Program & Contents (Oral Session)

Address: Zhongguanxinyuan Hotel of Peking University/北京大学中关新园宾馆

August 26, Sunday, 2018

13:00-21:00 Registration

Zhongguanxinyuan Hotel Building No.1（Lobby）/中关新园宾馆 1 号楼大厅

18:00-21:00 Welcome Reception

He-Yuan Restaurant/和园餐厅

>>>Room-I（Elites Banquet Hall/群英宴会厅）

August 27, Monday, 2018

8:30-9:30 Opening

8:30-8:45 Opening
Chair: **Jinbo Yang** *(State Key Laboratory for Mesoscopic Physics, School of Physics, Peking University, Beijing, P. R. China)*

8:45-9:30
Chair: **Ming Yue** *(College of Materials Science and Engineering, Beijing University of Technology, Beijing, China)*

(Invited) [A0667] Prospects for Rare Earth Permanent Magnets
J. M. D. Coey
(School of Physics and CRANN, Trinity College, Dublin 2, Ireland.)

9:30-10:00 Conference Photo & Coffee Break

10:00-12:15 [Room I]

Chair: **Oliver Gutfleisch** *(Funktionale Materialien, Institut für Materialwissenschaft, TU Darmstadt, Alarich-Weiss-Str. 16, D-64287 Darmstadt, Germany)*

Minggang Zhu (*Division of Functional Materials, Central Iron and Steel Research Institute, Beijing 100081, China)*

10:00-12:15[Room I] NdFeB: processing & properties 1

10:00-10:30

(Invited) [A0269] The ultimate production technology of Nd-Fe-B sintered magnets: advancements and exemplifications

M. Sagawa, K. Isogai and Y. Koyama

(NDFEB Corporation, 1-36 Goryo Ohara, Nishikyoku, Kyoto615-8245, Japan)

10:30-10:45

[A0654] Corrosion behaviors of Nd-Ce-Fe-B sintered magnets with (Nd,Pr)H_x grain boundary restructuring

Xinhua Wang, Zeyu Qian, Tianyu Ma, Jiaying Jin, Mi Yan**

(State Key Laboratory of Silicon Materials, School of Materials Science and Engineering, Key Laboratory of Novel Materials for Information Technology of Zhejiang Province, Zhejiang University, Hangzhou 310027, China)

10:45-11:00

[A0691] Optimizing the La, Tb, Nb and Ga Substitutions in NdFeB Magnets Using Taguchi Design of Experiments

Waleed Khalifa

(Faculty of Engineering, Cairo University, 12613 Giza, Egypt)

11:00-11:30

(Invited) [A0715] Heavy rare earth free, free rare earth and rare earth free magnets - vision and reality

Oliver Gutfleisch

(Institut für Materialwissenschaft, Technische Universität Darmstadt, D-64287 Darmstadt, Germany)

11:30-11:45

[A0655] Improved Ductility of Hydrogen Ductilisation Processed (HyDP) NdFeB material

O. Brooks[(a)], W. Zhou[(a)], J. Stoneham[(a)], A. Walton[(a)] and I.R. Harris[(a)]

([(a)]School of Metallurgy and Materials,College of Engineering and Physical Sciences,University of Birmingham, UK)

11:45-12:00
[A0618] Effects of La substitution on the structure and intrinsic magnetic properties of Ce-Fe-B alloy
*Zhi LI, Zhipeng ZHANG, Weiqiang LIU, Yuqing LI, Hongguo ZHANG, Ming YUE**
(College of Materials Science and Engineering, Beijing University of Technology, Beijing 100124, China)

12:00-12:15
[A0091] δ phase in Ga and Cu dopped sintered Nd-Fe-B magnets and related $Nd_{30}Fe_{65}(Ga,Cu)_5$ alloys
Xiao-Yu. Gao, Wei. Zhu, E Niu, Fei. Du, Xuan-Zhang. Ye, Zhan. Wang, Xiao-Lei. Rao, Bo-Ping. Hu
(Beijing Zhong Ke San Huan Research, Beijing 102200, China)

14:00-15:30 [Room I]

Chair: **Deng Fang** *(Motor Drive Technology, Electronics and Electrical Systems,Whirlpool Corporation, Benton Harbor, Michigan, USA)*

14:00-15:30 [Room I] Magnet applications 1

14:00-14:30
(Invited) [A0716] Creating a Future Where Every Motor is a Permanent Magnet Motor
John Petro
(Petro and Associates，USA)

14:30-14:45
[A0632] High performance magnets for undulator applications
C. Brombacher[(a)], K. Üstüner[(a)], F.-J. Börgermann[(a)], M. Katter[(a)]
Vacuumschmelze GmbH & Co. KG, Hanau, Germany)

14:45-15:15
(Invited) [A0148] Magnetic Force Equation for Rare Earth Magnets and the Effect of Load Line
Christina H Chen [(a,c)], Hui Meng [(b)], and Min Fan [(a)]
([(a)]Quadrant at San Jose, CA 95131, USA,[(b)]Quadrant at Hangzhou, Zhejiang, China,[(c)]Magnet Energy LLC, San Jose, CA 95131, USA)

15:15-15:30
[A0414] Magnetic Materials for Motors of Electric Cars
Marcos Flavio de Campos[(a)]
)Department of Mechanical Engineering,Av. dos Trabalhadores 420, 27255-125, Universidade

Federal Fluminense, Volta Redonda, RJ, Brazil)

15:45-16:00 Coffee Break

August 28, Tuesday, 2018

8:30-12:15 [Room I]

Chair: **HW Kwon** (*Pukyong National University, Busan, Republic of Korea 48513)*
K. Hono *(Elements Strategy Initiative Center for Magnetic Materials, National Institute for Materials Science (NIMS), Tsukuba, Japan)*

8:30-10:15 [Room I] NdFeB: processing & properties 2

8:30-9:00
(Invited) [A0699] Rare earth permanent magnets with ultimate hard magnetic properties
K. Hono
(Elements Strategy Initiative Center for Magnetic Materials, National Institute for Materials Science (NIMS), Tsukuba, Japan)

9:00-9:15
[A0381] Temperature Stability of Sintered and Die-Upset R–Fe–B Magnets Made With (Ce, La)-Mischmetal
A.M. Gabay[(a)], G.C. Hadjipanayis[(a)], W.F. Li[(b)]
([(a)]University of Delaware, Newark, DE 19716, USA,[(b)]Ford Motor Company, Dearborn, MI 48121, USA)

9:15-9:30
[A0484] Micromagnetic studies on the coercivity of heavy rare-earth diffusion processed Nd-Fe-B hot-deformed magnets
J. Li[a], H. Sepehri-Amin[a], Lihua Liu[a,b], T. Ohkubo[a], T. Schrefl[c], K. Hono[a]
([a] Elements Strategy Initiative Center for Magnetic Materials, National Institute of Materials Science, Tsukuba 305-0047, Japan,[b] Graduate School of Pure and Applied Science, University of Tsukuba, Tsukuba 305-8577, Japan,[c] Department of Integrated Sensor Systems, Danube University Krems, 2700 Wiener Neustadt, Austria)

9:30-9:45
[A0579] Recycling Nd-Fe-B sludges as sintered magnets through calcium reduction-diffusion process
Xiaowen Yin[1], Chen Cheng[1], Min Liu[1], Weiqiang Liu[1,2], Ming Yue[1,2], Xiaofei Yi[2,3]*
([1] College of Material Science and Engineering, Beijing University of Technology, China,[2] State Key Laboratory of Rare Earth Permanent Magnetic Materials, Hefei, 231500, China,[3] Anhui Earth-Panda Advance Magnetic Material Co., Ltd., Hefei, 231500, China)

9:45-10:00

[A0570] Experimental electron density of $Nd_2Fe_{14}B$ from X-ray diffraction

H. Okazaki[(a,b)], D. Billington[(a,b)], S. Kawaguchi[(a)], K. Sugimoto[(a)], K. Toyoki[(a,b)], N. Tsuji[(a)], W. Ueno[(a,b)], S. Hirosawa[(b)], and T. Nakamura[(a,b)]

([(a)]Japan Synchrotron Radiation Research Institute, SPring-8, 1-1-1 Kouto, Sayo,679-5198, Japan,[(b)]Elements Strategy Initiative Center for Magnetic Materials (ESICMM), National Institute for Materials Science, Tsukuba 305-0047, Japan)

10:00-10:15

[A0393] Enhanced coercivity through grain boundary and Tb distribution optimization of sintered Nd-Fe-B magnets by TbH_2 grain boundary diffusion with Al aiding

Jinghui Di [(a,b)], Guangfei Ding [(a)], Xiao Yang [(a,b)], Xuejing Cao [(a)], Shuai Guo [(a)], Renjie Chen [(a)], Aru Yan [(a)]

([(a)]Ningbo Institute of Material Technology and Engineering, Chinese Academy of Sciences, Ningbo, Zhejiang, China ,[(b)]University of Chinese Academy of Sciences, Beijing, China)

10:15-10:30 Coffee Break

10:30-12:00 [Room I] NdFeB: processing & properties 3

10:30-11:00

(Invited) [A0543] Electrical resistivity and demagnetization characteristics of salt-added Nd-Fe-B-type magnet

H. W. Kwon[a], K. M. Kim[a], M. S. Kang[a], D. Wu[b], M. Yue[b], J. G. Lee[c], and J. H. Yu[c]

([a] Pukyong National University, Busan, Republic of Korea 48513,[b] Beijing University of Technology, Beijing, China 100124,[c] Korea Institute of Materials Science, Changwon, Republic of Korea 51508)

11:00-11:15

[A0413] Atomistic model approach to Nd-Fe-B permanent magnets

M. Nishino[(a,b)], Y. Toga[(a)], T. Hinokihara[(a,c)], T. Miyake[(a,d)], A. Sakuma[(a,e)], S.Miyashita[(a,c)]

([(a)]Element Strategy Initiative Center for Magnetic Materials (ESICMM), National Institute for Materials Science, Tsukuba, Ibaraki, Japan,[(b)]International Center for Materials Nanoarchitectonics, National Institute for Materials Science, Tsukuba, Ibaraki, Japan,[(c)]Graduate School of Science, The University of Tokyo, 7-3-1 Hongo, Bunyo-ku, Tokyo 113-8656, Japan,[(d)]CD-FMat, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Ibaraki 305-8568, Japan,,[(e)]Department of Applied Physics, Tohoku University, Sendai, 980-8579 Japan)

11:15-11:30

[A0030] Enhanced formation of 2:14:1 phase by Nd substitution of La-based permanent magnets

X.F. Liao, L.Z. Zhao, J.S. Zhang, Z.W. Liu

(School of Materials Science and Engineering, South China University of Technology, Guangzhou

510640, People's Republic of China)

11:30-11:45
[A0016] Coercivity enhancement and microstructure optimization by grain boundary diffusion process of low melting point Pr-Al-Cu alloys
*H. X. Zeng, Z. W. Liu**
(School of Materials Science and Engineering, South China University of Technology, Guangzhou 510640, China)

11:45-12:00
[A0469] Improved coercivity and squareness in hot-deformed magnets with respect to sintered magnet with the same chemical composition
X. D. Xu, T.T. Sasaki, M. Soderžnik, H. Sepehri-Amin, T. Ohkubo, K. Hono
(Elements Strategy Initiative Center for Magnetic Materials (ESICMM), National Institute for Materials Science, 1-2-1 Sengen, Tsukuba, 305-0047, Japan)

14:00-18:00 [Room I]

Chair: **Christina Chen** (*Quadrant at San Jose, CA 95131, USA*)
G. P. Zhao *(College of Physics and Electronic Engineering, Sichuan Normal University, Chengdu 610101, China)*

14:00-15:30 [Room I] Magnet applications 2

14:00-14:30
(Invited)[A0733] PM e-Motors and PM Materials for Automotive Electrification Applications
Wei Cai
(Jing-Jin Electric Technologies (Beijing) Co. Ltd., Beijing, 100016, China)

14:30-14:45
[A0334] State-of-the-Art Magnet Technology to Obliterate Boundaries in Science and Medicine
Heeju Choi, Lori Haley, Jinfang Liu
(Electron Energy Corporation, 924 Links Avenue, Landisville, PA 17538, USA)

14:45-15:15
(Invited) [A0721] Quantification of Permanent Magnet's Characteristics for Robust and Durable Large Permanent Magnet Machine Design and Development
Fang Deng, Ph. D.
(Senior Principal Engineer/ Engineering Director,Motor Drive Technology, Electronics and Electrical Systems,Whirlpool Corporation, Benton Harbor, Michigan, USA)

15:15-15:30

[A0456] Design of Smart Magnetic Devices

Hui Meng [(a)],Jason N Morgan [(b)], Qifeng Wei[(a)], and Christina H Chen [(c)]

([(a)]Quadrant at Hangzhou, Foresee Group, Zhejiang, China,[(b)]Correlated Magnetics Research, LLC., Huntsville, AL, USA,[(c)]Quadrant at San Jose, Foresee Group, CA 95131, USA)

15:45-16:00 Coffee Break

16:00-18:00 [Room I] Modeling & measurements 1

16:00-16:30

(Invited) [A0412] Computational Design of the Rare-Earth Reduced Permanent Magnets

Thomas Schrefl

T. Schrefl[(a)], A. Kovacs[(a)], J. Fischbacher[(a)], H. C. Herper[(b)], O. Y. Vekilova [(b)], P. Nieves[(c)], S. Arapan[(c)], S. Cuesta-Lopez[(c)]

([(a)]Department of Integrated Sensor Systems, Danube University Krems, Austria,[(b)]Department of Physics and Astronomy, Uppsala University, Uppsala, Sweden,[(c)] ICCRAM, University of Burgos, Burgos, Spain)

16:30-16:45

[A0288] Spin Dynamics of Strong Permanent Magnet $Nd_2Fe_{14}B$

P. Babkevich[(a)], M. B. Stone[(b)], T. N. Lamichhane[(c,d)], P. C. Canfield[(c,d)], and H. M. Ronnow[(a)]

([(a)]Laboratory for Quantum Magnetism, Institute of Physics, École Polytechnique Fédérale de Lausanne (EPFL), CH-1015 Lausanne, Switzerland,[(b)]Oak Ridge National Laboratory, Quantum Condensed Matter Division, Oak Ridge, Tennessee 37831, USA,[(c)]Ames Laboratory, U.S. Department of Energy, Ames, Iowa 50011, USA,[(d)]Department of Physics and Astronomy, Iowa State University, Ames, Iowa 50011, USA)

16:45-17:00

[A0225] Self-Demagnetisation Correction in Three-Dimensional Magnets

James Clewett[(b)], Jack Wade[(a)], Stuart Townley[(a)], Markus Mueller[(a)], Robin Cornelius[(b)], He Jian[(c)] and John Dudding[(b)]

([(a)]School of Mathematics, University of Exeter, UK.,[(b)]Hirst Magnetic Instruments, Falmouth, UK.,[(c)]National Institute of Metrology, Beijing, China.)

17:00-17:30

(Invited) [A0746] Design Consideration for Permanent Magnet Materials, a Micromagnetic View

Kai-Zhong Gao* and Yuepeng Zhang

(Argonne National Laboratory (ANL)，USA)

17:30-17:45

[A0319] Micromagnetic Simulations of Reversal Magnetization in Cerium-containing Magnets

L. Li, S. Z. Dong, R. Han, R. J. Jiang, D. Li, M. G. Zhu, W. Li

(Division of Functional Materials Research, Central Iron & Steel Research Institute, Beijing 100081, China)

17:45-18:00
[A0410] First-Principles Study on Stability and Magnetism of ZFe_{12} (Z from K to Rn) Compounds
Zhufeng Hou[(a)], Taro Fukazawa[(b)], Yosuke Harashima[(b,c)], KiyoyukiTerakura[(a)], and Takashi Miyake[(a,b,c)]
([(a)]CMI2, NIMS, Tsukuba,Ibaraki 305-0047, Japan,[(b)]CD-FMat, AIST, Tsukuba, Ibaraki 305-8568, Japan,[(c)]ESICMM, NIMS, Tsukuba,Ibaraki 305-0047, Japan)

19:00-20:30 [Room I] Panel discussion

Rare earth resourses and their highly efficient utilization
Chair: **Boping Hu**
Zhong Ke San Huan Hi-Tech Co., LTD，Beijing 100190，China

August 29, Wednesday, 2018

8:30-12:15 [Room I]

Chair: **Boping Hu** *(Zhong Ke San Huan Hi-Tech Co., LTD，Beijing 100190，China)*
W.C. Chang (*Department of Physics, National Chung Cheng University, Chia-Yi, 621 Chinese Taipei)*

8:30-10:15 [Room I]NdFeB: processing & properties 4

8:30-9:00
(Invited) [A0149] Evaluation of crystal-field and exchange parameters for the $R_1R_2Fe_{14}B$ intermetallics from the analysis of high-magnetic field behavior
N.V. Kostyuchenko[(1,2)], I.S. Tereshina[(3)], Y.Skourski[(4)], D.I. Gorbunov[(4)], E. Tereshina-Chitrova[(5)], A.V. Andreev[(5)], M. Doerr[(6)], G.A. Politova[(7)], A. K. Zvezdin[(1,8)]
([(1)] Moscow Institute of Physics and Technology (State University), Dolgoprudny, Moscow region, 9 Institutsky Per., 141700, Russia,[(2)] Institut für Festkörperphysik, Technische Universität Wien, Vienna, Austria,[(3)] Lomonosov Moscow State University, 119991 Moscow, Russia,[(4)]Hochfeld-Magnetlabor Dresden (HLD-EMFL), Helmholtz-Zentrum Dresden-Rossendorf, Dresden, Germany,[(5)] Institute of Physics CAS, Na Slovance 2, 18221 Prague, Czech Republic,[(6)] Institut für Festkörper- und Materialphysik, Technische Universität Dresden, D-01062 Dresden, Germany,[(7)] Baikov Institute of Metallurgy and Materials Science RAS, 119334 Moscow, Russia,[(8)] A. M. Prokhorov General Physics Institute of Russian Academy of Sciences, Moscow, 38 Vavilov Str., 119991, Russia)

9:00-9:15
[A0287] New processes for the production of fine-grained Nd-Fe-B powders with narrow particle size distribution
Z. Duan, F. Winter, W. Fernengel
([1]NETZSCH Trockenmahltechnik GmbH, Hanau, Germany)

9:15-9:30
[A0320] Engineering the microstructure of Nd-Fe-B strip-cast flakes by exploration the processing parameters
K. Opelt[(a)], T. Ahmad[(a)], O. Diehl[(a)], J. D. Rossa[(a)], J. Gassmann[(a)], R. Stauber[(a)] and O. Gutfleisch[(a)(b)].
([(a)] Magnetic Materials, Fraunhofer Project Group IWKS, 63457 Hanau, Germany,[(b)] Functional Materials, Technische Universität Darmstadt, 64287 Darmstadt, Germany)

9:30-10:00
(Invited) [A0210] Coercivity enhancement of hot deformed NdFeB magnets by doping low-melting RCu alloys (R=light rare earth elements)
H.W. Chang, Y.I. Lee, B.S. Liao, and W.C. Chang
Department of Physics, National Chung Cheng University, Chia-Yi, 621 Chinese Taipei)

10:00-10:15
[A0302] Microstructure and magnetic anisotropy with different HD conditions in d-HDDR process of Nd-Fe-B powders
M. Yamazaki[(a)(b)], T. Horikawa[(b)], M. Mishima[(b)], M. Matsuura[(a)], N. Tezuka[(a)]， S. Sugimoto[(a)]
([(a)]Department of Materials Science, Graduate School of Engineering, Tohoku University, 6-6-2, Aoba, Aramaki, Aoba-ku, Sendai, Miyagi, Japan,[(b)]Aichi Steel corporation, 1, Wanowari, Arao-machi, Tokai, Aichi, Japan)

10:15-10:30 Coffee Break

10:30-12:15 [Room I] NdFeB: processing & properties 5

10:30-11:00
(Invited) [A0717]China's Rare-earth Permanent Magnet Industry
Boping Hu
(Beijing Zhong Ke San Huan High-tech Co. Ltd., Beijing 100190, China)

11:00-11:15
[A0295] Relationship between the microstructure, coercivity, and inter-granular magnetic exchange-coupling in Ga-containing Nd-Fe-B sintered magnets
D. Billington[(a,b)], H. Okazaki[(a,b)], K. Toyoki[(a,b)], Y. Kotani[(a)], Y. Takada[(c)], T. Sato[(c)], Y. Kaneko[(c)], A. Kato[(d)], T.T. Sasaki[(b)], T. Ohkubo[(b)], K. Hono[(b)], and T. Nakamura[(a,b)]
([(a)]Japan Synchrotron Radiation Research Institute (JASRI), SPring-8, 1-1-1 Kouto, Sayo 679-5198,

Japan,[(b)]Elements Strategy Initiative Center for Magnetic Materials (ESICMM), National Institute for Materials Science, 1-2 Sengen, Tsukuba 305-0047, Japan,[(c)]TOYOTA CENTRAL R&D LABS., INC., Aichi 480-1192, Japan,[(d)]Advanced Material Engineering Division, Toyota Motor Corporation, 1200 Mishuku Susono, Shizuoka 410-1193, Japan.)

11:15-11:30
[A0611] In-situ observation on grain boundary diffusion process of Nd-Fe-B sintered magnet with ultrahigh performance
D. Wu[(a)], M. Yue[(a),(b)], W. Q. Liu[(a),(b)], Q. Wu[(a)], D. T. Zhang[(a)], Q. M. Lu[(a)], H. G. Zhang[(a)], Y. Q. Li[(a)], X. F. Yi[(b),(c)]*
([(a)]College of Materials Science and Engineering， Beijing University of Technology, Beijing, 100124, China,[(b)]State Key Laboratory of Rare Earth Permanent Magnetic Materials, Hefei, 231500, China,[(c)]Anhui Earth-Panda Advance Magnetic Material Co., Ltd., Hefei, 231500, China)

11:30-12:00
(Invited) [A0138] Improved thermal stability of Nd-Ce-Fe-B sintered magnets by Y substitution
Mi Yan[1], Jiaying Jin[1], Baixing Peng[1], Xinhua Wang[1]
(Department of Materials Science and Engineering, Zhejiang University, Hangzhou, China)

12:00-12:15
[A0043] Enhancement of magnetic property in $(Nd_{0.8}Ce_{0.2})_{2.4}Fe_{12}Co_2B$ ribbon with ferromagnetic grain boundary phase
Heyun Li, Yang Liang, Xiaohua Tan, Hui Xu
(Institute of Materials, School of Materials Science and Engineering, Shanghai University, Shanghai 200072, China)

14:00-17:30 [Room I]

Chair: **J. Ping Liu** *(Department of Physics, University of Texas at Arlington, Arlington, Texas 76019, USA)*

Satoshi Hirosawa *(Elements Strategy Initiative Center for Magnetic Materials, Research Center for Magnetic and Spintronic Materials, National Institute for Materials Science, Tsukuba, Japan)*

14:00-15:45[Room I] Coercivity& physical properties 1

14:00-14:30
(Invited) [A0177] Atomistic understandings of rare earth permanent magnets toward ultimate performance
Satoshi Hirosawa
(Elements Strategy Initiative Center for Magnetic Materials, Research Center for Magnetic and

Spintronic Materials, National Institute for Materials Science, Tsukuba, Japan)

14:30-14:45
[A0680] Prediction of magnetization process of rare-earth permanent magnets using ultra-large-scale micromagnetic simulation and machine learning
Kanta Ono[(a)], Hiroshi Tsukahara[(a)], Hideitsu Hino[(b)], Tadashi Ishikawa[(a)], Kaoru Iwano[(a)], and Chiharu Mitsumata[(c)]
([(a)]High Energy Accelerator Research Organization (KEK), Tsukuba 305-0801, Japan,[(b)]The Institute of Statistical Mathematics, Tokyo 190-8562, Japan,National Institute for Materials Science (NIMS), Tsukuba 305-0047, Japan,[(c)] Elements Strategy Initiative Center for Magnetic Materials (ESICMM),National Institute for Materials Science (NIMS), Tsukuba 305-0047, Japan)

14:45-15:00
[A0674] Magnetization reversal process owing to dipole interactions inside nanocrystalline permanent magnet using ultra-large-scale micromagnetics simulation
H. Tsukahara[(a)], K. Iwano[(a)], C. Mitsumata[(b)], T. Ishikawa[(a)], and K. Ono[(a)]
([(a)] High Energy Accelerator Research Organization, Tsukuba, Japan,[(b)] National Institute for Materials Science, Tsukuba, Japan)

15:00-15:15
[A0224] Relationship between degree of alignment and magnetization reversal in Nd-Fe-B sintered magnet
T. Maki[(a)], R. Uchikoshi[(b)], R. Ishii[(a)], M. Natsumeda[(a)], T. Nishiuchi[(a)], M. Takezawa[(b)]
([(a)]Magnetic Materials Research Laboratory, Hitachi Metals, Ltd., Osaka, Japan,[(b)]Department of Applied Science for Integrated System Engineering, Kyushu Institute of Technology, Fukuoka, Japan)

15:15-15:30
[A0439] Efficient coarse-grained spin model reflecting atomistic properties
T. Hinokihara[(a),(b)], M. Nishino[(b),(c)], Y. Toga[(b)], and S. Miyashita[(a),(b)]
([(a)]Graduate School of Science, The University of Tokyo, 7-3-1 Hongo, Bunyo-ku, Tokyo 113-8656, Japan,[(b)]Element Strategy Initiative Center for Magnetic Materials (ESICMM), National Institute for Materials Science, Tsukuba, Ibaraki, Japan,[(c)]International Center for Materials Nanoarchitectonics, National Institute for Materials Science, Tsukuba, Ibaraki, Japan)

15:30-15:45
[A0419] Thermal stability and thermokinetics of Tc transition in recycled and virgin sintered NdFeB magnets.
D.Prosperi[(a)], C.O. Tudor[(a)], A. I. Bevan[(a)], G. Furlan[(a)], E. L. De Leon Quiroz[(a)], Z. Puh[(b)], R. Skomski[(c)], M. Zakotnik[(a)]
([(a)]Urban Mining Co. 8201 E Riverside Dr, Suite 150, Austin, TX 78744 (USA),[(b)]University of Marybor, 2000 Maribor (Slovenia),[(c)]University of Nebraska-Lincoln, Nebraska 68588-0299 (USA))

15:45-16:00 Coffee Break

16:00-17:30 [Room I] Coercivity& physical properties 2

16:00-16:30
(Invited) [A0452] Dynamic structure of magnetic domain and coercivity mechanism
Weixing Xia[(a)], J. Ping Liu[(a)(b)]
([(a)]Laboratory of Rare-Earth Magnetic Functional Materials, NIMTE, CAS , China ,[(b)]Department of Physics, University of Texas at Arlington, Arlington, TX 76019, USA)

16:30-16:45
[A0521] Investigation on the magnetic hardening mechanism of hot-deformed Nd-Fe-B magnets
Y. Q. Li, M. Yue, X. C. Xu, D. T. Zhang, W. Q. Liu, Q. M. Lu, H. G. Zhang, Q. Wu*
(College of Materials Science and Engineering, Beijing University of Technology, Beijing, 100124, China)

16:45-17:00
[A0449] Nucleation modes and coercivity mechanism in permanent nanomagnets
G.P. Zhao[(a),(b)], L. C. Shen[(a)]
([(a)]College of Physics and Electronic Engineering, Sichuan Normal University, Chengdu 610101, China,[(b)]Collaborative Innovation Center for Shanxi Advanced Permanent Materials and Technology, Linfen 041004, China)

17:00-17:15
[A0408] An Overview on Nucleation Theories and Models
Marcos Flavio de Campos[(a)], Jose Adilson de Castro[(a)]
([(a)]Department of Mechanical Engineering, Av. dos Trabalhadores 420, 27255-125, Universidade Federal Fluminense, Volta Redonda, RJ, Brazil)

17:15-17:30
[A0748] Coercivity enhancement of Nd-Ce-Fe-B melt-spuns by electron beam exposure
Liang Zha[(a)], Zhou Liu[(a)], Wenyun Yang[(a)],Honglin Du[(a)], Changsheng Wang[(a)], Jingzhi Han[(a)], Yingchang Yang[(a)], Jinbo Yang[(a),(b)]
([(a)]State Key Laboratory for Mesoscopic Physics, School of Physics, Peking University, Beijing 100871, P. R. China,[(b)]Collaborative Innovation Center of Quantum Matter, Beijing, P. R. China.)

August 30, Thursday, 2018

8:00-12:15 [Room I]

Chair: **Mi Yan** *(Department of Materials Science and Engineering, Zhejiang University, Hangzhou, China)*

L. Y. Zheng (*Division of Functional Materials, Central Iron & Steel Research Institute, Beijing, 100081 China)*

8:00-10:15[Room I] Nd-Fe-B: processing & properties 6

8:00-8:30

(Invited) [A0640] Selective Lased Melting of Nd-Fe-B magnets: new strategies and approaches

Konstantin P. Skokov[(a)], Lukas Schäfer[(a)], Stefan Riegg[(a)], Iliya Radulov[(a)], Mark Pabst[(a)] and Oliver Gutfleisch[(a)]

([(a)]Funktionale Materialien, Institut für Materialwissenschaft, TU Darmstadt, Alarich-Weiss-Str. 16, D-64287 Darmstadt, Germany)

8:30-8:45

[A0626] Effect of heat treatment in Dy vapor on the properties and microstructure of Nd-Fe-B sintered magnets

Liu Youhao, Zha Shanshun, Chen Jingwu, Yi Xiaofei

(State Key Laboratory of Rare Earth Permanent Magnetic Materials, Hefei, China Earth-Panda Advance Magnetic Material Co., Ltd, Hefei, China)

8:45-9:00

[A0201] Magnetic Properties of (Nd,Y,Ce)-Fe-B Thin Films and Melt Spun Ribbon

K. Suzuki [(a)], R. Hashimoto [(a)], D. Tanaka [(a)], Y. Enokido [(a)], K.-K. Choi [(a)]

([(a)] Materials Development Center, Technology & IP HQ, TDK Corporation, 570-2, Matsugashita, Minamihadori, Narita, Chiba, 286-8588, Japan.)

9:00-9:15

[A0284] HRE-free Hot-deformed Magnets with High Magnetic Properties and Their Application for Traction Motor Mounted on Hybrid Vehicles

Y. Nakazawa[(a)], R. Kato[(a)], H. Shimizu[(a)], Y. Shintani[(a)], S. Soma[(a)], A. Hattori[(b)], T. Oikawa[(b)], K. Hioki[(c)]

([(a)]Honda R&D Co., Ltd. Automobile R&D Center, Haga-machi, Tochigi, Japan,[(b)]Daido Electronics Co., Ltd., Nakatsugawa-City, Gifu, Japan,[(c)]Daido Steel Co., Ltd., Nagoya-City, Aichi, Japan)

9:15-9:30

[A0279] Development of the Highest Performance Dy free Nd-Fe-B sintered Magnet

T. Mizoguchi[(a)], M. Nakamura[(a)], T. Iriyama[(b)], H. Hashino[(a)] and M. Sagawa[(a)]

([(a)]Daido Steel Co., Ltd., Nagoya, Aichi, Japan,[(b)]Intermetallics Co., Ltd., Nakatsugawa, Gifu, Japan)

9:30-9:45

[A0276] Novel SPS-processed permanent magnets prepared from gas-atomized Nd-Fe-B powders

Tomaž Tomše[(a),(b)], Jaćim Jaćimović[(c)], Simona Tekavec[(a)], Kristina Žužek Rožman[(a),(b)], Jean-Marie Dubois[(a),(b)], Spomenka Kobe[(a),(b)]

([(a)] Jožef Stefan Institute, Department for Nanostructured Materials, SI-1000 Ljubljana, Slovenia,[(b)]

Jožef Stefan International Postgraduate School, SI-1000 Ljubljana, Slovenia,[(c)] ABB Corporate Research Center, CH-5405 Baden-Daettwil, Switzerland)

9:45-10:00
[A0174] Understanding the Fundamental Behavior of La, Ce and Y based RE-Fe-B Permanent Magnetic Alloys
Zhongwu Liu[(a)], Zhenyang Zhang[(a)], Mozaffar Hussain[(a)(b)], Lizhong Zhao[(a)], Jiasheng Zhang[(a)], Xuefeng Liao[(a)]
([(a)]School of Materials Science and Engineering, South China University of Technology, Guangzhou, 510640, China,[(b)] Department of Physics, Air University, Islamabad, 44000, Pakistan)

10:00-10:15
[A0217] Ab-initio study on Ga-added Nd-Fe-B sintered magnets
Yasutomi Tatetsu (立津慶幸)、Yoshihiro Gohda (合田義弘)
(Tokyo Institute of Technology, Japan)

10:15-10:30 Coffee Break

10:30-12:15 [Room I] Nd-Fe-B: processing & properties 7

10:30-11:00
(Invited) [A0289] Review of melt-spun RE-Fe-B powders and their bonded and fully-dense magnets for automotive applications
Zhongmin Chen, Lim Yong Keat, Nimit Sheth, Jim Herchenroeder
(Magnequench Technology Center，Neo Performance Materials (S) PTE LTD, Singapore)

11:00-11:15
[A0357] Magnetic and mechanical properties of hot-deformed Nd-Fe-B magnets with SiC whiskers
L. Zheng[(a, b)], K. Fang[(b)], R. Jiang[(a,b)], L. Zhao[(c)], D. Zhou[(a)], M. Zhu[(a)], W. Li[(a)]
([(a)]Division of Functional Materials, Central Iron & Steel Research Institute, Beijing, 100081 China,[(b)]School of Materials Science and Engineering, Hebei University of Engineering, Handan, 056038 China,[(c)]School of Machinery and Equipment Engineering, Hebei University of Engineering, Handan, 056038 China)

11:15-11:30
[A0549] Phase Diagrams of Permanent Magnet Alloys: Binary Rare Earth Alloys Systems
K.C. Yang, J. Wang, Q.R. Yao, H.Y. Zhou, G.H. Rao*
(School of Material Science and Engineering & Guangxi Key Laboratory of Information Materials, Guilin University of Electronic Technology, Guilin, 541004,China)

11:30-11:45
[A0516] Preparation and characterization of sodium silicate/epoxy resin bonded Nd-Fe-B magnets with high comprehensive property

Wang Xi, Weiqiang Liu, Ming Yue, Dongtao Zhang, Qingmei Lu, Hongguo Zhang, Qiong Wu, Yuqing Li
(College of Materials Science and Engineering, Beijing University of Technology, Beijing, 100124, China)

11:45-12:00
[A0474] Phase Diagrams of Permanent Magnet Alloys: RE-B (RE=La, Ce, Y, Dy) Systems
S. Li, L. Xu, J. Wang, Q.R. Yao, H.Y. Zhou, G.H. Rao*
(School of Material Science and Engineering & Guangxi Key Laboratory of Information Materials, Guilin University of Electronic Technology, Guilin, 541004, China)

12:00-12:15
[A0332] Phase structure of Al-doped Ce-rich liquid phase alloys and its effect on magnetic properties of sintered Ce-Fe-B magnets
L. L. Xi, A. H. Li, H. B. Feng, M. Tan, M. G. Zhu, W. Li
(Central Iron & Steel Research Institute, Beijing 100081, China)

14:00-15:45 [Room I]

Chair: **T. Schrefl** (*Department of Integrated Sensor Systems, Danube University Krems, Austria*)

14:00-15:45[Room I] Modeling & measurements2

14:00-14:15
[A0280] Heat Capacities for $Nd_2Fe_{14}B$ at 2- 700 K: Third Law Entropy, Electronic and Lattice Vibration Terms
M. Morishita[(a)], K. Kamon[(b)], T. Abe[(c)], A. Nozaki[(a)] and I. Ohnuma[(c)]
([(a)]Dept. Chem. Eng. &Mater. Sci., University of Hyogo, Himeji 671-2280, Japan,[(b)]Graduate Student of University of Hyogo, Himeji 671-2280, Japan,[(c)]Natl. Lab. Eng. & Mater. Sci., Tsukuba 305-0047, Japan)

14:15-14:30
[A0268] Development of magnetic property evaluation system for permanent magnets by superconducting magnets
N. Tomita[(a)], D. Nagata[(a)], M. Hori[(a)], A. Kasahara[(a)], Lv. Zhen[(b)]
([(a)]NIHON DENJI SOKKI CO., LTD of 8 -59-2, Sunagawa-Cho, Tachikawa-City, Tokyo, Japan,[(b)]SHANGHAI KASAHARA ELECTRICAL EQUIPMENT CO., LTD of 1105-1106 Room, No.2 Yinghua Interenational Plaza 2899 Lane, West GuangFu Road, Putuo District, Shanghai, China)

14:30-14:45
[A0713] A Monte Carlo study of spring-exchange magnets containing ultra-high coercive phases.
K. Granek[(a)], G. Ziółkowski[(a)] and A. Chrobak[(a)]
([(a)]Institute of Physics, University of Silesia, 75 Pulku Piechoty 1A, 41-500 Chorzow, Poland)

14:45-15:00
[A0544] Optimisation of forces between magnetic sheets
T. Vennemann[(a)], P. Babkevich[(a)], H. M. Rønnow [(a)]
([(a)]Laboratory of Quantum Magnetism, Swiss Federal Institute of Technology Lausanne (EPFL), Lausanne, Switzerland)

15:00-15:15
[A0425] Atomistic spin model for $Nd_2Fe_{14}B$-type magnets
Min Yi, Bai-Xiang Xu, Hongbin Zhang, Oliver Gutfleisch
(Institute of Materials Science, Technical University of Darmstadt, Darmstadt, Germany)

15:15-15:30
[A0416] δM plots of exchange-coupled magnetically hard nanocrystalline alloys
A. S. Bolyachkin, A. S. Volegov, I. V. Alekseev, S. V. Andreev, N. V. Kudrevatykh
(Ural Federal University, Yekaterinburg, 620002, Russia)

15:30-15:45
[A0213] Ab-initio phase stabilities of Ce-based hard magnetic materials
Halil İbrahim Sözen, TilmannHickel and JörgNeugebauer
(Max-Planck-InstitutfürEisenforschung, Düsseldorf, Germany)

16:00-17:00 [Room I] (Elites Banquet Hall/群英宴会厅)Closing Remarks

>>>Room-II（Science Lecture Hall/科学报告厅）

August 27, Monday, 2018

10:00-12:15 [Room II]

Chair: **J. M. D. Coey** *(School of Physics and CRANN, Trinity College, Dublin 2, Ireland.)*
R. Gopalan (*International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI), Chennai, India)*

10:00-11:15 [Room II] RE-Fe-N: processing & properties

10:00-10:15

[A0274] Magnetic properties of Mn diffused $Sm_2Fe_{17}N_x$ core-shell powder by reduction diffusion process

Masashi Matsuura[(a)], Keisuke Yarimizu[(a)], Nobuki Tezuka[(a)], Satoshi Sugimoto[(a)], Takashi Ishikawa[(b)], Yukinobu Yoneyama [(b)]

([(a)]Graduate School of Engineering, Tohoku University, Japan [(b)]Sumiko Kunitomi Denshi Co., Ltd., Japan)

10:15-10:30

[A0652] Nitrogenation of (Nd-Zr)$Fe_{10}Si_2$ Alloys With the $ThMn_{12}$ Structure

A. Martín-Cid[(a)], David Mérida[(b)], Margaritis Gjoka[(c)], Daniel Salazar[(a)], Jose Manuel Barandiarán[(a)(b)], Dimitris Niarchos[(c)], George Hadjipanayis[(d)]

([(a)]BCMaterials, UPV/EHU Science Park, 48940 Leioa, Spain [(b)]Univ. of the Basque Country (UPV/EHU), Bilbao 48080, Spain [(c)]NCSR Demokritos, Agia Paraskevi 15341, Greece [(d)]University of Delaware, Newark DE 19716, USA)

10:30-10:45

[A0651] Implementation of $NdTiFe_{11}N_x$ alloys elaborated at large scale by strip casting

S. Luca[(a)], O. Tosoni[(a)], C. Rado[(a)], K. Skokov[(b)], M. Bailleux[(a)], M Dalmasso[(a)], R Soulas[(a)], J. Leforestier[(a)]

([(a)]Univ. Grenoble Alpes, Grenoble, CEA Grenoble, LITEN, DTNM, Grenoble, France [(b)]Materials Science, TU Darmstadt, Darmstadt, Germany)

10:45-11:15

(Invited) [A0270] High performance Sm-Fe-N Zn-bonded magnets prepared using powders with low oxygen content

Satoshi Sugimoto[(a)], Yuki Nishijima[(a)], Ryo Matsunami[(a)], Masashi Matsuura[(a)], Nobuki Tezuka[(a)], Noritsugu Sakuma[(b)(c)], Tetsuya Shoji[(b)(c)]

([(a)]Graduate School of Engineering, Tohoku University, Japan [(b)] Toyota Motor Corporation, Japan [(c)]Technology Research Association of Magnetic Materials for High-efficiency Motors (MagHEM), Japan)

11:15-12:15 [Room II] RE-Co: processing & properties 1

11:15-11:30

[A0259] Attractive Domain Wall Pinning Enhanced Magnetic Properties via Cu Particle Doping in Sm(Co, Fe, Cu, Zr)z Permanent Magnets

H. Chen[(a,b,c)], Y. Wang[(d)], M. Yue[(d),], J. Qu[(a,b,c)], S. P. Ringer[(a,b,c)], R. Zheng[(a,b,c),*]*

([(a)]School of Physics, The University of Sydney, Sydney, 2006, Australia; [(b)]Australian Centre for Microscopy and Microanalysis, The Univerisity of Sydney, Sydney, 2006, Australia [(c)]The University of Sydney Nano Institute, The University of Sydney, NSW,2006, Australia; [(d)]College of Materials Science and Engineering, Beijing University of Technology, Beijing, 100124; [(e)]School of Aerospace, Mechanical and Mechatronic Engineering, The University of Sydney, NSW, 2006, Australia)

11:30-11:45

[A0532] Magnetic properties and texture of nanocrystalline $SmCo_5$ magnets prepared by lower-temperature hot deformation

Xiaochang Xu, Yuqing Li, Ming Yue, Hongguo Zhang, Dongtao Zhang, Weiqiang Liu, Qingmei Lu, Qiong Wu*

(College of Materials Science and Engineering, Beijing University of Technology, Beijing 100124, China)

11:45-12:15

(Invited)[A0586] Facile strategies to prepare anisotropic $SmCo_5$ nanoparticles and manipulation of magnetic properties

Qiong Wu, Chenglin Li, Ming Yue*, Zhenhui Ma, Subhashini Palaka

(College of Materials Science and Engineering, Beijing University of Technology, Beijing 100022, China)

14:00-15:30 [Room II]

Chair: **Zhongwu Liu** (*School of Materials Science and Engineering, South China University of Technology, Guangzhou, 510640, China*)

14:00-15:30[Room II] RE-Co: processing & properties 2

14:00-14:15

[A0690] Evolution of lamellar structure in Sm_2Co_{17} type magnets at solution treatment temperature and its influence on high coercivity

R Gopalan[(a)], S Kavita[(a)], D Prabhu[(a)], V Chandrasekaran[(a)], O.A. Golovnia[(b)]A.G. Popov[(b)],*

([(a)]International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI), Chennai, India [(b)] IMP UB RAS S. Kovalevskoi 18 str., Ekaterinburg, 620990 Russia)

14:15-14:30

[A0557] Simulation of demagnetization effects at the grain boundaries in $Sm_2(Co, Fe, Cu, Zr)_{17}$ type magnets

M. Katter[(a)], K. Uestuener[(a)], C. Brombacher[(a)], E. Aras[(b)], T. Braun[(b)]

([(a)]Vacuumschmelze GmbH & Co. KG, Hanau, Germany [(b)]Technische Universität Darmstadt, Darmstadt, Germany)

14:30-14:45

[A0547] Research progress of high temperature permanent magnetic materials

*Nengjun Yu[(a,b)], Minggang Zhu[(a)], Yikun Fang[(a)], Wei Li[(a)]**

([(a)]Division of Functional Materials, Central Iron and Steel Research Institute, Beijing 100081, China [(b)]School of Materials Science and Engineering, Northeastern University, Shenyang 110819, China)

14:45-15:00
[A0380] Properties of Rare Earth Permanent Magnets for Applications in Extreme Conditions
M. Jasinski, J. F. Liu
(Electron Energy Corporation, Landisville, PA, USA)

15:00-15:30
(Invited) [A0228] SmCo high temperature permanent magnets
Chengbao Jiang, Wei Xia, Xinxin Qiu, Jinghua Liu, Tianli Zhang, Hui Wang
(School of Materials Science and Engineering, Beihang University, Beijing, China)

15:45-16:00 Coffee Break

August 28, Tuesday, 2018

8:30-12:15 [Room II]

Chair: **Aru Yan** (*CAS Key Laboratory of Magnetic Materials and Devices, Ningbo Institute of Material Technology and Engineering, Chinese Academy of Sciences, Ningbo 315201, P. R. China)*
Jung-Goo Lee *(Korea Institute of Materials Science, Changwon, Republic of Korea 51508)*

8:30-10:00[Room II] Raw materials, resources, mining, extraction & recycling

8:30-8:45
[A0335] Microstructural Fingerprint of Recycled Nd-Fe-B Permanent Magnets
J. Gassmann[(a)], E. Brouwer[(a)], U. Rohrmann[(a)], M. Schönfeldt[(a)], K. Opelt[(a)], O. Diehl [(a)], K. Güth[(a)], J. D. Rossa [(a)], R. Stauber[(a)], O. Gutfleisch[(a,b)]
([(a)]Magnetic Materials, Fraunhofer Project Group IWKS, Hanau, Germany [(b)]Functional Materials, Technische Universität Darmstadt, Darmstadt, Germany)

8:45-9:00
[A0323] Recycling Nd-Fe-B in permanent magnets : a sustainable process
S. Maât[(a)], Y. Condro[(b)], V. Nachbaur[(c)], S. Jouen[(c)], C. Aymonier[(b)], J.M. Le Breton[(c)]
([(a)]Department of Chemical Engineering, Northeastern University, Boston, MA-02115, USA [b)]CNRS, Univ. Bordeaux, Bordeaux INP, ICMCB, UMR5026, 33600 Pessac, France [(c)]GPM, Normandie Univ, UNIROUEN, INSA Rouen, CNRS, 76000 Rouen, France)

9:00-9:15
[A0420] Performance of permanent magnet electric motors fitted with magnet-to-magnet recycled sintered NdFeB and their role in more sustainable transport
A.I. Bevan(a), G. U. Rosillo(b), D. Prosperi(a), C.O. Tudor(a), G. Furlan(a), S. Dove(a), E. L. De Leon Quiroz(a), M. Zakotnik(a)

((a)Urban Mining Co. 8201 E Riverside Dr, Suite 150, Austin, TX 78744 (b)Smondragon Unibertsitatea, Goi Eskola Politeknikoa / Escuela Politécnica (c)Superior / Faculty of Engineering Loramendi 4, 20500 Arrasate-Mondragon (Spain))

9:15-9:30
[A0400] Trends in Rare Earth Market and Research
Marcos Flavio de Campos [(a)]
([(a)]Department of Mechanical Engineering, Av. dos Trabalhadores 420, 27255-125, Universidade Federal Fluminense, Volta Redonda, RJ, Brazil)

9:30-10:00
(Invited) [A0421] High performance sintered and bonded NdFeB-based magnet manufacture from recycling end-of-life sintered rare earth magnets
M. Zakotnik[(a,*)],A.I. Bevan[(a)], D. Prosperi[(a)], E. L. De Leon Quiroz[(a)], G. Furlan[(a)] and C.O. Tudor[(a)]
(Urban Mining Co. 8201 E Riverside Dr, Suite 150, Austin, TX 78744)

10:15-10:30 Coffee Break

10:30-12:15 [Room II] Rare earth free permanent magnets 1

10:30-10:45
[A0257] Anisotropic MnBi Bulk Magnets with High Magnetic Performance
Baozhi Cui[(a)], Wei Tang[(a)], Jun Cui[(a) (b)]
([(a)]Ames Laboratory, US Department of Energy, Ames, IA 50011, USA [(b)]Department of Materials Science and Engineering, Iowa State University, Ames, IA 50011, USA)

10:45-11:00
[A0275] Magnetocrystalline anisotropy of $L1_0$ FeNi from DFT
Mirosław Werwiński[(a)], Wojciech Marciniak[(b)]
([(a)]Institute of Molecular Physics Polish Academy of Sciences, M. Smoluchowskiego 17, 60-179 Poznań, Poland [(b)]Institute of Physics, Faculty of Technical Physics, Poznań University of Technology, Piotrowo 3, 61-138 Poznań, Poland)

11:00-11:15
[A0589] Single-Domain Size in a Nanocomposite: Micromagnetic Estimation
Sergey Erokhin[(a)], Dmitry Berkov[(a)]
([(a)] General Numerics Research Lab, Jena, Germany)

11:15-11:30
[A0273] Fe-Sn as a candidate system for magnetic applications - from high-throughput methods to single crystals

B. Fayyazi[(a)], K. P. Skokov[(a)], T. Faske[(a)], M. Duerrschnabel[(a)], L. Molina-Luna[(a)], D. K. Karpenkov[(a,b)], W. Donner[(a)], O. Gutfleisch[(a)]
([(a)] Materials Science, TU Darmstadt, Darmstadt, Germany [(b)] NUST MISiS, Moscow, Russia)

11:30-11:45
[A0046] Experimental and theoretical investigation of $SrFe_{12}O_{19}$ nanopowder for permanent magnet application
B. Abraime[(a),(b)], M. Ait Tamerd[(b)], A. Mahmoud[(c)], F. Boschini[(c)], A. Benyoussef[(a),(b)], M. Hamedoun[(a)], Y. Xiao[(d)], A. El Kenz[(b)] and O. Mounkachi[(a)]
([(a)]Materials and nanomaterials center, MAScIR (Moroccan Foundation for Advanced Science, Innovation and Research), BP 10100, Rabat, Morocco [(b)]Laboratory of Condensed Matter and Interdisciplinary Sciences (LaMCScI), B.P. 1014, Faculty of science, Mohammed V University, Rabat, Morocco [(c)]GREENMAT, CESAM, Institute of Chemistry B6, University of Liege, 4000 Liège, Belgium [(d)]Jülich Centre for Neutron Science JCNS und Peter Grünberg Institut PGI JCNS-2, PGI-4: Streumethoden Forschungszentrum Jülich GmbH)

11:45-12:15
(Invited) [A0434] Magnetic Hardening in Co Nanowire Assembies
Meiying Xing, Jeotikanta Mohapatra, and J. Ping Liu*
(Department of Physics, University of Texas at Arlington, Arlington, Texas 76019, USA)

14:00-17:15 [Room II]

Chair: **Wei Tang** *(Ames Laboratory, US Department of Energy, Ames, IA 50011, USA)*
Caiyin You (*School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, P. R. China)*

14:00-15:45 [Room II] Rare earth free permanent magnets 2

14:00-14:15
[A0290] Microstructure and Magnetic Hardening in Hot- deformed $L1_0$-ordered MnGa Magnet
*Q. M. Lu, D. J. Wang, H. G. Zhang, M. Yue**
(College of Materials Science and Engineering, Beijing University of Technology, Beijing, 100124, China)

14:15-14:30
[A0371] Microstructure of Dy-free Nd-Fe-B sintered magnet with 2 T coercivity
Z. J. Dong[(a)], X. D. Xu[(b)], T. T. Sasaki[(b)], J. N. Li[(b)], H. Sepehri Amin[(b)], T. Ohkubo[(b)], K. Hono[(b)]
([(a)]Yantai Shougang Magnetic Materials Inc., Yantai, 265500, China [(b)]Elements Strategy Initiative Center for Magnetic Materials, National Institute for Materials Science, Tsukuba, 305-0047, Japan)

14:30-14:45
[A0226] Rare Earth-Free Permanent Magnet Composites and Flexible Filament for 3D-Printing
E. M. Palmero, J. Rial, D. Casaleiz, J. de Vicente, and A. Bollero

(Division of Permanent Magnets and Applications, IMDEA Nanoscience, 28049 Madrid, Spain)

14:45-15:00
[A0194] High-Performance Ferrite Magnets Overcoming Irreversible Low Temperature Demagnetization: Temperature Dependence of Magnetic Properties
Junichi Nagaoka[(a)], Masashi Miwa[(a)]
([(a)] Materials Development Center, Technology & IP HQ, TDK Corporation, Narita, Japan)

15:00-15:15
[A0409] Structural, microstructural and magnetic properties of mechanically milled τ-phase MnAl alloys
Zhuyin Shao[(a)], Dong Liang[(a)], Wenyun Yang[(a)],Honglin Du[(a)], Changsheng Wang[(a)], Jingzhi Han[(a)], Yingchang Yang[(a)], Jinbo Yang[(a),(b)]
([(a)] State Key Laboratory for Mesoscopic Physics, School of Physics, Peking University, Beijing 100871, P. R. China.[(b)] Collaborative Innovation Center of Quantum Matter, Beijing, P. R. China.)

15:15-15:45
(Invited) [A0221] Rapid-milling applied to isotropic rare earth-free permanent magnet powders: from ferrites to MnAl
A. Bollero[(a)], J. Rial[(a)], E. M. Palmero[(a)], J. Camarero[(a)], P. Švec[(b)], P. Švec Sr.[(b)]
([(a)]Division of Permanent Magnets, IMDEA Nanoscience, Madrid, Spain [(b)]Institute of Physics, Slovak Academy of Sciences, Bratislava, Slovakia)

15:45-16:00 Coffee Break

16:00-17:15 [Room II] Other novel magnetic materials

16:00-16:30
(Invited) [A0499] Advanced reaction crucible and reaction sintering methods for searching high-coercivity intermetallic compounds
Dagmar Goll, Thomas Gross, Judith Laukart, Ralf Loeffler, Tim Vogel, Gerhard Schneider
(Aalen University, Materials Research Institute (IMFAA), Aalen, Germany)

16:30-17:00
(Invited) [A0701] High Entropy Alloys based on Rare Earths and Transition Metals as building blocks for novel Permanent Magnet Materials
D. Niarchos[(a,b)], G. Giannopoulos[(a)], A. Kaidatzis[(a)], V. Psycharis[(a)], M. Gjokas[(a)], E.Devlin[(a)]
C. Echeveria[(c)], D. Salazar[(c)] and Andrés Martín Cid[(c)]
([(a)]INN, NCSR Demokritos, Athens 15310, Greece [(b)] AMEN Technologies, Athens, Greece [(c)] BCMaterials, UPV/EHU Science Park, Leioa 48940, Spain)

17:00-17:15
[A0634] Modulation of Microwave Absorption Properties of Nd_2Co_{17}-xSix/Paraffin Composites by Si element

Guanyi Qiao[(a)], Wenyun Yang[(a)], Youfang Lai[(a)], Qiwei Hu[(a)], Honglin Du[(a)], Changsheng Wang[(a)], Jingzhi Han[(a)], Shunquan Liu[(a)], Yingchang Yang[(a)], Jinbo Yang[(a,b)]∗
([(a)]State Key Laboratory for Mesoscopic Physics, School of Physics, Peking University, Beijing 100871, P. R. China [(b)]Beijing Key Laboratory for Magnetoeletric Materials and Devices，Beijing 100871, P. R. China [(c)]Collaborative Innovation Center of Quantum Matter, Beijing, P. R. China)

August 29, Wednesday, 2018

8:30-12:15 [Room II]

Chair: **Dagmar Goll** *(Aalen University, Materials Research Institute (IMFAA), Aalen, Germany)*

Olivier Isnard *(Institut NEEL, University Grenoble Alpes and CNRS, 25 rue des martyrs, BP166X, 38029 Grenoble cedex, France)*

Yongsheng Yu *(School of Chemistry and Chemical Engineering, Harbin Institute of Technology, Harbin, Heilongjiang 150001, China)*

8:30-10:15[Room II] Microstructure & properties characterization 1

8:30-8:45
[A0480] Atom Probe and TEM Study of Melt Spun Fe-Nd Alloys
V. P. Menushenkov[(a)] O. Korchuganova,[(b)] I.V. Shchetinin,[(a)] M. V. Gorshenkov,[(a)]A. Aleev,[(b)] A. G. Savchenko,[(a)] Torben Boll[(c)]
([(a)]National University of Science and Technology "MISIS", Moscow, Leninskii pr. 4, Russia 119049 [(b)]Institute for Theoretical and Experimental Physics named by A.I. Alikhanov of National Research Centre "Kurchatov Institute", 117218, Moscow, Russia [(c)]Karlsruhe Institute of Technology, 76344, Eggenstein-Leopoldshafen, Germany)

8:45-9:00
[A0426] Microscopic magnetic properties of Nd-Fe alloys
V.P. Menushenkov[(a)], A.P. Menushenkov[(b)], I.V. Shchetinin[(a)], F. Wilhelm[(c)], A.A. Ivanov[(b)], I.A. Rudnev[(b)], V.G. Ivanov[(b)], D.G. Zhukov[(a)], A.G. Savchenko[(a)], A. Rogalev[(c)]
([(a)]National University of Science and Technology "MISIS", Leninskii prospekt 4, 119049 Moscow, Russia [(b)]National Research Nuclear University MEPhI (Moscow Engineering Physics Institute), Kashirskoe shosse 31, 115409 Moscow, Russia [(c)]European Synchrotron Radiation Facility (ESRF), CS40220, F-38043 Grenoble Cedex 9, France)

9:00-9:15
[A0666] Isotropic characteristic and coercivity mechanism of $Nd_2Fe_{14}B$ magnets under radial pressure
Jiang Ruijiao[(a,b)], Zhu Minggang[(a)],Zheng Liyun[(a,b)], Li,Lei[(a)], Wang Xin[(a)], Zhou Dong[(a)], Li Wei[(a)]
([(a)]Research institute of Functional Materials, Central Iron and Steel Research institute, Beijing 10081, China, [(b)]College of Material Science and Engineering, Hebei University of Engineering, Hebei 056038, China)

9:15-9:30

[A0588] A mechanism of Tb-rich shell formation in Nd-Fe-B sintered magnets during grain boundary diffusion process

Tae-Hoon Kim[(a)], T. T. Sasaki[(a)], T. Ohkubo[(a)], Y. Fujikawa[(b)], M. Miwa[(b)],Y.Enokido[(b)] and K. Hono[(a)]

([(a)]Elements Strategy Initiative Center for Magnetic Materials, National Institute for Materials Science, Tsukuba-city, Ibaraki 305-0047, Japan [(b)]TDK Corporation, Narita-city, Chiba 286-8588, Japan)

9:30-9:45

[A0222] Ferromagnetism and strong correlation between electric and magnetic properties in $FeTe_2$ single crystals

Azizur Rahman [(a)], Zengming Zhang[(b)]

([(a)] Department of Physics, University of Science and Technology of China, Hefei, Anhui 230026, China [(b)] The Centre for Physical Experiments, University of Science and Technology of China, Hefei, Anhui 230026, China)

9:45-10:15

(Invited) [A0718] Neutron scattering studies on rare earth-transition metal intermetallic compounds

Olivier Isnard

(Institut NEEL, University Grenoble Alpes and CNRS, 25 rue des martyrs, BP166X, 38029 Grenoble cedex, France)

10:15-10:30 Coffee Break

10:30-11:00 [Room II] Microstructure & properties characterization 2

10:30-10:45

[A0073] Effect of annealing conditions on the microstructure and magnetic properties of sintered Nd-Fe-B magnets as seen by magnetic small-angle neutron scattering

A. Michels[(a)], É.A. Périgo[(b)], I. Titov[(a)], R. Weber[(a)], D. Mettus[(a)], I. Peral[(a)], O. Vallcorba[(c)], D. Honecker[(d)], A. Feoktystov[(e)]

([(a)] Physics and Materials Science Research Unit, University of Luxembourg [(b)] ABB Corporate Research Center, 940 Main Campus Drive, 27606 Raleigh, USA [(c)] Alba Synchrotron, BP 1413, km 3.3, Cerdanyola del Vallès, Spain [(d)] Institut Laue-Langevin, Grenoble, France [(e)] Jülich Centre for Neutron Science, Garching, Germany)

10:45-11:00

[A0468] Coercivity Enhancement in Hot-Deformed Nd-Fe-B Magnets by Post Annealing above 700ºC

Tieqiao Zhang[a], Xianshuang Xia[a], Hui Xing[a,b], Fugang Chen[a], Wenhao Zhang[a], Lanting Zhang[a,b,c]

([(a)]School of Materials Science and Engineering, Shanghai Jiao Tong University, 800 Dong Chuan

Road, Shanghai 200240, China [(b)]Materials Genome Initiative Center, Shanghai Jiao Tong University, 800 Dong Chuan Road, Shanghai 200240, China [(c)]Hirano Institute for Materials Innovation, Shanghai Jiao Tong University, 800 Dong Chuan Road, Shanghai 200240, China)

11:00-12:15[Room II] Magnetism & nanotechnology

11:00-11:15
[A0292] Designing Shape Anisotropic $SmCo_5$ Particles by Chemical Synthesis to Reveal Morphological Evolution Mechanism
Ma Zhenhui, Yue Ming
(College of Materials Science and Engineering, Beijing University of Technology, Beijing, 100124, China)

11:15-11:30
[A0711] Flexible Hall sensors manufactured by multiple transfer-printing graphene onto 75μm-thick PET film
Ahmet Oral[(a)], Ugur Y. Inkaya[(a)], Kubra Celik[(b)]
([(a)]Department of Physics, Middle East Technical University, Ankara, Turkey [(b)]School of Civil Aviation, Firat University, Elazig, Turkey)

11:30-11:45
[A0411] Modern Interpretation of the Exchange Energy Term in Micromagnetic Models
Marcos Flavio de Campos [(a)], Amilton Ferreira da Silva Jr [(b)] , Adriano S. Martins
([(a)]Department of Mechanical Engineering, Av. dos Trabalhadores 420, 27255-125, Universidade Federal Fluminense, Volta Redonda, RJ, Brazil [(b)]Campus Angra dos Reis, CEFET, RJ, Brazil [(c)] Physics Department, ICEx, Universidade Federal Fluminense, Volta Redonda, RJ, Brazil)

11:45-12:15
(Invited) [A0369] Improving the performance of $RE_2Fe_{14}B$ based magnets containing a high concentration of the abundant rare earth elements
Xiaodong Fan[(a)], Caiyin You[(a)], Na Tian[(a)], Shuai Guo[(b)], Aru Yan[(b)]
([(a)] School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, P. R. China [(b)] CAS Key Laboratory of Magnetic Materials and Devices, Ningbo Institute of Material Technology and Engineering, Chinese Academy of Sciences, Ningbo 315201, P. R. China)

14:00-17:30 [Room II]

Chair: **D. Niarchos** *(INN, NCSR Demokritos, Athens 15310, Greece)*
G.C. Hadjipanayis *(Department of Physics & Astronomy, University of Delaware, Newark DE, 19716, USA)*

14:00-15:30[Room II] Other rare earth related compounds 1

14:00-14:15
[A0615] HDDR process in $SmFe_{12}$-based alloys
I. Dirba[(a)], H. Sepehri-Amin[(a)], T. Ohkubo[(a)], K. Hono[(a)]
([(a)]Elements Strategy Initiative Center for Magnetic Materials, National Institute of Materials Science, Tsukuba 305-0047, Japan)

14:15-14:30
[A0670] First principles study on $Sm(Fe_{1-x}M_x)_{12}$ systems
H. Tsuchiura[(a)], T. Yoshioka[(a)], P. Novák[(b)]
([(a)]Department of Physics, Tohoku University, Sendai 980-8579, Japan [(b)]Institute of Physics of ASCR, Prague 162 00, Czech Republic)

14:30-14:45
[A0231] Microstructure and magnetic properties of highly textured $Sm(Fe_{0.8}Co_{0.2})_{12}$ thin films with $ThMn_{12}$ structure
D.Ogawa, Y.K. Takahashi, S. Hirosawa and K. Hono
(Elements Strategy Initiative Center for Magnetic Materials (ESICMM), National Institute for Materials Science, Tsukuba, Japan)

14:45-15:00
[A0698] First-principles analysis of stability in RFe_{12}-based compounds
Ying Chen and Arkapol Saengdeejing
(School of Engineering, Tohoku University)

15:00-15:15
[A0267] Can RE-Ba-Cu-O bulk superconductors be used as permanent magnets
Difan Zhou, Yibing Zhang, Kexi Xu
(Department of Physics, Shanghai University, Shanghai, China)

15:15-15:45
(Invited) [A0697] $ThMn_{12}$-type Alloys for Permanent Magnets
G.C. Hadjipanayis[(a)], A.M. Gabay[(a)], A.M. Schönhöbel[(a,b)], A. Martín-Cid[(b)], M. Barandiaran[(b)] and D. Niarchos[(c)]
([(a)]Department of Physics & Astronomy, University of Delaware, Newark DE, 19716, USA [(b)]BCMaterials, Parque Científico UPV/EHU, 48940 Leioa, Spain [(c)]NCSR Demokritos, Agia Paraskevi 15341, Greece)

15:45-16:00 Coffee Break

16:00-17:30 [Room II] Other rare earth related compounds 2

16:00-16:15
[A0428] Structure and Intrinsic Magnetic Properties of $Sm_{(1-x)}M_{(x)}Fe_{11}V$ Alloys (M=Nd, Zr)
A. M. Schönhöbel[(a,b,c)], R. Madugundo[(a)], J. M. Barandiaran[(a,b)], and G. C. Hadjipanayis[(c)]
([(a)] BCMaterials, Parque Cientfico UPV/EHU, 48940 Leioa, Spain [(b)] Department of Electricity & Electronics, University Basque Country (UPV/EHU), 48080 Leioa, Spain [(c)] Department of Physics & Astronomy, University of Delaware, Newark, DE, 19716, USA)

16:15-16:30
[A0291] Formation of $Sm(Fe_{1-x}Co_x)_{12-y}Ti_y$ Particles with the Tetragonal $ThMn_{12}$ Structure
Jungryang Kim, Thang Thuy Trinh, Ryota Sato, Toshiharu Teranishi
(Institute for Chemical Research, Kyoto University, Uji, Japan.)

16:30-16:45
[A0712] Effect of Tb/Y substitution on structural and magnetic properties of Fe-Nb-B-Tb type of high-coercive alloys
Grzegorz Ziółkowski, Artur Chrobak, Joanna Klimontko
(Institute of Physics, University of Silesia, Uniwersytecka 4, 40-007 Katowice, Poland)

16:45-17:15
[A0341] Structural factor and Valence Electron Concentration considerations towards stabilization of the $R_{1-x}R'_x Co_{5-y}Fe_y$ phases
D. Niarchos[(a,b)]
([(a)]Institute of Nanoscience and Nanotechnology, NCSR Demokritos, Athens 15310, Greece [(b)]AMEN Technologies, Athens, Greece)

August 30, Thursday, 2018

8:30-12:15 [Room II]

Chair: **Xiaoxi Liu** *(Department of Electrical and Computer Engineering, Shinshu University, 4-17-1 Wakasato, Nagano, 380-8553, Japan)*

W. B. Cui *(Key Laboratory of Electromagnetic Processing of Materials (Ministry of Education), Northeastern University, Shenyang 110819, China)*

8:30-10:15[Room II] Nanocomposite magnets

8:30-8:45
[A0322] Development of permanent magnetic nanocomposites for exchange-spring magnets

K.Nakouri[(a)], F. Ayadi[(a)], S. Jouen[(a)], J.M. Le Breton[(a)], V. Nachbaur[(a)]
([(a)]Groupe de Physique des Materiaux, Normandie Univ, UNIROUEN, INSA Rouen, CNRS,76000 Rouen, France)

8:45-9:00
[A0216] Microstructural characterization of Nd-Fe-B nanocomposites by means of micromagnetic modeling
Sergey Erokhin[(a)], Dmitry Berkov[(a)], Andreas Michels[(b)]
([(a)]General Numerics Research Lab, Jena, Germany [(b)]Physics and Materials Science Research Unit, University of Luxembourg)

9:00-9:30
(Invited) [A0364] Engineering bulk hybrid nanostructures with high energy products
Xiangyi Zhang
(State Key Laboratory of Metastable Materials Science and Technology, Yanshan University, Qinhuangdao 066004, China)

9:30-9:45
[A0025] Dy content reduction and magnetic properties enhancement by Ce substitution in nanocomposite Nd-Dy-Fe-B alloys
J.S. Zhang[a], M.L. Zhong[b], L.Z. Zhao[a], X.F. Liao[a],H.X. Zeng[a],X.C. Zhong[a], Z.C. Zhong[b],Z.W. Liu[a,]*
([a]School of Materials Science and Engineering, South China University of Technology, Guangzhou, 510640, China [b]Institute for Rare Earth Magnetic Materials and Devices Jiangxi University of Science and Technology, Ganzhou, 341000, China)

9:45-10:15
(Invited)[A0119] Magnetic properties and microstructure of hard magnetic nanostructure prepared by chemical method
Yongsheng Yu
(School of Chemistry and Chemical Engineering, Harbin Institute of Technology, Harbin, Heilongjiang 150001, China)

10:15-10:30 Coffee Break

10:30-12:15[Room II] Thin film magnets

10:30-10:45
[A0310] The growth and regulation of magnetic properties by multi-fields for permanent magnetic films
Wenhui Liang[(a),(b)], Yao Liu[(a),(b)], Fengxia Hu[(a),(b),], Jing Wang[(a),(b),*], Jia Li[(a),(b)], Kaiming Qiao[(a),(b)], Jiefu Xiong[(a),(b)], Hao Kuang[(a),(b)], Jian Zhang[(c)], Hanyang Ren[(c)], Jirong Sun[(a),(b)], Baogen Shen[(a),(b)]*
([(a)]Beijing National Laboratory for Condensed Matter Physics and State Key Laboratory of Magnetism, Institute of Physics, Chinese Academy of Sciences, Beijing 100190, P. R. China [(b)]School of Physical Sciences, University of Chinese Academy of Sciences, Beijing 100190, P. R.

China [(c)]Key Laboratory of Magnetic Materials and Devices, Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences, Ningbo 315201, China)

10:45-11:00
[A0661] Development of coercivity in compositionally graded Sm-Fe-Ti/Sm-Co multilayered films
Gabriel Gomez [(a)], Andre Dias [(a)], Thibaut Devillers [(a)], Masaaki Ito [(b)],Masao Yano [(b)], Noritsugu Sakuma [(b)], Tetsuya Shoji [(b)], Akira Kato [(b)], Dominique Givord[(a)] and Nora M. Dempsey [(a)]
([(a)] Univ. Grenoble Alpes, Institut Néel, 38042 Grenoble, France [(b)] Advanced Material Engineering Div., Toyota Motor Corporatin, Susono 410-1193, Japan)

11:00-11:15
[A0587] A Comparative Study of Thermo-Magnetically Patterned Hard Magnetic Films Developed for Micro Systems Applications
Frederico O. KELLER[(a)], Ryogen FUJIWARA[(a)], Simon LE DENMAT[(a)], Richard HATTEL[(a)], Thibaut DEVILLERS[(a)], Nora M. DEMPSEY[(a)].
([(a)]Univ. Grenoble Alpes, CNRS, Institut NEEL, 38000 Grenoble, France)

11:15-11:30
[A0581] A High Throughput Study of Compositionally Graded FePt Thin Films
Yuan Hong[(a,b)], Isabelle de Moraes[(b)], Andre Dias[(b)], Thibaut Devillers[(b)], Vitoria M.T.S.Barthem[(b,c)], Dominique Givord[(b)], Dechang Zeng[(a)] and Nora M. Dempsey[(b)]
([(a)]School of Materials Science and Engineering, South China University of Technology,Guangzhou 510640, China [(b)]Univ. Grenoble Alpes, CNRS, Institut NEEL, 38000 Grenoble, France [(c)]Instituto de Fisica, Universidade Federal do Rio de Janeiro, Brazil)

11:30-11:45
[A0742] Magnetic phase separation and vertical exchange bias in single epitaxial low-doped LaSrMnO film
Xin Li[1], Tengfei Guo[2], Jingzhi Han[1]*
([1]State Key Laboratory for Mesoscopic Physics and School of Physics, Peking University, Beijing, 100871, PR China [2]Anhui Province Key Laboratory of Condensed Matter Physics at Extreme Conditions, High Magnetic Field Laboratory, Chinese Academy of Science ,Hefei,230031)

11:45-12:15
(Invited)[A0429] Nd-Fe-B films with perpendicular magnetic anisotropy
Xiaoxi Liu
(Department of Electrical and Computer Engineering, Shinshu University, 4-17-1 Wakasato, Nagano, 380-8553, Japan)

14:00-15:30 [Room II]

Chair: **A. Bollero** *(Division of Permanent Magnets, IMDEA Nanoscience, Madrid, Spain)*
Yikun Fang (*Division of Functional Materials, Central Iron and Steel Research Institute,*

Beijing 100081, China)

14:00-15:30 [Room II] Rare earth free permanent magnets 3

14:00-14:15
[A0423] Magnetic and structural properties of HIP powder Alnico magnets
O. M. Bovda[(a)], V. O. Bovda[(a)], I. V. Kolodiy[(a)], O. A. Kostin[(a)], L. V. Onischenko[(a)], I. M. Ostrovsky[(b)], O. S. Tortika[(a)], P. I. Shykhaylo[(b)]
([(a)]National Scientific Centre Kharkiv Institute of Physics and Technology, 61108, Kharkiv, Ukraine [(b)]Polus-N LLC, 61022, Kharkiv, Ukraine)

14:15-14:30
[A0629] Preparation and phase transformation of nanocrystalline MnAl-based magnetic materials
Pingzhan Si[(a,b)], Huidong Qian[(a)], Chuljin Choi[(a)], Jihoon Park[(a)]
([(a)]Korea Institute of Materials Science, Changwon, Republic of Korea [(b)]College of Materials Science and Engineering, China Jiliang University,Hangzhou, China)

14:30-14:45
[A0329] The thermal stability of the $L1_0$-Phase in the ternary Mn-Al-Ga-System
T. Mix[(a,b)], F. Bittner[(a,c)], J. Thielsch[(a)], K.-H. Müller[(a)], L. Schultz[(a,b,c)], T.G. Woodcock[(a)]
([(a)] IFW Dresden, Institute for Metallic Materials, Dresden, Germany [(b)] Department of Physics, TU Dresden, Dresden, Germany [(c)] Institute for Materials Science, TU Dresden, Dresden, Germany)

14:45-15:00
[A0433] Synthesis and magnetic properties of rare-earth-free iron-based nanostructures fabricated by wet chemical method
Da Li[(a)], Yong Li[(a)], Chuljin Choi[(b)], Zhidong Zhang[(a)]
([(a)] Institute of Metal Research, Chinese Academy of Sciences, China [(b)] Korea Institute of Materials Science, Korea)

15:00-15:30
(Invited) [A0346] Pathways for Coercivity Enhancement in Alnico Permanent Magnets
Wei Tang[(a)], Lin Zhou[(a)], Aaron G. Kassen[(a)], Emma M. H. White[(a)], Kevin W. Dennis[(a)], Matthew J. Kramer[(a)], Jun Cui[(a), (b)], and Iver E. Anderson[(a)]
([(a)]Division of Materials Sciences and Engineering, Ames Laboratory, Ames, IA50011, USA [(b)]Departmentof Material Science and Engineering, Iowa State University, Ames, IA 50011, USA)

16:00-17:00 [Room I] (Elites Banquet Hall/群英宴会厅) Closing Remarks