

IEEE TRANSACTIONS ON **MAGNETICS**

A PUBLICATION OF THE IEEE MAGNETICS SOCIETY

JULY 2016

VOLUME 52

NUMBER 7

IEMGAQ

(ISSN 0018-9464)



SELECTED PAPERS FROM THE 13TH JOINT MAGNETISM AND MAGNETIC
MATERIALS/INTERMAG CONFERENCE (MMM-INTERMAG 2016)
San Diego, California, January 11–15, 2016

IEEE TRANSACTIONS ON MAGNETICS

A PUBLICATION OF THE IEEE MAGNETICS SOCIETY

JULY 2016

VOLUME 52

NUMBER 7

IEMGAQ

(ISSN 0018-9464)

SELECTED PAPERS FROM THE 13TH JOINT MAGNETISM AND MAGNETIC MATERIALS/INTERMAG
CONFERENCE (MMM-INTERMAG 2016)
San Diego, California, January 11–15, 2016

- 0300701 **Publications Chair's Foreword**
P. Andrei
- 0300802 **Chairman's Preface**
B. Gurney
- 0300902 **Conference Chairs and Editors**
- 0301002 **Program Committee**
-

PAPERS

Fundamental Properties, Including Cooperative Phenomena

- 1000107 **Control of the Magnon–Photon Coupling**
L. Bai, K. Blanchette, M. Harder, Y. P. Chen, X. Fan, J. Q. Xiao, and C.-M. Hu
- 1000203 **Correlation Between the Field-Driven Microscopic Magnetization Reversal and the Disorders in Ferromagnetic Systems**
K.-S. Ryu and S.-C. Shin
- 1000304 **Size Effect on LuMn₂O₅ Nanorods**
T.-W. Hsu, C.-C. Yang, H.-W. Tu, Y.-X. Tong, and K.-S. Lin

Low Dimensional Systems

- 1100403 **Ferrimagnetism of Ti-Adsorbed Graphene**
Z. Qin, P. Liu, M. Feng, and X. Zuo
- 1100503 **Comparison With Ground States of Frustrated Quantum Spin Chain Systems A₂Cu₂Mo₃O₁₂ (A = Rb and Cs)**
A. Fujimura, Y. Yasui, Y. Yanagisawa, I. Terasaki, Y. Kono, S. Kittaka, and T. Sakakibara

Theory and Computation: Spin Phenomena, Dynamics, Interactions

- 1300404 **Non-Markovian Magnetization Dynamics for Uniaxial Nanomagnets**
P. Thibaudeau, J. Tranchida, and S. Nicolis
- 1300504 **Colored-Noise Magnetization Dynamics: From Weakly to Strongly Correlated Noise**
J. Tranchida, P. Thibaudeau, and S. Nicolis
- 1300604 **Ferromagnetic Resonance in Multilayer Perpendicular Films**
G. Parker and R. Wood
-

Spin Torque and Spin Injection

- 1400104 **A Methodology to Design Spin-Wave-Based Logic Gates in a Single Ferromagnetic Nanostripe Using Spin-Transfer Torque Effects**
X. Chen, Q. Wang, F. Bai, X. Tang, H. Zhang, and Z. Zhong
- 1400204 **Current-Induced Instability of a Perpendicular Ferromagnet in Spin Hall Geometry**
T. Taniguchi, S. Mitani, and M. Hayashi
- 1400304 **Effect of Mg Oxidation Degree on Rashba-Effect-Induced Torques in Ta/CoFeB/Mg(MgO) Multilayer**
N. Sato, A. El-Ghazaly, R. M. White, and S. X. Wang
- 1400404 **Current-Induced Domain-Wall Motion for Electron Flow in Ferromagnetic Pt/Co/Ni/Co/Pt Wires**
K.-S. Ryu, S.-H. Yang, L. Thomas, and S. Parkin
- 1400504 **The Physics of Spin-Transfer Torque Switching in Magnetic Tunneling Junctions in Sub-10 nm Size Range**
J. Hong, A. Hadjikhani, M. Stone, F. I. Allen, V. Safonov, P. Liang, J. Bokor, and S. Khizroev

Soft Magnetic Materials, Alloys and Films

- 2003104 **Perpendicular Standing Spin Wave and Magnetic Anisotropic Study on Amorphous FeTaC Films**
B. Samantaray, A. K. Singh, C. Banerjee, A. Barman, A. Perumal, and P. Mandal
- 2003204 **Calculation of Capacitance in High-Frequency Transformer Windings**
X. Liu, Y. Wang, J. Zhu, Y. Guo, G. Lei, and C. Liu

Hard Magnetic Materials, Alloys and Films

- 2100704 **Magnetic Properties of Interstitially Modified Ce-Nd-Fe-Mo-N Magnets Prepared by Spark-Plasma Sintering**
J. Kong, C. Zhou, and F. E. Pinkerton
- 2100804 **Mechanical Properties of La-Ce-Substituted Nd-Fe-B Magnets**
J. Jin, Y. Zhang, T. Ma, and M. Yan
- 2100904 **Improvement of Magnetic Performance of Nd-Fe-B-Type Die-Upset Magnet by RF₃-Doping**
J. Y. Kim, H. W. Kwon, J. G. Lee, and J. H. Yu
- 2101004 **Effect of Processing Parameters on the Magnetic Properties and Macrotexture of a Nd_{13.5}Fe_{73.8}Co_{6.7}B_{5.6}Ga_{0.4} Alloy Processed by Equal Channel Angular Pressing With Back Pressure**
E. Onal, R. Lapovok, H. Kishimoto, A. Kato, C. H. J. Davies, and K. Suzuki
- 2101104 **Bias Point Shift in the TMR Sensor Under the Media Field**
V. Venugopal, G. Wu, and S. Stokes
- 2101209 **Fabrication, Processing Technologies, and New Advances for RE-Fe-B Magnets**
D. N. Brown
- 2101304 **Anisotropic α -Fe/Nd-Fe-B Exchange-Spring Magnets Produced by High-Pressure Crystallization**
Z. Turgut, Y. Shen, S. Leontsev, J. C. Horwath, and S. L. Semiatin
- 2101404 **A Phenomenological Analysis on the Anisotropic Shrinkage of Nd-Fe-B Compacts During Sintering Process**
J. M. Byun, M. S. Kim, S. H. Kim, J. W. Kim, and Y. D. Kim
- 2101503 **Microstructures and Magnetic Properties of Annealed Zr-Co Alloys**
G.-T. Lee, K. W. Moon, K.-W. Jeon, and J. Kim
- 2101604 **Effects of Calcination Conditions on Magnetic Properties in Strontium Ferrite Synthesized by the Molten Salt Method**
K. Kim, K.-W. Jeon, K. W. Moon, M. K. Kang, and J. Kim

Nanostructured and Patterned Materials

- 2300504 **Generation of Propagating Spin Waves From Edges of Magnetic Nanostructures Pumped by Uniform Microwave Magnetic Field**
C. S. Davies and V. V. Kruglyak
- 2300604 **Multicore Magnetic Fe₃O₄@C Beads With Enhanced Magnetic Response for MRI in Brain Biomedical Applications**
Z. Vargas-Osorio, B. Argibay, Y. Piñeiro, C. Vázquez-Vázquez, M. A. López-Quintela, M. A. Álvarez-Pérez, T. Sobrino, F. Campos, J. Castillo, and J. Rivas
-

2300704 **Relevant Parameters for Magnetic Hyperthermia in Biological Applications: Agglomeration, Concentration, and Viscosity**

Y. Piñeiro, Z. Vargas-Osorio, M. Bañobre-López, Y. V. Kolen'ko, M. A. López-Quintela, and J. Rivas

2300803 **Ferromagnetism of Nanographite Structures in Carbon Microspheres**

E. Sharoyan, A. Mirzakhanyan, H. Gyulasaryan, C. Sanchez, A. Kocharian, O. Bernal, and A. Manukyan

Magnetic Semiconductors

2400204 **Angular Dependence of Tunneling Magnetoresistance in Hybrid Fe/GaAlAs/GaMnAs Magnetic Tunnel Junctions**

S. Choi, T. Yoo, S.-K. Bac, H. Lee, S. Lee, S. Lee, X. Liu, and J. K. Furdyna

Functional Materials Including Magnetocaloric, Magnetolectric, Magnetoelastic, Magneto-optic Materials, Metamaterials

2500804 **Magnetic Field Dependence of Dielectric Constant and Resistivity of $\text{Eu}_{0.98}\text{Ba}_{0.02}\text{TiO}_3$**

K. Rubi and R. Mahendiran

2500904 **Preparation and Characterization of Cerium Substituted Bismuth Dysprosium Iron Garnets for Magneto-Optic Applications**

N. Radha Krishnan, R. D. Jeffery, M. Martyniuk, R. C. Woodward, M. Saunders, J. M. Dell, and L. Faraone

2501004 **Magnetic and Magnetocaloric Properties of $\text{La}_{0.8-x}\text{Ag}_x\text{Ca}_{0.2}\text{MnO}_3$ Exhibiting the Crossover of First- and Second-Order Phase Transitions**

T. D. Thanh, D. C. Linh, T. V. Manh, T. L. Phan, and S. C. Yu

2501104 **Evaluation of Magnetorheological Elastomers With Oriented Fe–Ga Alloy Flakes for Force Sensing Applications**

B. Yoo, S.-M. Na, A. B. Flatau, and D. J. Pines

2501204 **Pressure Effect on Ferroelectric Properties of GdMn_2O_5 and TmMn_2O_5**

N. Poudel, M. Gooch, B. Lorenz, C.-W. Chu, J. Kim, and S.-W. Cheong

2501304 **Enhanced Sensitivity With Five-Phase Heterostructure Magnetolectric Sensor at Low Magnetic Bias Field**

L. Chen, Y. Wang, F. Qin, and D. Li

2501404 **Magnetocapacitance in $\text{CdCr}_{1.8}\text{In}_{0.2}\text{S}_4$ Single Crystal Annealed in Cadmium Vapor**

Y. Xie, X. Chen, Z. Zhang, W. Song, S. Zhou, and Z. Yang

Half Metallic Materials

2600204 **Half-Metallicity in CuCr_2S_4 Film: A Density Functional Study**

M. Feng, B. Shao, X.-W. Cao, and X. Zuo

2600304 **Substrate Effects on In-Plane Magnetic Anisotropy and Verwey Transition Temperatures of (100) Magnetite (Fe_3O_4) Films**

J. Dho, B. Kim, and S. Ki

2600404 **Structural and Magnetic Properties of Sputter-Deposited Mn–Fe–Ga Thin Films**

A. Niesen, C. Sterwerf, M. Glas, J.-M. Schmalhorst, and G. Reiss

Magnetic Materials for High Frequency Applications

2800304 **Substrate Influence on the Magnetization Dynamics of Ni-Fe Thin Films**

Y. Endo, Y. Mitsuzuka, T. Miyazaki, Y. Shimada, and M. Yamaguchi

2800404 **Broadband Analysis of Response From Magnetic Cores Used in Inductive Sensors for Pulsed Nuclear Magnetic Resonance Applications**

N. G. Prabhu Gaunkar, I. C. Nlebedim, I. Bulu, M. Mina, R. L. Hadimani, Y. Q. Song, and D. C. Jiles

2800504 **Deposition of Magnetolectric Ferrite Thin Films Using Multiple Targets Technique**

H. Izadkhah, S. Zare, S. Somu, and C. Vittoria

2800604 **Post-Processed Thin-Film GMI Magnetic Sensors**

S. N. Nejad, R. Mansour, and G.-X. Miao

Recording Physics and Modeling

3000804 **Influence of Parasitic Capacitance on Single and Dual 2-D Magnetic Recording Read Head Performance**

E. Auerbach, S. Gider, G. Albuquerque, and D. Mauri

-
- 3000904 **Microwave-Assisted Magnetic Recording on Dual-Thickness and Dual-Layer Bit-Patterned Media**
S. J. Greaves, Y. Kanai, and H. Muraoka
- 3001004 **Magnetization Response Spectroscopy of Superparamagnetic Nanoparticles Under Mixing Frequency Fields**
K. Wu, A. Batra, S. Jain, and J.-P. Wang
- 3001104 **Microwave-Assisted Magnetic Recording on Exchange Coupled Composite Media**
S. J. Greaves, Y. Kanai, and H. Muraoka
- 3001204 **Micromagnetic Simulation of Spin-Torque Oscillator for Microwave-Assisted Magnetic Recording—Interaction Between Write Head and STO and Optimum Injected Current**
Y. Kanai, T. Katayama, K. Yoshida, S. Greaves, and H. Muraoka
- 3001304 **Areal-Density Limits for Heat-Assisted Magnetic Recording and Perpendicular Magnetic Recording**
C. Rea, P. Subedi, K. Gao, H. Zhou, P.-L. Lu, P. J. Czoschke, S. Hernandez, M. Ma, R. Lopusnik, Y. Peng, J.-U. Thiele, A. Q. Wu, G. Ju, T. Rausch, M. Seigler, and E. Gage
- 3001404 **Parametric Comparison of Modeled and Measured Heat-Assisted Magnetic Recording Using a Common Signal-to-Noise Metric**
S. Hernández, P. Krivosik, P.-W. Huang, W. R. Eppler, T. Rausch, and E. Gage
- 3001507 **Multi-Track Joint Detection for Shingled Magnetic Recording on Bit Patterned Media With 2-D Sectors**
Y. Wang and B. V. K. V. Kumar
- 3001604 **Effect of Reader Sensitivity Rotation in TDMR With Head Skew**
R. Suzuto, Y. Nakamura, H. Osawa, Y. Okamoto, Y. Kanai, and H. Muraoka
- 3001706 **Improved BER Performance With Rotated Head Array and 2-D Detector in Two-Dimensional Magnetic Recording**
Y. Wang, B. Yuan, and K. K. Parhi
- Recording Mechanisms and Technologies*
- 3100804 **High-Frequency Magnetic Recording Using a Dual Write Head**
N. Akitaya, S. J. Greaves, and H. Muraoka
- 3100904 **Novel Method for Determining Absolute Position Information From Magnetic Patterns**
C.-Y. Lin, H.-S. Hsiao, and J.-Y. Chang
- Media Including Advanced, Heat-Assisted, Microwave-Assisted and Perpendicular*
- 3200704 **Substrate Bias Effects on Magnetic and Structural Properties of $L1_0$ -FePt Based Recording Media**
B. Varghese, K. K. M. Cher, J. Hu, T. S. Li, Y. Ding, and G. Ju
- 3200803 **Magnetic Anisotropy and Crystal Domain Variant in $L1_0$ -FePt Polycrystalline Films**
A. Hotta, T. Ono, N. Kikuchi, S. Okamoto, O. Kitakami, and T. Shimatsu
- 3200904 **Distinguishing Random and Spatially Deterministic Noise Components in Heat-Assisted Magnetic Recording**
M. Alex, H. Li, G. Bertero, and J.-G. Zhu
- 3201004 **Growth Mechanism of Columnar Grains in FePt-C Granular Films for HAMR Media Processed by Compositionally Graded Sputtering**
H. Pandey, A. Perumal, J. Wang, Y. K. Takahashi, and K. Hono
- 3201104 **Composite Structure With Superparamagnetic Writing Layer for Heat-Assisted Magnetic Recording**
Z. Liu and R. H. Victora
- 3201203 **Microwave-Assistance Effect on Magnetization Switching in Antiferromagnetically Coupled CoCrPt Granular Media**
Y. Nakayama, Y. Kusanagi, T. Shimatsu, N. Kikuchi, S. Okamoto, and O. Kitakami
- 3201304 **Long-Term Stability of Magnetic Tape for Data Storage Under an Accelerated Condition**
K. Katayama, Y. Chinda, O. Shimizu, T. Mikami, M. Suzuki, and H. Noguchi
-

-
- 3201404 **Effect of Mask Erosion on Patterning of FePt for Heat-Assisted Magnetic Recording Media Using Embedded Mask Patterning**
J. Zhu, P. Quarterman, and J.-P. Wang
- 3201504 **Measuring Temperature Dependence of Anisotropy Field in Heat-Assisted Magnetic Recording Media by Pump-Probe Method**
Z. Dai, H. Li, and J.-G. Zhu
- 3201603 **Structural and Magnetic Properties of $L1_0$ -FePt-Based Exchange Coupled Composite Films With FeRu Underlayers**
L. Lin, B. Yu, B. Ma, Z. Zhang, Q. Jin, and J. Wang
- 3201704 **Probing HAMR Media Thermal Properties With Pulsed Recording**
P.-O. Jubert, S. Burgos, V. Mehta, and M. Grobis
- 3201804 **Ion Irradiation-Induced Magnetic Transition of MnGa Alloy Films Studied by X-Ray Magnetic Circular Dichroism and Low-Temperature Hysteresis Loops**
D. Oshima, M. Tanimoto, T. Kato, Y. Fujiwara, T. Nakamura, Y. Kotani, S. Tsunashima, and S. Iwata
- 3201904 **Electronic Structure and Magnetic Properties of Mn-Substituted Fe-Pt**
J. Park, Y.-K. Hong, C.-D. Yeo, S.-G. Kim, D. S. Kuo, L. Gao, and J.-U. Thiele
- Heads, Head-Disk Interfaces, Lubes and Tribology*
- 3300904 **Measurement of Thickness Distribution of Molecularly Thin Lubricant Films on Head Sliders Using Ellipsometric Microscopy**
K. Fukuzawa, C. Yamashita, H. Ishikawa, S. Itoh, and H. Zhang
- 3301004 **Diamagnetic Oil Seal for Pivot Bearings of Hard Disk Drives**
H. Tani, S. Koganezawa, and N. Tagawa
- 3301104 **Rheological Properties of PFPE Lubricants at Elevated Temperatures**
P. S. Chung, W. Song, L. T. Biegler, and M. S. Jhon
- 3301204 **Physiochemical Response of Organic Molecules in Head-Disk Interface Under Heat-Assisted Magnetic Recording Environment**
W. Song, P. S. Chung, L. T. Biegler, and M. S. Jhon
- 3301304 **Design Optimization of Write Head for Shingled Magnetic Recording**
H. Wang, Y. Tabuse, K. S. Chan, Y. Kanai, Z. Yuan, and S. Shafidah
- 3301404 **Entropy-Based Multi-Resolution Head/Media Contact Detection for Hard Disk Drive**
A. Daugela, J. D. Trantham, and S. E. Ryun
- 3301504 **Effect of Thin Cr and Cu Adhesion Layers on Surface Plasmon Resonance at Au/SiO₂ Interfaces**
C.-M. Chow and J. A. Bain
- Magnetic Random Access Memory and Magnetic Logic Devices*
- 3400404 **Scaling Limits on All-Spin Logic**
S.-C. Chang, N. Kani, S. Manipatruni, D. E. Nikonov, I. A. Young, and A. Naeemi
- 3400505 **Theoretical Study of Magnetic Damping and Anisotropy of Fe/Pd (001) Superlattice**
T. Qu, S. C. Pandey, G. S. Sandhu, and R. H. Victora
- 3400604 **Influence of the Reference Layer Composition on the Back-End-of-Line Compatibility of Co/Ni-Based Perpendicular Magnetic Tunnel Junction Stacks**
Y. Tomczak, T. Lin, J. Swerts, S. Couet, S. Mertens, E. Liu, W. Kim, K. Sankaran, G. Pourtois, D. Tsvetanova, L. Souriau, S. Van Elshocht, G. S. Kar, and A. Furnemont
- 3400704 **Current-Induced Magnetization Switching of CoFeB/Ta/[Co/Pd (Pt)]-Multilayers in Magnetic Tunnel Junctions With Perpendicular Anisotropy**
S. Ishikawa, E. C. I. Enobio, H. Sato, S. Fukami, F. Matsukura, and H. Ohno
- 3400803 **Precise Damage Observation in Ion-Beam Etched MTJ**
Y. Ohsawa, N. Shimomura, T. Daibou, Y. Kamiguchi, S. Shirotori, T. Inokuchi, D. Saida, B. Altansargai, Y. Kato, H. Yoda, T. Ohkubo, and K. Hono
- 3400904 **Magnetic Properties of CoFeB-MgO Stacks With Different Buffer-Layer Materials (Ta or Mo)**
K. Watanabe, S. Fukami, H. Sato, F. Matsukura, and H. Ohno
-

3401004 **Experimental Observation of Back-Hopping With Reference Layer Flipping by High-Voltage Pulse in Perpendicular Magnetic Tunnel Junctions**

W. Kim, S. Couet, J. Swerts, T. Lin, Y. Tomczak, L. Souriau, D. Tsvetanova, K. Sankaran, G. L. Donadio, D. Crotti, S. Van Beek, S. Rao, L. Goux, G. S. Kar, and A. Furnemont

3401104 **Improvement of Thermal Tolerance of CoFeB–MgO Perpendicular-Anisotropy Magnetic Tunnel Junctions by Controlling Boron Composition**

H. Honjo, S. Ikeda, H. Sato, S. Sato, T. Watanabe, S. Miura, T. Nasuno, Y. Noguchi, M. Yasuhira, T. Tanigawa, H. Koike, M. Muraguchi, M. Niwa, K. Ito, H. Ohno, and T. Endoh

3401204 **Operation of [Co/Pd] Nanowire Sequential Memory Utilizing Bit-Shift of Current-Driven Magnetic Domains Recorded and Reproduced by Magnetic Head**

M. Okuda, Y. Miyamoto, M. Kawana, E. Miyashita, N. Saito, and S. Nakagawa

3401304 **Parallel Read-Out and Database Search With Magnonic Holographic Memory**

F. Gertz, A. Kozhevnikov, Y. Khivintsev, G. Dudko, M. Ranjbar, D. Gutierrez, H. Chiang, Y. Filimonov, and A. Khitun

Magnetic Sensors and Devices, Including Magneto-Optic, Microwave, Millimeter and Terahertz Frequency Devices

4001004 **Low-Frequency Noise Characterization of CoFeB/MgO/CoFeB MTJ-Based Perpendicular Field Sensor**

B. Das, Y. C. Lee, L. C. Li, L. Yi-Shiou, Y. W. Suen, L. Horng, T.-H. Wu, C. R. Chang, and J.-C. Wu

4001104 **The Output Characteristics of Galfenol Magnetostrictive Displacement Sensor Under the Helical Magnetic Field and Stress**

L. Zhang, B. Wang, X. Yin, R. Zhao, L. Weng, Y. Sun, B. Cui, and W. Liu

4001204 **Tunneling-Magnetoresistance Vector Magnetometer With Deflection Flux-Chopper**

V. S. Luong, J.-T. Jeng, J.-H. Hsu, C.-R. Chang, and C.-C. Lu

4001304 **Magnetic Tunnel Junctions With [Co/Pd]-Based Reference Layer and CoFeB Sensing Layer for Magnetic Sensor**

T. Nakano, M. Oogane, T. Furuichi, K. Ao, H. Naganuma, and Y. Ando

4001404 **Pulse Wave Detection Magnetoelastic Sensing Device Based on Nanocrystalline Microwires for the Indirect Diagnosis of Paroxysmal Rhythm Disorders**

H. Chiriac, C. Hlenschi, S. Corodeanu, M. Grecu, T.-A. Óvári, and N. Lupu

4001504 **A Passive Electric Current Sensor Based on Ferromagnetic Invariant Elastic Alloy, Piezoelectric Ceramic, and Permalloy Yoke**

W. He, J. Zhang, C. Qu, J. Wu, and J. Peng

4001604 **Fundamental Study of Non-Contact Water Salinity Sensor by Using Electromagnetic Means for Seawater Desalination Plants**

M. Sonehara, N. Van Toai, and T. Sato

4001705 **Magnetic Particle Nanosensing by Nucleation of Domain Walls in Ultra-Thin CoFeB/Pt Devices**

J. Wells, P. Krzysteczko, A. Caprile, B. Gribkov, H. W. Schumacher, J. H. Lee, R. Cowburn, and O. Kazakova

4001804 **Tunneling Magnetoresistive Sensors for High-Frequency Corona Discharge Location**

G. Zhao, J. Hu, Y. Ouyang, Z. Wang, S. X. Wang, and J. He

4001904 **Magnetolectric Effect for Rotational Parameters Detection**

Z. Wu, L. Bian, J. Zhang, and X. Wang

4002004 **A Fluxgate Current Sensor With an Amphitheater Busbar**

P. Ripka, M. Příbil, V. Petrucha, V. Grim, and K. Draxler

4002104 **Linearization of Magnetic Sensors With a Weakly Pinned Free-Layer MTJ Stack Using a Three-Step Annealing Process**

E. Paz, R. Ferreira, and P. P. Freitas

4002208 **Integrated Magnetics and Multiferroics for Compact and Power-Efficient Sensing, Memory, Power, RF, and Microwave Electronics**

H. Lin, Y. Gao, X. Wang, T. Nan, M. Liu, J. Lou, G. Yang, Z. Zhou, X. Yang, J. Wu, M. Li, Z. Hu, and N. X. Sun

-
- 4002304 **Ultrahigh Sensitivity of Anomalous Hall Effect Sensor Based on Cr-Doped Bi₂Te₃ Topological Insulator Thin Films**
Y. Ni, Z. Zhang, I. C. Nlebedim, and D. C. Jiles
- 4002405 **Bidirectional Current–Voltage Converter Based on Coil-Wound, Intermagnetically Biased, Heterostructured Magnetolectric Ring**
S. Zhang, M. Zhang, and S. W. Or
- 4002503 **Sensitivity Enhancement of a Pd/Co Bilayer Film for Hydrogen Gas Sensing Using a Perpendicular-to-Plane Ferromagnetic Resonance Configuration**
C. Lueng, P. J. Metaxas, and M. Kostylev
- Spin Torques And Currents In Metals, Semiconductors And Multiferroics*
- 4100204 **Spin Hall Angle and Spin Diffusion Length in Au–Cu Alloy**
J. Wu, L. Zou, T. Wang, Y. Chen, J. Cai, J. Hu, and J. Q. Xiao
- Giant Magnetoresistance, Tunneling Magnetoresistance And Magnetic Tunnel Junctions*
- 4400204 **Tunnel Magnetoresistance of Ferromagnetic Antiperovskite MnGaN/MgO/CoFeB Perpendicular Magnetic Tunnel Junctions**
H. Lee, H. Sukegawa, J. Liu, Z. Wen, S. Mitani, and K. Hono
- 4400304 **Magnetic Field Effects on Tunnel Magnetoresistance of a Coupled Carbon-Nanotube-Molecular-Magnet System**
A. Płomińska and I. Weymann
- 4400404 **Enhancement of Interfacial Spin-Dependent Scattering of Co₂Fe(Ga_{0.5}Ge_{0.5})/Ag/Co₂Fe(Ga_{0.5}Ge_{0.5}) Current-Perpendicular-to-Plane Giant Magnetoresistive Pseudo-Spin Valves**
J. W. Jung, Y. Sakuraba, S. Bosu, S. Li, and K. Hono
- 4400504 **Underlayer Effect on Perpendicular Magnetic Anisotropy in Co₂₀Fe₆₀B₂₀/MgO Films**
P. J. Chen, Y. L. Iunin, S. F. Cheng, and R. D. Shull
- 4400604 **Perpendicular Anisotropy in Heusler Alloy Layers Induced by a V Seed Layer**
W. Frost and A. Hirohata
- Spin Caloritronics*
- 4500104 **Static Magnetic Proximity Effect in Pt Layers on Sputter-Deposited NiFe₂O₄ and on Fe of Various Thicknesses Investigated by XRMR**
T. Kuschel, C. Klewe, P. Bougiatioti, O. Kuschel, J. Wollschläger, L. Bouchenoire, S. D. Brown, J.-M. Schmalhorst, D. Meier, and G. Reiss
- Magnetic Fluids and Applications*
- 4600204 **Magnetoviscosity of Paraffin-Based Barium Ferrite Ferrofluid**
N. Gautam, G. Thirupathi, and R. Singh
- 4600304 **Experimental Characterization of Magnetorheological Fluids Using a Custom Searle Magnetorheometer: Influence of the Rotor Shape**
N. Golinelli, A. C. Becnel, A. Spaggiari, and N. M. Wereley
- MEMS for Magnetic Devices*
- 4700204 **Magnetic Nanocomposite Cilia Energy Harvester**
M. A. Khan, A. Alfadhel, and J. Kosel
- Exchange Bias, Hybrid Effects*
- 4800104 **Influence of Thermal Deformation on Exchange Bias in FeGa/IrMn Bilayers Grown on Flexible Polyvinylidene Fluoride Membranes**
Y. Zhang, Q. Zhan, X. Rong, H. Li, Z. Zuo, Y. Liu, B. Wang, and R.-W. Li
- 4800204 **Room Temperature Exchange Bias in BiFeO₃/Co–Fe Bilayers**
C. Sterwerf, M. Meinert, E. Arenholz, J.-M. Schmalhorst, and G. Reiss
- Biomagnetism*
- 5000504 **Mechanical Stress on Suspended Cortical Bone Sample by Low Frequency Magnetic Field**
S. M. Schwab, C. Androjna, E. I. Waldorff, J. T. Ryaby, L. R. Moore, R. J. Midura, and M. Zborowski
- 5000604 **Pulsed Electromagnetic Fields Stimulate Cellular Proliferation in Different Types of Cells**
H.-W. Cho, S.-N. Kim, K. K. Kim, K. Kim, and K.-J. Kim
-

-
- 5000704 **Detection of Monosodium Urate Crystals for Gout Diagnosis Using Magnetic Fields and Near-Infrared Light**
Y. Takeuchi and M. Iwasaka
- 5000804 **Investigational Effect of Brain-Scalp Distance on the Efficacy of Transcranial Magnetic Stimulation Treatment in Depression**
E. G. Lee, W. Duffy, R. L. Hadimani, M. Waris, W. Siddiqui, F. Islam, M. Rajamani, R. Nathan, and D. C. Jiles
- 5000904 **Virtual Blood-Flow Controlling System: Optimization of Human Bioactivity Under Exposure to Magnetic Fields**
H. Nakagawa and M. Ohuchi

Biomedical Diagnostics and Imaging

- 5100504 **Improvement in Efficiency of Transcranial Magnetic Stimulator Coil by Combination of Iron Core Plates Laminated in Different Directions**
K. Yamamoto, Y. Miyawaki, Y. Saitoh, and M. Sekino
- 5100604 **Numerical Analyses of Transcranial Magnetic Stimulation Based on Individual Brain Models by Using a Scalar-Potential Finite-Difference Method**
K. Yamamoto, Y. Takiyama, Y. Saitoh, and M. Sekino

Magnetic Materials in Biological Applications

- 5200304 ***In Vitro* Viscosity Measurement on Superparamagnetic Nanoparticle Suspensions**
K. Wu, C. Ye, J. Liu, Y. Wang, Y. Feng, and J.-P. Wang
- 5200404 **Investigation of Coil Designs for Transcranial Magnetic Stimulation on Mice**
P. Rastogi, R. L. Hadimani, and D. C. Jiles

Magnetic Materials in Therapeutics and Medicine

- 5400204 **Computational Study of Kinematics of Capture of Magnetic Particles by Stent: 2-D Model**
S. Vyas, V. Genis, and G. Friedman
- 5400304 **Electronic Measurements in an Alternating Magnetic Field for Studying Magnetic Nanoparticle Hyperthermia: Minimizing Eddy Current Heating**
Z. Boekelheide, Z. A. Hussein, and S. Hartzell

Measurement of Magnetic Properties—Static

- 6000405 **Magnetotransport Measurements of Domain Wall Propagation in Individual Multisegmented Cylindrical Nanowires**
H. Mohammed, E. V. Vidal, Y. P. Ivanov, and J. Kosel

Measurement of Magnetic Properties—Dynamic

- 6100404 **Enhancement of Medium Frequency Hysteresis Loop Measurements Over a Wide Temperature Range**
B. Ahmadi, F. Mazaleyrat, G. Chaplier, V. Loyau, and M. LoBue

Nondestructive Evaluation Including Magnetics and Eddy Currents

- 6201504 **Detection of Inner Corrosion of Steel Construction Using Magnetic Resistance Sensor and Magnetic Spectroscopy Analysis**
K. Tsukada, Y. Haga, K. Morita, N. Song, K. Sakai, T. Kiwa, and W. Cheng

Power Losses and Eddy Currents

- 6301304 **Magnet Shape Optimization of Surface-Mounted Permanent-Magnet Motors to Reduce Harmonic Iron Losses**
F. Chai, P. Liang, Y. Pei, and S. Cheng
- 6301404 **Predicting Iron Losses in Soft Magnetic Materials Under DC Bias Conditions Based on Steinmetz Premagnetization Graph**
W. Chen, X. Huang, S. Cao, J. Ma, and Y. Fang

Magnetic Imaging Including Microscopy, Measurements, Instrumentation

- 6500304 **Holographic Magnetic Imaging of Single-Layer Nanocontact Spin-Transfer Oscillators**
E. O. Burgos Parra, N. Bukin, M. Dupraz, G. Beutier, S. R. Sani, H. Popescu, S. A. Cavill, J. Åkerman, N. Jaouen, P. S. Keatley, R. J. Hicken, G. van der Laan, and F. Y. Ogrin
-

Computational Magnetics

- 7004404 **Analytical Magnetic Field Calculation of Coaxial Magnetic Gear With Flux Concentrating Rotor**
H. M. Shin and J. H. Chang
- 7004503 **Magnetism of Asymmetrically Terminated FeRh(001) Thin Films: A First-Principle Study**
S. Jekal, S. H. Rhim, and S. C. Hong
- 7004604 **2-D Magnetic Domain Patterns on Thin Films With Perpendicular Magnetic Anisotropy**
K. Iwano, C. Mitumata, and K. Ono

Micromagnetic Methods And Applications

- 7100304 **Unexpected Width of Minor Magnetic Hysteresis Loops in Nanostructures**
A. Bachleitner-Hofmann, C. Abert, F. Bruckner, P. Palmesi, A. Satz, and D. Suess
- 7100404 **Optimum Multilayer Anisotropy Distribution for Microwave-Assisted Magnetic Recording [CoX/Pt]_n Media**
J. Li, Z. Zhao, L. Wang, M. Zhang, and D. Wei

Numerical Methods

- 7209604 **Mechanical Deformation and Body Force Density Due to the Generalized Korteweg–Helmholtz Force Density Method Employing the Virtual Air-Gap Scheme**
J.-H. Choi, C. Kwak, H.-S. Choi, H. Kim, and S.-H. Lee

Hysteresis Modeling

- 7300904 **Vector Magnetization of a Distribution of Uniaxial Particles**
E. Della Torre, A. Jamali, H. ElBidweihy, and L. H. Bennett

Finite Element Modeling

- 7403105 **Thermofluid Analysis in Magnetic Hyperthermia Using Low Curie Temperature Particles**
I. Astefanoaei, I. Dumitru, H. Chiriac, and A. Stancu
- 7403204 **Optimizing the Dimensions of an Inverse-Magnetostrictive MEMS Pressure Sensor by Means of an Iterative Finite-Element Scheme**
M. Löffler, M. Nierla, M. Kadur, M. Hoffmann, A. Sutor, and R. Lerch
- 7403304 **Design of Novel Shaftless Pump-Jet Propulsor for Multi-Purpose Long-Range and High-Speed Autonomous Underwater Vehicle**
Y. Shen, P. Hu, S. Jin, Y. Wei, R. Lan, S. Zhuang, H. Zhu, S. Cheng, J. Chen, D. Wang, and D. Liu
- 7403404 **Prediction of Flux Loss in a Nd–Fe–B-Bonded Magnet Under an External Magnetic Field**
S. Horita, T. Yanai, M. Nakano, and H. Fukunaga

Electromagnetic Devices – Not Electrical Machines

- 8001304 **Performance Analysis of a Novel Triple-Permanent-Magnet-Excited Magnetic Gear and Its Design Method**
Y. Chen, W. N. Fu, and W. Li
- 8001404 **Analytical Surface Charge Method for Rotated Permanent Magnets: Boundary Element Method Comparison and Experimental Validation**
J. R. M. van Dam, J. J. H. Paulides, W. S. P. Robertson, M. Dhaens, and E. A. Lomonova
- 8001504 **Low-Profile Multiband Ferrite Antenna for Telematics Applications**
W. Lee, Y.-K. Hong, J. Park, M. Choi, J. Lee, I.-S. Baek, N.-P. Hur, and W.-M. Seong

Electrical Machines

- 8103904 **Comparative Analysis of End Effect in Partitioned Stator Flux Reversal Machines Having Surface-Mounted and Consequent Pole Permanent Magnets**
Z. Z. Wu and Z. Q. Zhu
- 8104004 **Novel Hybrid-Excited Switched-Flux Machine Having Separate Field Winding Stator**
H. Hua and Z. Q. Zhu
- 8104105 **Reduction of Cogging Torque and Torque Ripple in Interior PM Machines With Asymmetrical V-Type Rotor Design**
W. Ren, Q. Xu, Q. Li, and L. Zhou
- 8104204 **Modeling Torque Characteristics and Maximum Torque Control of a Three-Phase, DC-Excited Flux-Switching Machine**
S.-M. Yang, J.-H. Zhang, and J.-Y. Jiang
-

-
- 8104304 **Equivalent Circuit Modeling of a Hysteresis Interior Permanent Magnet Motor for Electric Submersible Pumps**
S. F. Rabbi and M. A. Rahman
- 8104404 **Influence on Vibration and Noise of Squirrel-Cage Induction Machine With Double Skewed Rotor for Different Slot Combinations**
L. Wang, X. Bao, C. Di, and Y. Zhou
- 8104504 **Investigation of Unbalanced Magnetic Force in Magnetic Geared Machine Using Analytical Methods**
X. Zhang, X. Liu, and Z. Chen
- 8104604 **Performance Improvement of Partitioned Stator Switched Flux Memory Machines With Triple-Magnet Configuration**
H. Yang, Z. Q. Zhu, H. Lin, Y. Zhang, S. Fang, Y. Huang, and N. Feng
- 8104704 **High-Performance Fault Tolerant Halbach Permanent Magnet Vernier Machines for Safety-Critical Applications**
L. Xu, G. Liu, W. Zhao, J. Ji, and X. Fan
- 8104804 **Design and Analysis of Low-Cost Tubular Fault-Tolerant Interior Permanent-Magnet Motor**
H. Zhou, Z. Lu, W. Zhao, G. Liu, and L. Xu
- 8104904 **Analysis on the Pitching Moment in Permanent-Magnet Linear Synchronous Motor for Linear Motion Stage Systems**
K.-H. Shin, S.-H. Lee, H.-W. Cho, C.-H. Park, J.-Y. Choi, and G. Khim
- 8105005 **A Novel Dual Three-Phase Permanent Magnet Synchronous Motor With Asymmetric Stator Winding**
Y. Demir and M. Aydin
- 8105104 **Investigation of a New Ironless-Stator Self-Bearing Axial Flux Permanent Magnet Motor**
W. Geng and Z. Zhang
- 8105204 **A New Coreless Axial Flux Interior Permanent Magnet Synchronous Motor With Sinusoidal Rotor Segments**
M. Aydin and M. Gulec
- 8105304 **Non-Invasive Detection of Rotor Short-Circuit Fault in Synchronous Machines by Analysis of Stray Magnetic Field and Frame Vibrations**
M. Cuevas, R. Romary, J.-P. Lecointe, and T. Jacq
- 8105404 **Novel Structure of Three-Axis Active-Control-Type Magnetic Bearing for Reducing Rotor Iron Loss**
T. Matsuzaki, M. Takemoto, S. Ogasawara, S. Ota, K. Oi, and D. Matsushashi
- 8105504 **Investigation Into a Magnetic-Field-Modulated Brushless Double-Rotor Machine With the High-Strength and Low-Loss Modulating Ring Rotor**
J. Bai, Y. Liu, C. Tong, Z. Song, and P. Zheng
- 8105604 **A Study of the Influence of Quasi-Halbach Arrays on a Torus Machine**
I. P. Wiltuschnig, P. R. Eckert, D. G. Dorrell, and A. F. Flores Filho
- 8105704 **Angle-Sensorless Zero- and Low-Speed Control of Bearingless Machines**
T. Wellerdieck, T. Nussbaumer, and J. W. Kolar
- 8105804 **Detection of Partial Demagnetization Fault in PMSMs Operating Under Nonstationary Conditions**
C. Wang, M. Delgado Prieto, L. Romeral, Z. Chen, F. Blaabjerg, and X. Liu
- 8105904 **Reduction of Eddy-Current Losses in Fractional-Slot Concentrated-Winding Synchronous PM Machines**
G. Choi and T. M. Jahns
- 8106004 **A Novel Current Injection-Based Online Parameter Estimation Method for PMSMs Considering Magnetic Saturation**
G. Feng, C. Lai, and N. C. Kar
- 8106104 **Novel Brushless Wound Rotor Synchronous Machine With Zero-Sequence Third-Harmonic Field Excitation**
G. Jawad, Q. Ali, T. A. Lipo, and B.-I. Kwon
-

-
- 8106204 **Rotor Pole Optimization of Novel Axial-Flux Brushless Doubly Fed Reluctance Machine for Torque Enhancement**
S. Khaliq, S. Atiq, T. A. Lipo, and B.-I. Kwon
- 8106304 **Analysis and Design of a Hybrid Rare-Earth-Free Permanent Magnet Reluctance Machine by Frozen Permeability Method**
H. Hwang, S. Bae, and C. Lee
- 8106405 **Novel 6/7 Stator/Rotor Hybrid Excitation Doubly Salient Permanent Magnet Machine**
W. Xu and M. He
- 8106504 **Optimal Design of a New Interior Permanent Magnet Motor Using a Flared-Shape Arrangement of Ferrite Magnets**
K.-Y. Yoon and B.-I. Kwon
- 8106604 **Analysis and Design of a Double-Stator Flux-Switching Permanent Magnet Machine Using Ferrite Magnet in Hybrid Electric Vehicles**
D. Kim, H. Hwang, S. Bae, and C. Lee
- 8106704 **A Novel Technique for Two-Phase BLDC Motor to Avoid Demagnetization**
T. Yazdan, W. Zhao, T. A. Lipo, and B.-I. Kwon
- 8106805 **Analytical Investigation Into Magnet Eddy Current Losses in Interior Permanent Magnet Motor Using Modified Winding Function Theory Accounting for Pulsewidth Modulation Harmonics**
A. Balamurali, C. Lai, A. Mollaeian, V. Loukanov, and N. C. Kar
- 8106904 **Efficiency Improvement of Overall PMSM-Inverter System Based on Artificial Bee Colony Algorithm Under Full Power Range**
X. Ding, G. Liu, M. Du, H. Guo, C. Duan, and H. Qian

Motors, Generators and Actuators

- 8202404 **Developments of an Efficient Analytical Scheme for Optimal Composition Designs of Tubular Linear Magnetic-Geared Machines**
C.-T. Liu, K.-Y. Hung, and C.-C. Hwang
- 8202504 **Improvement of Magnetic Actuator Capable of Movement on Magnetic Substance**
H. Yaguchi and S. Sakuma
- 8202604 **Analysis of Dynamic Unbalanced Magnetic Pull in Induction Motor With Dynamic Eccentricity During Starting Period**
Y. Zhou, X. Bao, C. Di, and L. Wang
- 8202704 **Cogging Force Analysis of Linear Permanent Magnet Machines Using a Hybrid Analytical Model**
S. Ouagued, Y. Amara, and G. Barakat
- 8202804 **A Non-Resonant Magnetolectric Energy Converter for Scavenging Magnetic Field Energy From Two-Wire Power Cords**
W. He, C. Qu, J. Zhang, J. Wu, and J. Peng
- 8202904 **Irreversible Demagnetization Analysis of Permanent Magnet Materials in a Novel Flux Reversal Linear-Rotary Permanent Magnet Actuator**
K. Guo, S. Fang, Y. Zhang, H. Yang, H. Lin, S. L. Ho, and N. Feng
- 8203004 **Design Criteria, Modeling, and Verification of Tubular Transverse Flux Machines for Force-to-Current Ratio Improvement in Direct Drive Applications**
Q. Wang, Y. Xu, Y. Li, and J. Zou
- 8203104 **Analysis of a Double Stator Linear Rotary Permanent Magnet Motor With Orthogonally Arrayed Permanent Magnets**
L. Xu, M. Lin, X. Fu, and N. Li
- 8203204 **Unbalanced Magnetic Forces Due to Rotor Eccentricity in a Toroidally Wound BLDC Motor**
D. Kim, M. D. Noh, and Y.-W. Park
- 8203304 **A Novel Coaxial Magnetic Gear and Its Integration With Permanent-Magnet Brushless Motor**
X. Zhang, X. Liu, and Z. Chen
- 8203404 **Comparative Study of Electromagnetic Performance of High-Speed Synchronous Motors With Rare-Earth and Ferrite Permanent Magnets**
K.-H. Kim, H.-I. Park, S.-M. Jang, D.-J. You, and J.-Y. Choi
-

-
- 8203504 **Cogging-Torque Reduction of Transverse-Flux Motor by Skewing Stator Poles**
Y. Ueda, H. Takahashi, A. Ogawa, T. Akiba, and M. Yoshida
- 8203604 **Optimum Iron Pole Design of a Tubular Linear Synchronous Machine With Double-Sided Axially Magnetized Permanent Magnets Considering Leakage Flux**
K.-H. Shin, H.-I. Park, J.-M. Kim, H.-W. Cho, and J.-Y. Choi
- 8203704 **Electromagnetic Performance Analysis of a New Stator-Partitioned Flux Memory Machine Capable of Online Flux Control**
X. Zhu, Y. Chen, Z. Xiang, L. Yang, and L. Xu
- 8203804 **Direct Voltage Control of Dual-Stator Brushless Doubly Fed Induction Generator for Stand-Alone Wind Energy Conversion Systems**
X. Wei, M. Cheng, W. Wang, P. Han, and R. Luo
- 8203904 **An Improved Method for Armature-Reaction Magnetic Field Calculation of Interior Permanent Magnet Motors**
P. Liang, Y. Pei, F. Chai, Y. Bi, and S. Cheng
- 8204004 **Electromagnetic Performance Analysis and Verification of a New Flux-Intensifying Permanent Magnet Brushless Motor With Two-Layer Segmented Permanent Magnets**
X. Zhu, S. Yang, Y. Du, Z. Xiang, and L. Xu
- 8204104 **Current Control of WRSM Considering Magnetic Saturation Phenomenon**
H.-S. Seol, J.-M. Jeong, J. Lee, and C.-S. Jin
- 8204205 **Development of a Limited-Angle Torque Motor With a Moving Coil**
J. Zou, G. Yu, Y. Xu, Y. Wei, and Q. Wang
- 8204304 **Usage of the Inductive Energy Storage in the Field Winding for Driving the Variable Reluctance Motor**
J. Bao, K. Boynov, J. Paulides, and E. Lomonova
- 8204404 **Characterization of Electromagnetic Rotor Material Properties and Their Impact on an Ultra-High Speed Spinning Ball Motor**
M. Schuck, T. Nussbaumer, and J. W. Kolar
- 8204504 **Sensorless Torque and Thrust Estimation of a Rotational/Linear Two Degrees-of-Freedom Switched Reluctance Motor**
Y. Sato, K. Murakami, and Y. Tsuboi
- 8204604 **A Small Axial-Flux Vernier Machine With Ring-Type Magnets for the Auto-Focusing Lens Drive System**
F. Zhao, M.-S. Kim, B.-I. Kwon, and J.-H. Baek
- 8204705 **Design and Analysis of Brushless Doubly Fed Reluctance Machine for Renewable Energy Applications**
M.-F. Hsieh, Y.-H. Chang, and D. G. Dorrell
- 8204804 **Power Factor Improvement of a Linear Vernier Permanent-Magnet Machine Using Auxiliary DC Field Excitation**
T. W. Ching, K. T. Chau, and W. Li
- 8204904 **Hysteresis Torque Estimation Method Based on Iron-Loss Analysis for Permanent Magnet Synchronous Motor**
S.-W. Hwang, M.-S. Lim, and J.-P. Hong
- 8205004 **A 32,000 r/min Axial Flux Permanent Magnet Machine for Energy Storage With Mechanical Stress Analysis**
S. Kumar, T. A. Lipo, and B.-I. Kwon
- Large Scale Electromagnetic Systems And Magnetic Levitation*
- 8300104 **Analysis and Control of the Electromagnetic Coupling Effect of the Levitation and Guidance Systems for a Semi-High-Speed MAGLEV Using a Magnetic Equivalent Circuit**
J.-H. Jeong, C.-W. Ha, J. Lim, and J.-Y. Choi
- 8300204 **Influence of Lateral-Impact Force on Electropermanent Magnet Suspension Conveyor With Inherent Guidance Force**
H.-J. Shin, J.-Y. Choi, K.-H. Jung, J.-M. Lee, and C.-H. Kim
-

8300304 **Improving Operational Performance of Magnetically Suspended Flywheel With PM-Biased Magnetic Bearings Using Adaptive Resonant Controller and Nonlinear Compensation Method**
Z. Su, D. Wang, J. Chen, X. Zhang, and L. Wu

8300405 **Subdomain Method for Permanent Magnet Biased Homo-Polar Radial Magnetic Bearing**
K. Wang, D. Wang, Y. Shen, X. Zhang, J. Chen, and Y. Zhang

Inductors and Transformers

8400604 **Integrated On-Chip Solenoid Inductors With Nanogranular Magnetic Cores**
L. Wang, Y. Wang, H. Zhang, Z. Zhong, L. Wang, D. Peng, and F. Bai

8400704 **Performance Comparison of Finemet and Metglas Tape Cores Under Non-Sinusoidal Waveforms With DC Bias**
H. Kosai, Z. Turgut, T. Bixel, and J. Scofield

8400804 **Planar PCB Transformer Model for Circuit Simulation**
L. A. R. Tria, D. Zhang, and J. E. Fletcher

8400904 **Fast, In Situ Demagnetization Method for Protection Current Transformers**
T. Zheng, E. Hu, H. Yang, R. Zhao, Y. C. Kang, P. Wall, and V. Terzija

8401004 **Efficiency Study of Vertical Distance Variations in Wireless Power Transfer for E-Mobility**
M. Ghorbani Eftekhari, Z. Ouyang, M. A. E. Andersen, P. B. Andersen, L. A. de S. Ribeiro, and E. Schaltz

8401104 **Design of a Coupling Transformer With a Virtual Air Gap for Dynamic Voltage Restorers**
V. Majchrzak, G. Parent, J.-F. Brudny, V. Costan, and P. Guinic

8401204 **Integrated Transformers With Magnetic Thin Films**
H. Wu, M. Lekas, R. Davies, K. L. Shepard, and N. Sturcken

8401304 **Inductive Charging Coupler With Assistive Coils**
S. Wang, D. G. Dorrell, Y. Guo, and M.-F. Hsieh

8401404 **Inductance Maximization by Mitigation of Encapsulation Stresses of PCB Embedded Ferrite Broadband Transformers**
D. Bowen, C. Krafft, and I. Mayergoyz

8401504 **High DC Current Density On-Chip Strip-Line Inductors Integrated With Magnetic Film**
M. Khmour, H. Wu, and H. Yu

Control Propulsion and Shielding

8500104 **Continuous-Behavior and Discrete-Time Combined Control for Linear Induction Motor-Based Urban Rail Transit**
J.-Q. Li, W.-L. Li, G.-Q. Deng, and Z. Ming

Power And Control Magnetics

8600105 **Investigation of a Vector-Controlled Five-Phase Flux-Switching Permanent-Magnet Machine Drive System**
M. Tong, W. Hua, P. Su, M. Cheng, and J. Meng

8600204 **Self-Contained Wireless Hall Current Sensor Applied for Two-Wire Zip-Cords**
C. Sun, Y. Wen, P. Li, W. Ye, J. Yang, J. Qiu, and J. Wen

Applications Including Wind Generators, Hybrid Electric Vehicles and Automotive

8700205 **Scaling of Pseudo Direct Drives for Wind Turbine Application**
A. Penzkofer and K. Atallah

8700305 **Efficiency Improvement and Thermal Analysis of a Totally Enclosed Self-Cooling Doubly Salient Generator With Optimized Stator Yoke**
Z. Zhang, Y. Wang, Y. Sang, and L. Yu

8700404 **Coil Design and Efficiency Analysis for Dynamic Wireless Charging System for Electric Vehicles**
X. Zhang, Z. Yuan, Q. Yang, Y. Li, J. Zhu, and Y. Li

8700504 **A Novel Control Strategy for Online Harmonic Compensation in Parametrically Unbalanced Induction Motor**
E. Ghosh, A. Mollaeian, W. Hu, and N. C. Kar

Superconductivity in Magnetic Devices

- 9000104 **Finite Element Model Simplification Methods for Stacks of Superconducting Tapes**
B. J. H. de Bruyn, J. W. Jansen, and E. A. Lomonova

Emerging Topics Including Coupled Functionalities, New Devices, Emergent Phenomena etc.

- 9100304 **Functionalized Magnetic Force Enhances Magnetic Nanoparticle Guidance: From Simulation to Crossing of the Blood–Brain Barrier *In Vivo***
T. D. Do, F. U. Amin, Y. Noh, M. O. Kim, and J. Yoon
- 9100404 **Design and Analysis of a Shoe-Embedded Power Harvester Based on Magnetic Gear**
Y. Liu, W. Fu, W. Li, and M. Sun
- 9100504 **Enhanced Cyclability in Rechargeable Li–O₂ Batteries Based on Mn₃O₄ Hollow Nanocage/Ketjenblack Catalytic Air Cathode**
Y. Cao and S. W. Or

Other Topics Relevant To TMAG Scope

- 9401404 **Magnetorheological Characteristics of Nano-Sized Iron Oxide Coated Polyaniline Composites**
S. H. Kwon, B. Sim, and H. J. Choi
- 9401504 **Analytic and Experimental Analysis of Magnetic Force Equations**
S. Gama, L. D. R. Ferreira, C. V. X. Bessa, O. Horikawa, A. A. Coelho, F. C. Gandra, R. Araujo, and P. W. Egolf
- 9401604 **Multiobjective Optimization Design for a Six-Phase Copper Rotor Induction Motor Mounted With a Scroll Compressor**
C.-H. Lin and C.-C. Hwang
- 9401704 **Construction of a Pulsed-Magnetic System for On-Site Use: Application to Liposomes for Biological Membrane Modeling**
A. Hamasaki and S. Ozeki
- 9401804 **A Novel Magnetic Energy Harvester Using Spinning Magnetoelectric Transducer**
Z. Wang, J. Hu, J. Niu, J. Han, S. X. Wang, and J. He

-
- 9500905 **CONFERENCE AUTHOR INDEX**
-