5-1392 First-principles Study on Half-metallic Properties of XCrZ Half-heusler Alloys ([X = Na, Li, K, Rb]; [Z = As, Sb])

Hoang Thu Thuy, Soon Cheol Hong
University of Ulsan, Korea

G5-1879 Magnetization Simulation Using Convolution Product in Tensorflow Library

Chanki Lee, Hee Young Kwon, Nam Jun Kim, Changyeon Won
Kyung Hee University, Korea

G5-2131 Giant Magnetic Anisotropy of Layered Chromium Compounds Originated by Ligand Spin-orbit Coupling

Donghwan Kim[1], Kyoo Kim[1], Kyung-Tae Ko[1], Junho Seo[1,2], Jun Sung Kim[1,2], Younghak Kim[1], Jae-Young Kim[2] Sang-Wook Cheong[1,3], Jae-Hoon Park[1]
[1]Pohang University of Science and Technology, Korea, [2]Institute for Basic Science, Korea, [3]Rutgers University, USA

G5-2134 Density Functional Theory Study of Meta-doped WS_2 Monolayer

Jung-Min Hyun, Miyoung Kim
Sookmyung Women's University, Korea

G5-2137 Magnetic Properties of Chains of Iron-oxide Particles Obtained from Magnetotactic Bacteria
Hyeonah Jo, Geonhee Bea, Jae-Hyeok Lee, Min-Kwan Kim, Jaegun Sim, Sang-Koog Kim
Seoul National University, Korea

G5-2142 Calculation of Magnetic Exchange Interactions and Construction of Spin Model for Low Dimensional Magnetic Compounds
Zlata Pchelkina
Ural Branch of the Russian Academy of Sciences, Russia

G10. Functional Magnetic Devices

17:00-18:30, June 5 (Tue.) *Lobby (8F)*

Chair Seok Soo Yoon (Andong National University, Korea)

G10-0356 Improved Efficiency Characteristics of Wireless Power Charging System in Superconducting MAGLEV Train Using Inserted Permanent Magnets
Yoon Do Chung[1], Eun Young Park[2], Chang Young Lee[3]
[1]Suwon Science College, Korea, [2]Korea Christian University, Korea, [3]Korea Railroad Research Institute, Korea

G10-0529 Optimal Design of the Knee Joint Pitch Motor for Quadruped Robot Using Orthogonal Array, Characteristic Function, and Response Surface Methodology
Joonwoo Mo[1], Taewoo Lee[1], Dokwan Hong[1, 2], Geunhie Rim[1, 2], Byungchul Woo[2]
[1]University of Science and Technology, Korea, [2]Korea Electrotechnology Research Institute, Korea

G10-0779 Research on Hall Sensor Error Diagnoisis and Compensation Algorithm that Caused Irreversible Demagnetization of PMSM
Jae Yong Lee[1], Dong Yeol Lee[1], Jun Young Kim[2], Dong Woo Kang[1]
[1]Keimyung University, Korea, [2]Hanyang University, Korea

G10-0814 Design Method of an Ultra-high Speed PM Motor/Generator for Electric-turbo Compounding System
Ho-Joon Lee, Woo-Suk Lee, Chul-Ho Kim
Busan Institute of Science & Technology, Korea

G10-0890 Shield Effect of a Portable Multi-layered Shield Can
Young Hak Kim
Pukyong National University, Korea

G10-1030 Magnetic Sensor Using R/L Transient Response in Cu core/ $Ni_{80}Fe_{20}$ Shell Composite Wire Fabricated by Electrodeposition
Seok Soo Yoon, Dong Young Kim
Andong National University, Korea

G10-1073 Magnetic Garnet Films Fabricated by Metal Organic Decomposition Method for Magneto-plasmoinic Effect
Yoshito Ashizawa, Toshihide Harada, Katsuji Nakagawa
Nihon University, Japan

G10-1096 Optimized Design of Improved Motor for Articulated Robot Actuator Using the Penalty Function and Response Surface Method

Tae-Woo Lee[1], Joon-Woo Mo[1], Do-Kwan Hong[1,2], Byung-Chul Woo[2]
[1]University of Science & Technology, Korea, [2]Korea Electrotechnology Research Institute, Korea

G10-1103 Synthesis of Zn-substituted Barium Y-type Hexaferrites and Their Microwave Absorbing Property

Jae-Hyoung You, SungJoon Choi, Sunwoo Lee, Sang-Im Yoo
Seoul National University, Korea

G10-1120 Development of Computational and Mathematical Resonance Frequency Prediction Model of Linear Oscillating Actuators Considering Nonlinearity of Permanent-magnetic Material

DongWoo Kang[1], YongDae So[1], JiSun Kim[1,2], EunKyung Hong[1]
[1]Keimyung University, Korea, [2]JINN Co, Ltd, Korea

G10-1509 Magnetoelectric Effects and Power Conversion Efficiencies in Gyrators with Functionally-graded Ferrites and Piezoelectrics

Jitao Zhang[1], Gopalan Srinivasan[2]
[1]Zhengzhou University of Light Industry, China, [2]Oakland University, USA

G10-1520 Microwave Power Absorption and Inter-decoupling Effects in Near-field for Graphene Oxide Sheets Embedded in Carbonyl Iron-polymeric Composites

Seunggeun Jeon, Jinu Kim, Ki Hyeon Kim
Yeungnam University, Korea

G10-1692 Suppression of 1/f Noise in Tunneling Magnetoresistance Sensors with AC-biasing Bridge

Van Su Luong, Anh Tuan Nguyen, Thi Hoai Dung Tran, Quoc Khanh Hoang, Anh Tue Nguyen, Tuyet Nga Nguyen
Hanoi University of Science and Technology, Vietnam

G10-1694 Analysis of Defect Signal Interference by Adjacent Defects on the Pipeline in Nondestructive Test Using MFL Method

Hui Min Kim[1], Chang Guen Heo[1], Sung Ho Cho[2], Gwan Soo Park[1]
[1]Pusan National University, Korea, [2]Korea Gas Corporation, Korea

G10-1811 Orthogonality Correction for Concentric Tri-axis Fluxgate Magnetometer

Xuan-Thang Trinh[1], Jen-Tzong Jeng[1], Chih-Cheng Lu[2]
[1]National Kaohsiung University of Applied Sciences, Taiwan, [2]National Taipei University of Technology, Taiwan

G10-1937 Electromagnetic Scattering and Transmission of Dual Metallic Grating Screens Inserting a Magnetized Ferrite Sheet

Hyun Ho Park
The University of Suwon, Korea

G10-2023 Spring Displacement Sensor Composed of LC Resonance Circuit

Kwang-Ho Shin, Kyungwon Kim
Kyungsung University, Korea

G10-2145 Magneto-plasmonic Properties for Au/MnSb/Au Nanostructure at around Curie Temperature
Shin Saito, Tatsuaki Sasaki
Tohoku University, Japan

G11. Magnetic Characterizations

17:00-18:30, June 5 (Tue.) *Lobby (8F)*

Chair Ki-Suk Lee (Ulsan National Institute of Science and Technology, Korea)

G11-0165 Magnetic Sensing and Imaging with Diamond Nitrogen-Vacancy(NV) Center
Jungbae Yoon[1], Myeongwon Lee[1], Alec Jenkins[2], Mohan Chandra Mathpal[1], Ania Bleszynski Jayich[2], Donghun Lee[1]
[1]Korea University, Korea, [2]University of California, USA

G11-0224 Measurements of Spin-selective Magnetic Hysteresis Curve in Fe-3wt% Si Alloy Using Magnetic Compton Scattering
Chan Wook Kim[1], Kyu Seok Han[2], Naruki Tsuji[3], Yoshiharu Sakurai[3]
[1]Research Institute of Industrial Science & Technology, Korea, [2]POSCO, Korea, [3]Spring-8, Japan

G11-1458 Pulsed Field Magnetometry: Eddy Current Correction Technique with a Single Pulse
Seung-jae Cho[1], Dae-hyoung Cho[2], Tae-Won Kim[2], Minsung Kim[3]
[1]Seoul Controls Magnet Instrument, Korea, [2]Korea Testing Laboratory, Korea, [3]Pohang University of Science and Technology, Korea

G11-1953 Characterization of Rare Earth Substituted Cobalt Ferrite Nanopartcles by First Order Reversal Curve Method
Basharat Want
University of Kashmir, India

G1-3. Spintronics

17:00-18:30, June 6 (Wed.) *Lobby (8F)*

Chair Jinho Lee (Seoul National University, Korea)

G1-0254 Magnetic Skyrmion Motion in the Presence of Defect
Ik-sun Hong[1], Kyung-Jin Lee[2]
[1]KU-KIST Graduate School of Converging Science and Technology, Korea University, Korea, [2]Korea University, Korea

G1-0258 Electrically-modulating Magnetic and Transport Properties in a Composite SiO_2-Co/ZnO-Co Film
Xiaoli Li, Fanfan Du, Yanchun Li, Yana Shi, Yuhao Bai, Zhiyong Quan, Xiaohong Xu
Shanxi Normal University, China

G1-0315 Non-adiabatic Spin-transfer Torque for Ferromagnetic Domain Wall
Hyeon-Jong Park[1], Jung Hyun Oh[2], Kyung-Jin Lee[1, 2]
[1]KU-KIST Graduate School of Converging Science and Technology, Korea University, Korea, [2]Korea University, Korea

G1-0348 Electrical Synchronization of Spin-torque Nano-oscillators
Hee Gyum Park[1, 2], Chaun Jang[1], Byoung-Chul Min[1, 2]
[1]Korea Institute of Science and Technology, Korea, [2]Korea University of Science and Technology, Korea

G1-0378 Tuning the Ferromagnetism in Noncompensated n-p Codoped ZnO Films by Carrier Density
Feng-Xian Jiang, Li-Fei Ji, Rui-Xue Tong, Shi-Fei Qi, Xiao-Hong Xu
Shanxi Normal University, China

G1-0385 Efficient In-line Skyrmion Injection Method for Synthetic Antiferromagnetic Systems
Weiliang Gan, Sachin Krishnia, Wen Siang Lew
Nanyang Technological University, Singapore

G1-0400 Effect of 4D and 5D Transition-metal Insertions to Spin-dependent Transports in Fe/MgO Superlattices
Shunta Ando, Kohji Nakamura, Abdul Muizz Pradipto, Tomonori Ito, Toru Akiyama
Mie University, Japan

G1-0412 Spin-hall Magnetoresistance for Cr / $Co_{100-x}Gd_x$ / Pt Layered Structures
Takeshi Seki, Weinan Zhou, Takahide Kubota, Koki Takanashi
Tohoku University, Japan

G1-0416 Size Dependence of Vortex Dynamics in a Co_2(Fe,Mn)Si Heusler Alloy Disk
Takeshi Seki, Takahide Kubota, Tatsuya Yamamoto, Koki Takanashi
Tohoku University, Japan

G1-0473 Manipulation of Magnetization in GaMnAs by Spin-orbit Field in the Absence of External Field

Sanghoon Lee[1], Sangyeop Lee[1,2]
[1]Korea University, Korea, [2]Korea Institute of Science and Technology, Korea

G1-0498 Transition from Current Flow to Electron Flow in Current-induced Domain Wall Motion due to Spin Hall Effect Change

Kwang-Su Ryu[1], See-Hun Yang[2], Luc Thomas[3], Stuart Parkin[2]
[1]Korea National University of Education, Korea, [2]IBM Almaden Research Center, USA, [3]TDK-Headway Technologies, USA

G1-0503 Tuning Atomic-layer Alignment for Perpendicular Magnetocrystalline Anisotropy of Co/Ni Multilayers

Thao Thi Phuong Nguyen[1], Kohji Nakamura[2], Tamio Oguchi[1]
[1]Osaka University, Japan, [2]Mie University, Japan

G1-0508 Correction of Thermoelectric Artifacts in Second Harmonics Measurements

Eun-Sang Park[1,2], Byoung-Chul Min[2], Kyung-Jin Lee[1,2]
[1]KU-KIST Graduate School of Converging Science and Technology, Korea University, Korea, [2]Korea Institute of Science and Technology, Korea

G1-1910 Anomalous Hall Effect of $Ir_{20}Mn_{80}$\Pt Bilayers

Tae Hee Kim[1], Thi Kim Hang Pham[1,2], Mario Ribeiro[2]
[1]Ewha Womans University, Korea, [2]Institute for Basic Science, Korea

G1-2159 Complementary Logic Operation Based on Electric Field Controlled Spin-orbit Torques

Seung-heon Chris Baek[1,2], Young-Wan Oh[1], Kyung-Woong Park[1,2], Kyung-Jin Lee[3], Byong-Guk Park[1]
[1]Korea Advanced Institute of Science and Technology, Korea, [2]SK Hynix Semiconductor, Inc., Korea, [3]Korea University, Korea

G5-3. Fundamental Properties of Materials

17:00-18:30, June 6 (Wed.) *Lobby (8F)*

Chair Gwan Soo Park (Pusan National University, Korea)

G5-1979 A Density Functional Study of Thickness Effect on Magnetism and Magnetocrystalline Anisotropy of Pd/Co/Pd (111) Films

Huynh Thi Ho, S. H. Rhim, Soon Cheol Hong
University of Ulsan, Korea

G6. Novel Magnetic Phenomena

17:00-18:30, June 6 (Wed.) *Lobby (8F)*

Chair Yoon Seok Oh (Ulsan National Institute of Science and Technology, Korea)

G6-0177 Optical Investigation of the Metal-insulator Transition in the Manganite Films with the Thickness Dependence
Yunsang Lee, Ilwan Seo
Soongsil University, Korea

G6-0365 Influence of Two Cation Substitution on Low-energy Dynamics of M-type Hexaferrite $Ba_{0.8}Pb_{0.2}Fe_{(12-x)}Al_xO_{19}$
Liudmila Alyabyeva[1], Denis Vinnik[2], Victor Torgashev[3], Svetlana Gudkova[1, 2], Dmitriy Zherebtsov[2], Elena Zhukova[1], Anatoliy Prokhorov[1, 4], Boris Gorshunov[1]
[1]Moscow Institute of Physics and Technology, Russia, [2]South Ural State University, Russia, [3]Southern Federal University, Russia, [4]A.M. Prokhorov General Physics Institute, Russian Academy of Sciences, Russia

G6-0368 Influence of Co and Al on Magnetic Properties and Magnetocaloric Effect of Ni-Mn-Sn Alloy
Kieu Xuan Hau
Chungbuk National University, Korea

G6-0393 The p+ip Triplet Superconducting Pairs Existing in the Graphene Sandwiched by Superconductor and Ferromagnet
Shih-Jye Sun[1], Hsiung Chou[2]
[1]National University of Kaohsiung, Taiwan, [2]National Sun Yat-Sen University, Taiwan

G6-0421 Optimization of High Temperature Superconducting Magnet Using No-insulation Multi-width Winding Technique
Byeongha Yoo, Jong Cheol Kim, Young-Gyun Kim, Jimin Kim, Haigun Lee
Korea University, Korea

G6-0431 Investigation on Purification of CMP Wastewater Using Superconducting a High-Gradient Magnetic Separation (HGMS) System
Byeongha Yoo, Jong Cheol Kim, Young-Gyun Kim, Jihoon Lee, Haigun Lee
Korea University, Korea

G6-0434 Study on the Electromagnetic Stability of a No-insulation GdBCO Superconducting Magnet in Magnetic Ripple Field
Jihoon Lee, Young-Gyun Kim, Byeongha Yoo, Hyun Hee Son, Haigun Lee
Korea University, Korea

G6-0438 Investigation of Thermal/Electrical Characteristics of REBCO Superconducting Magnets Wound Using the Metallic Insulation Winding Technique
Jimin Kim, Jong Cheol Kim, Young-Gyun Kim, Byeongha Yoo, Haigun Lee
Korea University, Korea

G6-0440 Charge-discharge and Over-current Characteristics of GdBCO Superconducting Magnets Wound with Various Thermal Greases

Jimin Kim, Young-Gyun Kim, Byeongha Yoo, Hyun Hee Son, Haigun Lee
Korea University, Korea

G6-0442 Investigation on the Development of High Temperature Superconducting Magnets for 10 MW Class Wind Power Generators

Jihoon Lee, Jong Cheol Kim, Hyun Hee Son, Jimin Kim, Haigun Lee
Korea University, Korea

G6-0452 Effect of Current Sweep Reversal Method on Screening Current-induced Field of a No-insulation REBCO Superconducting Magnet

Young-Gyun Kim, Byeongha Yoo, Jihoon Lee, Hyun Hee Son, Haigun Lee
Korea University, Korea

G6-0456 A Progress Report on Design and Fabrication of 0.5-T/300-mm MRI Magnet Using MgB_2 Superconducting Wires

Young-Gyun Kim[1], Jong Cheol Kim[1], Jiman Kim[1, 2], Byeongha Yoo[1], Jihoon Lee[1], Duck Young Hwang[2], Haigun Lee[1]
[1]Korea University, Korea, [2]Kiswire Advanced Technology Co., Ltd., Korea

G6-0459 Study on Partial Insulation REBCO Superconducting Magnet for Protection-free HTS AC Power Applications

Hyun Hee Son, Young-Gyun Kim, Jimin Kim, Jihoon Lee, Haigun Lee
Korea University, Korea

G6-0464 Investigation on Thermal and Electrical Stabilities of GdBCO Superconducting Magnets Impregnated with Epoxy Composites Using Surface-treated Carbon Nanotube Fillers

Hyun Hee Son[1], Jong Cheol Kim[1], Young-Gyun Kim[1], Jihoon Lee[1], Yeon Suk Choi[2], Haigun Lee[1]
[1]Korea University, Korea, [2]Korea Basic Science Institute, Korea

G6-0896 Understanding the Two-dimensional Spin Glass Behavior in Van der Waals $Mn_{0.5}Fe_{0.5}PS_3$

Suhan Son[1, 2], Sungmin Lee[1, 2], Haeri Kim[1, 2], Soo Yeon Lim[3], Hyeonsik Cheong[3], Je-Geun Park[1, 2]
[1]Seoul National University, Korea, [2]Institute for Basic Science, Korea, [3]Sogang University, Korea

G6-1462 Effect of Size on Multiferroic $SmMn_2O_5$ Nanorods

Ting-Wei Hsu[1], Chun-Chuen Yang[1], Chuen-Yang Chu[1], Yung-Hsiang Tung[1], Cheng-Wei Kao[1], Wei-Chun Wu[1], Kuen-Song Lin[2]
[1]Chung Yuan Christian University, Taiwan, [2]Yuan Ze University, Taiwan

G6-1558 Voltage-controllable Colossal Magnetocrystalline Anisotropy in Single-layer Transition Metal Dichalcogenides

Xuelei Sui[1, 2], Jianfeng Wang[1, 2], Wenhui Duan[2], Mao-Sheng Miao[1, 3]
[1]Beijing Computational Science Research Center, China, [2]Tsinghua University, China, [3]California State University Northridge, USA

G6-2008 Structural and Magnetic Properties of Epitaxial $FeMn_2O_{4\pm\delta}$ Film on MgO(100)
Duong Van Thiet[1], Dang Duc Dung[2], Duong Anh Tuan[1], Sunglae Cho[1]
[1]University of Ulsan, Korea, [2]Ha Noi University of Science and Technology, Vietnam

G7-1. Soft/Hard Magnetic Materials and Their Applications

17:00-18:30, June 6 (Wed.) *Lobby (8F)*

Chair Hyojun Kim (JAHWA Electronics Co. Ltd, Korea)

G7-0830 The Effect of Ce-Mn Substitution on the Hard Magnetic Properties of M-type Sr-hexaferrites
Young-Min Kang
Korea National University of Transportation, Korea

G7-0833 Synthesis and Magnetic Properties of Z-type Sr_3Co_2-xZnx$Fe_{24}O_{41}$ Hexaferrites
Min-Hyeok Park, Young-Min Kang
Korea National University of Transportation, Korea

G7-1165 Electronic Structure and Magnetic Property of Ni-doped $ZnFe_2O_4$ Nanoparticles
Ngo Tran, Deok Hyeon Kim, Hyun Sung Kim, The-Long Phan, Bo Wha Lee
Hankuk University of Foreign Studies, Korea

G7-1167 Exchange Coupled Fe-Ni/$Fe_{22}Ni_{78}$ Multilayered Films Prepared by an Electroplating Method
Junichi Kaji, Hideyuki Aramaki, Kazuki Kouda, Kazuki Eguchi, Keisuke Takashima, Takeshi Yanai, Masaki Nakano, Hirotoshi Fukunaga
Nagasaki University, Japan

G7-1246 Effect of Copper Contents on the Magnetic Properties of Cu-substituted $SmCo_5$ Nanofiber: A Novel Structure Based on Electrospinning
Jimin Lee, Tae-yeon Hwang, Min Kyu Kang, Jongryoul Kim, Yong-Ho Choa
Hanyang University, Korea

G7-1294 Influence of Rare Earth Elements on Phase Formation and Magnetocaloric Effect of Fe-Zr Alloys
Dan Nguyen[1], Yen Nguyen[1], Ha Nguyen[2], Thanh Pham[1], Ngoc Nguyen[1], Thanh Tran[1], Hau Kieu[3], Dong Huyn Kim[3], Seong Cho Yu[3]
[1]Vietnamese Academy of Science and Technology, Vietnam, [2]Hong Duc University, Vietnam, [3]Chungbuk National University, Korea

G7-1456 Effects of Nitrogen Partial Pressure on Magnetism in Annealed (110) Fe Films
Gowoon Kim[1], Eunyoung Ahn[1], Hyeonjun Kong[1], Jaekwang Lee[1], Youn-Kyoung Baek[2], Hyoungjeen Jeen[1]
[1]Pusan National University, Korea, [2]Korea Institute of Materials Science, Korea

G7-1490 High-speed Plating of Fe Films Using DES-based Plating Baths
Takeshi Yanai, Tomoki Yamaguchi, Masaki Nakano, Hirotoshi Fukunaga
Nagasaki University, Japan

G7-1494 Fe-Ni Thin Ribbons Prepared Using an Electroplating Method
Takeshi Yanai, Kazuki Koda, Junichi Kaji, Hideyuki Aramaki, Masaki Nakano, Hirotoshi Fukunaga
Nagasaki University, Japan

G7-1669 Influence of Pr-Co Substitution on the Structural and Dielectric Properties of Barium Hexaferrite
Zubida Habib, Mohd IKram
National Institute of Technology, India

G7-1723 Synthesis of High Purity Iron Nitrtide Particles with Tunable Sphere Structures
Youn-Kyoung Baek, Su Gyeong Kim, Jung-Goo Lee
Korea Institute of Materials Science, Korea

G7-1733 Mössbauer Studies of $BaCoZnFe_{16}O_{27}$ W-type Hexaferrite
Jeonghun Kim, Jung Tae Lim, Hyunkyu Kim, Chul Sung Kim
Kookmin University, Korea

G7-1753 Magnetic and Thermal Properties of Fe_3O_4@MFe_2O_4 (M=Zn, Al) Nanoparticles Investigated by Mössbauer Spectroscopy
Hyunkyung Choi, Sam Jin Kim, Chul Sung Kim
Kookmin University, Korea

G7-1768 Magnetization-reversal Process for Various Distributions of Different Grain Orientations in Granular Nd-Fe-B Magnets: A Finite-element Micromagnetic Simulation Study
Shinwon Hwang, Jae-Hyeok Lee, Sang-Koog Kim
Seoul National University, Korea

G7-1784 Synthesis and Magnetic Properties of α"-$(Fe,Co)_{16}N_2$ Nanoparticles Obtained Hydrogen Reduction of α-(Fe,Co)OOH and Subsequent Nitrogenation
Masahiro Tobise, Shin Saito
Tohoku University, Japan

G7-1994 Effects of Defects on Magnetism and Magnetocrystalline Anisotropy of $L1_0$-MnAl
Gi-Beom Cha, Soon Cheol Hong
University of Ulsan, Korea

G7-1995 Magnetism and Magnetocrystalline Anisotropy of $L1_0$-MnAl(001) Film
Gi-Beom Cha, Soon Cheol Hong
University of Ulsan, Korea

G7-2004 Tuning Transport and Magnetic Properties of $Co_xFe_{3-x}O_4$ Thin Films by Co Content
Nguyen Van Quang[1], Shin Yooleemi[2], Duong Anh Tuan[1], Cho Sunglae[1], Christian Meny[2]
[1]University of Ulsan, Korea, [2]Institute of Physics and Chemistry for Materials of Strasbourg, France

G7-2037 Variation of the Magnetic and Thermal Properties of Fe-Co-Zr-Ta-B Amorphous Alloy System by Changing the Ratio of Fe to Co
Haein Yim
Sookmyung Women's University, Korea

G8-1. Energy Applications of Magnetic Materials

17:00-18:30, June 6 (Wed.) *Lobby (8F)*

Chair Gwan Soo Park (Pusan National University, Korea)

G8-0158 Rotor Open-rib Design for Power Density Improvement in Synchronous Reluctance Motor
Jae-Kwang Lee, Jongsuk Lim, Dong-Hoon Jung, Ju Lee
Hanyang University, Korea

G8-0410 Magnetic Flux Estimation for Interior Permanent Magnet Synchronous Motor by Using MRAC
Hanwoong Ahn, Hyun-jong Park
Korea Aerospace Research Institute, Korea

G8-1270 A Study on the Optimal Design of Slot-less Permanent Magnet Motor Using Response Surface Method
Dong-Hoon Jung, Jae-Kwang Lee, Gang Seok Lee, Ju Lee
Hanyang University, Korea

G8-1420 Design and Optimization of Axial Magnetic Field Coreless Permanent Magnet Motor
Xue Li, Fugui Liu, Shaopeng Wang, Bo Li
Hebei University of Technology, China

G8-1452 Analysis of Eddy Current Braking System Used in High-speed Maglev Train
Chuntao Chen[1], Jie Xu[2], Xiaoqin Zheng[1], Xinzhen Wu[1]
[1]Qingdao University, China, [2]Naval University of Engineering, China

G8-1528 Electromagnetic Analysis of Magnetic Polarity Distribution for a Dual-rotor Switched Reluctance Machine
Xing Wang, Rui Nie, Hao Chen, Haiying Wang
China University of Mining and Technology, China

G8-1529 Multi Objective Optimization Design of Dual-stator Switched Reluctance Motor
Xing Wang, Rui Nie, Hao Chen
China University of Mining and Technology, China

G8-1581 Analysis of Torque Characteristics According to Non-uniform Air Gaps of Coaxial Magnetic Gear
Eui-Jong Park[1], Chan-Seung Kim[1], Sang-Yong Jung[2], Yong-Jae Kim[1]
[1]Chosun University, Korea, [2]Sungkyunkwan University, Korea

G8-1584 Vibration Analysis, Calculation, and Reduction in Surface-mounted Permanent Magnet Motor
Jianfeng Hong, Shanming Wang, Yuguang Sun, Haixiang Cao
Tsinghua University, China

G8-1597 Development of a Database of Soft Magnetic Material for Computational Electromagnetics
Junquan Chen, Dong Wang, Yapeng Jiang, Xuan Teng, Siwei Cheng, Xiaoqin Zheng
PLA Naval University of Engineering, China

G8-1628 Torque Maximization Method of Radial Magnetized Surface-mounted PM Machine Having Sinusoidal Shaped Pole

Pengfei Hu[1], Dong Wang[1], Shuangjiang Zhuang[1], Nan Lin[1], Shuanbao Jin[1], Yingsan Wei[1], Hao Zhu[1], Xingyu Wu[1], Xiaoqin Zheng[2]

[1]PLA Naval University of Engineering, China, [2]Qingdao University, China

G8-1702 Study of Impact of Poloidal Coil Current Disturbance on Tokamak Plasma Shape

Yuanyang Chen[1], Xiaohua Bao[1], Wei Xu[1], Ge Gao[2]

[1]Hefei University of Technology, China, [2]Institute of Plasma Physics, Chinese Academy of Sciences, China

G8-1743 Design of Dual Skewed Rotor in Induction Motors for Reducing Synchronous Parasitic Torque

Wei Xu, Xiaohua Bao, Jinlong Fang, Chunyu Wang

Hefei University of Technology, China

G8-1798 Analysis of Core Loss for Three-phase Induction Machines with Single-double Layer Star-delta Winding

Zechen Li, Xiaohua Bao, Wei Xu

Hefei University of Technology, China

G8-1803 Investigation of Starting Torque of Submersible Motor with Rotor's Fan-shaped Slices Connected by Stainless Steel Weldment

Shuai Cheng, Xiaohua Bao, Wei Xu

Hefei University of Technology, China

G8-1812 Development and Experimental Study on Agile Frequency Electromagnetic Anti-scaling Device

Ye Zhang, Tianyi Sun, Shengxian Cao, Gong Wang, Zhenhao Tang

Northeast Electric Power University, China

G8-1857 Performance Comparison of Amorphous and Silicon-steel Permanent Magnet Synchronous Motors Used in Steering Pump of Electric Vehicle

Ruifang Liu, Xin Ma, Junci Cao, Zhigang Wu

Beijing Jiaotong University, China

G8-1935 Comparison of Electromagnetic Vibration and Noise of Amorphous Alloy PMSMs and Silicon Steel PMSMs

Shengnan Wu, Wenming Tong, Ruolan Sun, Renyuan Tang

Shenyang University of Technology, China

G8-1941 A Transverse Flux Single-phase Tubular Switched Reluctance Linear Motor with Two Stator Poles

Hao Chen, Haiying Wang, Rui Nie

China University of Mining and Technology, China

G8-2108 Dependance of Stator Inductance on Temperature Variation in AQDM Based Induction Motor Drive

Chun-Ki Kwon

Soonchunhyang University, Korea

G4. Magnetization Dynamics

13:30-14:30, June 7 (Thur.) *Lobby (8F)*

Chair Ki-Suk Lee (Ulsan National Institute of Science and Technology, Korea)

G4-0203 The Influence of "Injected" and "Thermal" Magnons on Magnon-magnon Drag in Pt/Yig/Pt Structures
Igor Lyapilin
Institute of Metal Physic, Russian Academy of Sciences, Russia

G4-0763 Distinct Stochasticities between Ferromagnetic Domain-wall Motions Driven by Magnetic Field and Electric Current
Yune-Seok Nam[1], Dae-Yun Kim[1], Min-Ho Park[1], Yong-Keun Park[1], Joo-Sung Kim[1], Duck-Ho Kim[2], Byoung-Chul Min[3], Sug-Bong Choe[1]
[1]Seoul National University, Korea, [2]Kyoto University, Japan, [3]Korea Institute of Science and Technology, Korea

G4-0809 Spin Accumulation on Cu Driven by Ultrafast Demagnetization of Fe, Co, and Ni
Im Hyuk Shin[1], Gyung Min Choi[2]
[1]Korea Institute of Science and Technology, Korea, [2]Sungkyunkwan University, Korea

G4-1258 Domain Wall Ratchet Effect by Out-of-plane AC Magnetic Field in Sawtooth-shaped Ferromagnetic Nanowires
XiaoPing Ma[1], Hong-Guang Piao[2], Dong-Hyun Kim[2]
[1]Chungbuk National University, Korea, [2]China Three Gorges University, China

G4-1477 Vortex-chirality Induced Standing Spin-wave Modes in Soft Magnetic Nanotubes
Jaehak Yang, Junhoe Kim, Bosung Kim, Young-Jun Cho, Jae-Hyeok Lee, Sang-Koog Kim
Seoul National University, Korea

G4-1480 Vortex-polarity Switching in Magnetic-dot Arrays by Gyration Signals
Young-Jun Cho, Junhoe Kim, Jae-Hyeok Lee, Jaehak Yang, Bosung Kim, Sang-Koog Kim
Seoul National University, Korea

G4-1489 Temperature Dependence of Magnetic Properties on GdFe Nanoparticles
Jaegun Sim, Jae-Hyeok Lee, Sang-Koog Kim
Seoul National University, Korea

G4-1771 Spin Dynamics Analysis Using Coplanar Waveguide for Magnetic Garnet Thin Film Fabricated by Metal Organic Decomposition Method
Takanori Akazawa, Hina Saito, Yuya Hironaka, Yoshito Ashizawa, Katsuji Nakagawa
Nihon University, Japan

G4-2033 Non-monotonic After-effect Measurements in Perpendicular Synthetic Ferrimagnets
Galina L'vova[1], Roman Morgunov[1], Thibaud Fache[2], Stephane Mangin[2]
[1]Institute of Problems of Chemical Physics of Russian Academy of Sciences, Russia, [2]University de Lorraine, France

G7-2. Soft/Hard Magnetic Materials and Their Applications

13:30-14:30, June 7 (Thur.) *Lobby (8F)*

Chair Jung-Goo Lee (Korea Institute of Materials Science, Korea)

G7-0195 Synthesis and Magnetorheology of Zinc-doped Spinel Ferrite Nanoparticles with Controlled Morphology and Magnetic Property
Jae Kyeong Han, Hyoung Jin Choi
Inha University, Korea

G7-0197 PDPA Coated Carbonyl Iron Composite Magnetic Particles and Their Viscoelastic Characteristics under Magnetic Field
Jin Hee Lee, Hyoung Jin Choi
Inha University, Korea

G7-0216 Polyindole Coated Soft-magnetic Particles and Their Viscoelastic Behaviors under Applied Magnetic Field
In Hye Park[1], Seung Hyuk Kwon[1], Hyoung Jin Choi[1], Nam Hui Kim[2], Chun Yeol You[2]
[1]Inha University, Korea, [2]Daegu Gyeongbuk Institute of Science & Technology, Korea

G7-0223 Fabrication of Magnetite Nanoparticle-embedded Polystyrene Composites and Their Additive Role on Dynamic Properties of Carbonyl Iron-based Magnetorheological Fluid
Qi Lu[1], Chun Yan Gao[1], Hyoung Jin Choi[1], Nam Hui Kim[2], Chun Yeol You[2]
[1]Inha University, Korea, [2]Daegu Gyeongbuk Institute of Science & Technology, Korea

G7-0240 Characterization of Ca-La M-type Hexaferrites in Iron Deficiency
KnagHyuk Lee, Wei Yan, Sang-Im Yoo
Seoul National University, Korea

G7-0247 The Effect of Alumina Insulation Coating on the Magnetic Properties of Fe Powder
SungJoon Choi, Sunwoo Lee, Jae-Hyoung Yoo, Sang-Im Yoo
Seoul National University, Korea

G7-0260 Controllable Electrical Conduction Characteristics in Amorphous Ferromagnetic Alloys
Cheng Chen[1], Sumin Kim[2], Hong-Guang Piao[1], Haein Yim[2], Dong-Hyun Kim[3]
[1]China Three Gorges University, China, [2]Sookmyung Women's University, Korea, [3]Chungbuk National University, Korea

G7-0262 Magnetocaloric Effect in Ni-doped LaFeCoSiB Alloys
Zhihao Wang[1], Yingde Zhang[2], Cheng Chen[1], Guangduo Lu[1], Hong-Guang Piao[1], Seong-Cho Yu[3]
[1]China Three Gorges University, China, [2]Baotou Research Institute of Rare Earths, China, [3]Chungbuk National University, Korea

G7-0489 Performance Analysis of High Speed Motor for Electric Turbo Charger Considering Several Cores
Do-Kwan Hong[1, 2], Yeon-Ho Jeong[1], Min-Hyuk Ahn[1], Ji-Won Kim[1, 2], Byung-Chul Woo[1]
[1]Korea Electrotechnology Research Institute, Korea, [2]University of Science & Technology, Korea

G7-0512 Characterization of Rare-earth Element Substitution in M-type Hexagonal Ca-La-Co Substituted Strontium Ferrites by the Ceramic Process

Namji Oh[1, 2], Seungyeon Park[1], Yongwan Kim[3], Hyukmin Kwon[3], Sangsub Kim[2], Kyoungmook Lim[1]
[1]Korea Institute of Industrial Technology, Korea, [2]Inha University, Korea, [3]Ugimag Korea, Korea

G7-0514 Effect of Zr and Nb on the Electrical and Magnetic Properties of Fe-Zr-Nb-B-Cu Alloy

Junghyun Noh[1, 2], Seungyeon Park[1], Haejin Hwang[2], Kyoungmook Lim[1]
[1]Korea Instituted of Industrial Technology, Korea, [2]Inha University, Korea

G7-0750 Preparation of $Sm_2Fe_{17}Nx$ by High Pressure N_2 Nitridation and Sm_2Fe_{17} by Diffusion Process

Xiaofei Xiao[1], Pingzhan Si[1], Hongliang Ge[1], Chul-Jin Choi[2]
[1]China Jiliang University, China, [2]Korea Institute of Materials Science, Korea

G7-0870 Magnetic Properties of MnAlC Magnetic Materials

Sumin Kim[1], Minyeong Choi[2], Yang-Ki Hong[2], Hyun-Sook Lee[1], Wooyoung Lee[1]
[1]Yonsei University, Korea, [2]The University of Alabama, USA

G7-0886 Fe-Hf-B-P-Nb-C Amorphous Soft Magnetic Powders Fabricated through High-pressure Gas Atomization

Jae Won Jeong[1], Dong-Yeol Yang[1], Ki Bong Kim[1], Tae-Soo Lim[1], Sangsun Yang[1], Min Ha Lee[2], HwiJun Kim[2], Yong-Jin Kim[1]
[1]Korea Institute of Materials Science, Korea, [2]Korea Institute of Industrial Technology, Korea

G7-0980 Coercivity Enhancement of Nd-Fe-B Powders by the Grain Boundary Diffusion of Tb Plus Cu Mixture

Sang Hyup Lee, Hyo Jun Kim
JAHWA Electronics Co. Ltd, Korea

G7-0986 Synthesis and Magnetic Properties of Samarium Cobalt Particles Using Modified Spray Pyrolysis–calcination and Reduction-diffusion Process

Tae-yeon Hwang, Jimin Lee, Gwang-myeong Go, Yong-Ho Choa
Hanyang University, Korea

G7-1033 The Mechanical and Hydrogen Absorption Properties Response in Melt-Spun Ti-Zr-Ni-Cr Amorphous Ribbons

Jianxin Wang, Xiaochen Wang, Bing Jiang, Chengyuan Qian, Lingfeng Xu, Guangqing Wang, Xueling Hou
Shanghai University, China

G7-1047 Effect of RE Substitution on Magnetic Properties of $Nd_2Fe_{14}B$ Particles Produced by Spray Drying Followed by Reduction-diffusion Process

Vitalii Galkin[1, 3], Kamran Haider[1, 4], Jongbin Ahn[1, 2], Oleg Tolochko[3], Dongsoo Kim[1, 2]
[1]Korea Institute of Geoscience and Mineral Resources, Korea, [2]Korea Institute of Materials Science, Korea, [3]Peter the Great St. Petersburg Polytechnic University, Russia, [4]Sogang University, Korea

G7-1054 Effect of Na Ion Concentration on Coercivity of Electroplated Fe-Pt Film-magnets

Junya Honda, Ryo Hamamura, Yuya Omagari, Keisuke Takashima, Takeshi Yanai, Masaki Nakano, Hirotoshi Fukunaga
Nagasaki University, Japan

G7-1065 Electroplated Fe-Pt Film-magnets with Smooth Surface and High Coercivity
Yuya Omagari, Junya Honda, Ryo Hamamura, Keisuke Takashima, Takeshi Yanai, Masaki Nakano, Hirotoshi Fukunaga
Nagasaki University, Japan

G7-1083 Rare-Earth-Free Permanent Magnets : MnBi Bulks and Thin Films
Sumin Kim[1], Hongjae Moon[1], Hwaebong Jung[1], Sumin Kim[2], Haein Kim[2], Hyun-Sook Lee[1], Wooyoung Lee[1]
[1]Yonsei University, Korea, [2]Sookmyung Women's University, Korea

G7-1115 Effect of Target Materials on Various Properties of PLD-fabricated Isotropic Nd-Fe-B Thick-film Magnets
Kazuyuki Uchida, Akihiro Yamashita, Takeshi Yanai, Masaki Nakano, Hiritoshi Fukunaga
Nagasaki University, Japan

G7-1135 Tunable Magnetocaloric Properties of Ti-Zr-Ni-Cr Amorphous Ribbons via V Additions
Bing Jiang, Xiaochen Wang, Jianxin Wang, Lingfeng Xu, Chengyuan Qian, Guangqing Wang, Xueling Hou
Shanghai University, China

G7-1141 Effect of Ge Addition on the Magnetic Properties of FePCGe Amorphous Alloys
Sumin Kim[1], Lin Huang[2], Dong-Hyun Kim[2], Haein Yim[1]
[1]Sookmyung Women's University, Korea, [2]Chungbuk National University, Korea

G7-2101 Fabrication of Anisotropic Bulk Magnet from HDDR Powder
Ga-Yeong Kim[1, 2], Jae-Kyeong Yoo[1, 2], Hee-Ryoung Cha[3], Youn-Kyoung Baek[1], Hae-Woong Kwon[4], Yang-Do Kim[2], Jung-Goo Lee[1]
[1]Korea Institute of Materials Science, Korea, [2]Pusan National University, Korea, [3]National Institute of Advanced Industrial Science and Technology, Japan, [4]Pukyoung National University, Korea

G7-2113 Magnetic and Microwave Properties of Hydrothermal Mg-Zn Spinel Ferrite Nanoparticles
Yi-Chun Chiu, Chien-Yie Tsay
Feng Chia University, Taiwan

G7-2126 Fe-based Soft Magnetic Amorphous Alloys
Haein Yim
Sookmyung Women's University, Korea

G8-2. Energy Applications of Magnetic Materials

13:30-14:30, June 7 (Thur.) *Lobby (8F)*

Chair Haein Yim (Sookmyung Women's University, Korea)

G8-0184 Development of Gd-Co-based Amorphous and Nanocrystalline Alloys Used as Magnetic Refrigeration Materials
Yeabin Moon[1], Jin Kyu Lee[2], Hyo-Soo Lee[3], Ki Buem Kim[1]
[1]Sejong University, Korea, [2]Kongju National University, Korea, [3]Korea Institute of Industrial Technology, Korea

G8-0196 A Torque Compensation Control Scheme of PMSM Considering Wide Variation of Permanent Magnet Temperature

Suyeon Cho
Korea Automotive Research Institute, Korea

G8-0244 A Study on the Design of IPMSM for Reliability of Demagnetization Characteristics-based Rotor

Geochul Jeong[1], Gang-Seok Lee[1], Chang Sung Jin[2], Sung Chul Go[3], Ju Lee[1]
[1]Hanyang University, Korea, [2]Hanwha Techwin, Korea, [3]Samsung Electronics Co., Ltd., Korea

G8-0273 Design Strategy of Magnetizer for Post-assembly Magnetization of Spoke-type Ferrite Magnet Motor

Hyun-Soo Seol[1], Hyun-Woo Jun[1], Gang Seok Lee[1], SangJun Ko[1], Dong-Woo Kang[2], Ju Lee[1]
[1]Hanyang University, Korea, [2]Keimyung University, Korea

G8-0304 Characteristics of Novel Outer Rotor Fan-type PMSM for Improving Power Density and Efficiency

Sooyoung Cho[1], Gang Seok Lee[1], Sang-hwan Ham[2], Ju Lee[1]
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Launched in 2004 as an institute for national policy, DIGST has become a university focusing on the fusion researches having the functions of research and education at the same time by establishing the master and doctor's course and aims to become No.1 university of the fusion researches in the world.

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LDJIM
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Daegu Gyeongbuk Institute of Science and Technology (DGIST) and Lawrence Berkeley National Laboratory (LBNL) have launched a joint research center based on the agreement of international cooperation between the two institutes in December 2012. By establishing a highly cooperative joint research center, we pursue the development of multi-functional hybrid materials including quantum materials, energy harvesting nanomaterials, and nanomagnetic materials for the next generation technologies. The vision of DGIST-LBNL Joint Research Center is the establishment of a new global hub for emerging materials science in South Korea. To accomplish the goal, researchers at DGIST and LBNL are working together in design and fabrication of functional hybrid materials, and the collaborative efforts are being made for complete material analyses in LBNL using the state-of-the art facilities with extreme spatial and temporal resolutions. Since the establishment in December 2012, DGIST-LBNL Joint Research Center have hosted 8 domestic and 6 international academic conferences. The research center has published more than 103 SCI papers in the high profile journals including nature communication, physical review letters, nano letters, etc.

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Center for Bio-Convergence Spin System (BiC Spin) is developing a new spin-based devices using spintronics technology. Spintronic technology is a technology that can overcome the functional limitations of existing devices considering electron charge and quantum mechanical characteristics. BiC Spin research center is a new paradigm research center that links to life sciences. This research center will develop bio-spintronics field for the diagnosis and treatment of several diseases. And, neuro-spintronics field to mimic human brain. In addition, BiC Spin is conducting research on the growth, physical properties and theoretical studies of new spin based materials, conducting fusion and convergence research through the combination of spin based materials and devices with life science.

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The Korea Institute of Science and Technology (KIST) is a science and technology institute working to bring better quality of life to all people by preparing for the future. KIST was founded as the first science and technology rerearch institute of Korea in 1966 and since then, it has continually played a leading role in national development.

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Korea Institute of Materials Science

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The institute is trying to contribute to securing national competitiveness for the next-generation by developing key technologies in the field of quantum technologies and achieving research excellence.

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IcAUMS 2018

The 5th International Conference of Asian Union of Magnetics Societies

KOFST Korean Federation of Science & Technology Societies

Publication of the proceedings was supported by the Korean Federation of Science and Technology Societies
Grant funded by the Korean Government.

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