

20th International Conference on Magnetism (ICM 2015)

Physics Procedia Volume 75

Barcelona, Spain
5 - 10 July 2015

Part 1 of 2

ISBN: 978-1-5108-1694-7

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© by Elsevier B.V.
All rights reserved.

Printed by Curran Associates, Inc. (2016)

For permission requests, please contact Elsevier B.V.
at the address below.

Elsevier B.V.
Radarweg 29
Amsterdam 1043 NX
The Netherlands

Phone: +31 20 485 3911
Fax: +31 20 485 2457

<http://www.elsevierpublishingsolutions.com/contact.asp>

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com



Contents

Foreword	1
Publications Committee	8

Strongly Correlated Electron System (SCES) (including Superconductivity / Multiferroics)

Phase Transitions and Magnetoelectric Coupling in $\text{Bi}_{1-x}\text{A}_x\text{FeO}_3$ ($\text{A}=\text{La}, \text{Nd}$) Multiferroic Ceramics A.A. Amirov, I.K. Kamilov, D.M. Yusupov, L.A. Reznichenko, O.N. Razumovskaya, I.A. Verbenko	10
Impurity Effects on the Energy Gap in Fe-doped Bi2212 S. Baar, N. Momono, J. Suzuki, K. Kobayashi, H. Takano, Y. Amakai, T. Kurosawa, M. Oda, M. Ido	18
Quantum Coherence of Strongly Correlated Defects in Spin Chains S. Bertaina, C.-E. Dutoit, J. Van Tol, M. Dressel, B. Barbara, A. Stepanov	23
Pressure-induced Semimetal-to-semiconductor Transition in Bismuth P. Brown, K. Semeniuk, A. Vasiljkovic, F.M. Grosche	29
Magnetic Investigation of Silver Sheathed $\text{Sr}_{0.6}\text{K}_{0.4}\text{Fe}_2\text{As}_2$ Superconductor B. Brunner, M. Reissner, P. Kováč, C. Yao, X. Zhang, Y. Ma	34
First-principles Theory of the Momentum-Dependent Local Ansatz for Correlated Electron System S. Chandra, Y. Kakehashi	41
Electric Tuning of Magnetization Dynamics and Negative Magnetic Permeability in Nanoscale Composite Multiferroics M. Chen, T. Wei, C. Jia	49
Single Crystal Growth and Electronic State of $\text{UPd}_2\text{Cd}_{20}$ H. Doto, Y. Hirose, F. Honda, D. Li, Y. Homma, D. Aoki, R. Settai	56
Defect Induced Enhanced Low Field Magnetoresistance and Photoresponse in $\text{Pr}_{0.6}\text{Ca}_{0.4}\text{MnO}_3$ Thin Films T. Elovaara, S. Majumdar, H. Huhtinen, P. Paturi	62
Enhancement of T_c Due to Pressure Application in $\text{LaFeAsO}_{1-x}\text{H}_x$ Studied by NMR N. Fujiwara, N. Kawaguchi, S. Iimura, S. Matsuishi, H. Hosono	70
Electrical Resistivity of Single-crystal SmIr_2Si_2 K. Fushiyama, T.D. Matsuda, R. Higashinaka, Y. Aoki	77
Low-energy Magnetic Excitations of CeCu_2Ge_2 Investigated by Inelastic Neutron Scattering P. Geselbracht, E. Faulhaber, M. Rotter, K. Schmalzl, D. Quintero-Castro, O. Stockert, M. Loewenhaupt, A. Schneidewind	83
Novel Electronic Structures of Ru-pnictides RuPn ($Pn = \text{P}, \text{As}, \text{Sb}$) H. Goto, T. Toriyama, T. Konishi, Y. Ohta	91
Low-energy μ SR Study on the Tetradymite Topological Insulator $\text{Bi}_{1.5}\text{Sb}_{0.5}\text{TeSe}_2$ T. Goto, K. Matsui, T. Adachi, T. Ohtsuki, N.H. Tu, Y. Tanabe, K. Tanigaki, I. Watanabe, Z. Salman, A. Suter, T. Prokscha	100
Magnetic Properties of Single-crystals of the $S=2$ Quasi-1D Heisenberg Antiferromagnet $\text{MnCl}_3(\text{bpy})$ M. Hagiwara, S.-i. Shinozaki, A. Okutani, D. Yoshizawa, T. Kida, T. Takeuchi, O.N. Risset, D.R. Talham, M.W. Meisel	106
Electronic Structures and the Spin-splittings in Ullmannite-type Structure Compounds H. Harima	114
Anisotropic Chemical Pressure Effect on the Antiferromagnetic Kondo Semiconductor $\text{Ce}(\text{Ru}_{1-x}\text{Fe}_x)_2\text{Al}_{10}$ K. Hayashi, Y. Muro, T. Fukuhara, T. Kuwai, J. Kawabata, T. Takabatake, M. Hagihara, K. Motoya	121
Inelastic Neutron Scattering on Multiferroics $\text{NdFe}_3(\text{BO}_3)_4$ S. Hayashida, M. Soda, S. Itoh, T. Yokoo, K. Ohgushi, D. Kawana, T. Masuda	127
Multiferroic Properties of $\text{Cu}_3(\text{Mo},\text{W})_2\text{O}_9$ Y. Hirata, S. Nishikawa, K. Aoki, R. Kino, H. Kuroe, H. Kuwahara, T. Sekine, M. Hase, K. Oka, T. Ito, H. Eisaki	134
Substitution Effects in the Itinerant Electron Metamagnetic Compound SrCo_2P_2 M. Imai, C. Michioka, H. Ueda, A. Matsuo, K. Kindo, K. Yoshimura	142
Effect of Lishitz Transition on Thermal Transport Properties in Sr_2RuO_4 Y. Imai, K. Wakabayashi, M. Sigrist	150
Thermal Expansion and Magnetostriction of Heavy Fermion CeRu_2Si_2 at Millikelvin Temperatures D. Inoue, D. Kaido, Y. Yoshikawa, M. Minegishi, K. Matsumoto, S. Abe, S. Murayama	158
Elastic Softening in the Orthorhombic Compound YbPdGe I. Ishii, Y. Noguchi, H. Goto, X. Xi, S. Kamikawa, K. Araki, K. Katoh, T. Suzuki	166

Nonequilibrium Dynamics of a Periodically-driven Impurity Spin Coupled to the Bath of Ultracold Fermions by Kondo Coupling K. Iwahori, N. Kawakami	171
Nd-ion Substitution Effect on <i>f</i> -electron Multipole Order of $\text{PrRu}_4\text{P}_{12}$ K. Iwasa, A. Yonemoto, S. Takagi, S. Itoh, T. Yokoo, S. Ibuka, C. Sekine, H. Sugawara	179
Elastic Softening in $\text{HoFe}_2\text{Al}_{10}$ S. Kamikawa, I. Ishii, Y. Noguchi, H. Goto, T.K. Fujita, F. Nakagawa, H. Tanida, M. Sera, T. Suzuki	187
Isovalent Substitution Effect of P to As on Magnetic Characteristics of $\text{EuFe}_2(\text{As}_{1-x}\text{P}_x)_2$ Single Crystals T. Kashiwagi, Y. Arakawa, T. Ishikawa, K. Kadowaki	192
Pressure Dependence of Superconductivity in Filled-Skutterudite YO_3P_{12} Y. Kawamura, H. Mikage, Yu Qi Chen, J. Hayashi, C. Sekine, H. Gotou, Z. Hiroi	200
Doping-induced States in the Single-particle Spectrum Originating from Magnetic Excitation of a Mott Insulator M. Kohno	206
Itinerant-Localized Transitions in Magnetic Phases of the Periodic Anderson Model K. Kubo	214
Muon-Spin Rotation in Multiferroic $\text{Cu}_3\text{Mo}_2\text{O}_9$ Under Electric Fields H. Kuroe, H. Kuwahara, T. Sekine, I. Watanabe, A.-R. Raselli, M. Elender, P.K. Biswas, M. Hase, K. Oka, T. Ito, H. Eisaki	221
Field Dependence of the Magnetic Propagation Vector of the Heavy Fermion Compound CeCu_2Ge_2 Studied by Neutron Diffraction M. Loewenhaupt, P. Geselbracht, E. Faulhaber, M. Rotter, M. Doerr, K. Schmalzl, A. Schneidewind	230
Anisotropy, Magnetostriction and Converse Magnetoelectric Effect in Dy Substituted Ni Ferrite A. Majumder, K. Ugendar, Anoop Baby K.B., V. Chunchu, R.A. Mondal, G. Markandeyulu	238
Correlation Effects in One-Dimensional Quasiperiodic Anderson-Lattice Model F. Matsuda, M. Tezuka, N. Kawakami	245
Pressure-Temperature Phase Diagram of Ionic Liquid Dielectric DEME-TFSI D.M. McCann, M. Misek, K.V. Kamenev, A.D. Huxley	252
The Magnetic Properties of Single Crystal $\text{SrCo}_2\text{Ti}_2\text{Fe}_8\text{O}_{19}$ Compound M. Mihalík, V. Šireňko, A.M. Balbashov, V. Eremenko, M. Mihalík, M. Zentková	259
Superconductivity under Pressure in $\text{FeSe}_{1-x}\text{Te}_x$ Studied by DC Magnetic Measurements K. Miyoshi, M. Kondo, K. Morishita, E. Mutou, J. Takeuchi	266
Magnetic Measurements of Superconducting $\text{K}_x\text{Fe}_{2-y}\text{Se}_2$ Single Crystals under High Pressure K. Miyoshi, M. Kondo, K. Morishita, J. Takeuchi	272
Enhanced Electrical Resistivity after Rapid Cool of the Specimen in Layered Oxide Li_xCoO_2 K. Miyoshi, K. Manami, J. Takeuchi, R. Sasai, S. Nishigori	278
Development of a Rapid Temperature Scanning System for Pulsed Magnetic Fields and its Applications K. Mochidzuki, Y. Kohama, A. Matsuo, K. Kindo	284
Magneto-crystalline Anisotropy and non-Fermi-liquid Behavior in $\text{CeNi}_{1-x}\text{Co}_x\text{Ge}_2$ Z. Molčanová, M. Mihalík, M. Zentková, V. Kavečanský, J. Briančin, K. Wochowski	292
Point-Contact Spectroscopy of Heavy Fermion Compounds CeCu_6 and CeAl_3 in Magnetic Field G. Motoyama, S. Ogawa, K. Matsubayashi, K. Fujiwara, K. Miyoshi, S. Nishigori, T. Mutou, A. Yamaguchi, A. Sumiyama, Y. Uwatoko	296
Impurity Substitution Effect on Magnetoelectric Properties of $\text{CaBaCo}_4\text{O}_7$ Crystals R. Oda, R. Kajihara, K. Nishina, M. Akaki, H. Kuroe, H. Kuwahara	303
Electron Doping Effect on $A\text{eCo}_2\text{As}_2$ ($A\text{e} = \text{Ca}, \text{Sr}$ and Ba) H. Ohta, E. Akabane, H.A. Katori	309
Imaging of Condensed Quantum States in the Quantum Hall Effect Regime J. Oswald, R.A. Römer	314
Heavy-Fermion Superconductivity and Localized-Itinerant Crossover in the Kondo Lattice J. Otsuki	326
Competition of Spin and Charge Orders in a Model Cuprate Y.D. Panov, A.S. Moskvin, A.A. Chikov, I.L. Avvakumov	332
Signatures of Phase Transitions in the Microwave Response of YbRh_2Si_2 K. Parkkinen, M. Dressel, K. Kliemt, C. Krellner, C. Geibel, F. Steglich, M. Scheffl	340
Anomalous Influence of an External Magnetic Field on the Electron Energy Spectrum of Ferromagnetic Semiconductors with Strong p,d-hybridization A.A. Povzner, A.G. Volkov, K.A. Shumikhina	348
A Manifestation of Latent Superconductivity in Ferromagnet via a Proximity Effect in FS Structures Y.N. Proshin, M.V. Avdeev	356
C-axis Resistivity of Superconductive FeSe Single Crystals: Upper Critical Field and its Angular Behavior A.V. Sadakov, T.A. Romanova, D.A. Knyazev, D.A. Chareev, V.P. Martovitsky	364
Novel Quantum Phase Transition in the Frustrated Spin Nanotube T. Sakai, H. Nakano	369
Dynamical Characteristics of the Mott Transition: Examination of Doublon Dynamics in a Triangular-lattice Hubbard Model T. Sato, H. Tsunetsugu	376

Magnetic Properties of New Filled Skutterudite Compound $\text{BaFe}_4\text{As}_{12}$	383
C. Sekine, T. Ishizaka, K. Nishine, Y. Kawamura, J. Hayashi, K. Takeda, H. Gotou, Z. Hiroi	383
Non-magnetic Anomaly at 1K Arising in Ferromagnetic $\text{Ce}_{2.15}(\text{Pd}_{1-x}\text{Ag}_x)_{1.95}\text{In}_{0.9}$	390
J.G. Sereni, M. Giovannini, M. Gómez Berisso, F. Gastaldo	390
Spin-Fluctuation Effects Near the Quantum Phase Transition of the Ising-Type Itinerant Ferromagnet URhAl	
Y. Shimizu, D. Braithwaite, B. Salce, T. Combier, D. Aoki, J. Flouquet	397
Semi-Epitaxial SmB_6 Thin Films Prepared by the Molecular Beam Epitaxy	
H. Shishido, Y. Yoneda, T. Yoshida, S. Noguchi, T. Ishida	405
Ferromagnetic Properties of SrRuO_3 Thin Films Deposited on the Spin-triplet Superconductor Sr_2RuO_4	
Y. Sugimoto, M.S. Anwar, S.R. Lee, Y.J. Shin, S. Yonezawa, T.W. Noh, Y. Maeno	413
Antisymmetric Spin-Orbit Coupling in a d - p Model on a Zigzag Chain	
Y. Sugita, S. Hayami, Y. Motome	419
Magnetic Phases in $\text{Sr}_{1-x}\text{Ca}_x\text{Co}_2\text{P}_2$ Studied by μ^+ SR	
J. Sugiyama, H. Nozaki, M. Harada, I. Umegaki, Y. Higuchi, K. Miwa, M. Imai, C. Michioka, K. Yoshimura, E.J. Ansaldo, J.H. Brewer, D. Andreica, C. Baines, M. Måansson	426
Static Magnetic Order in A-site Ordered Perovskite, $\text{LaCu}_x\text{Cr}_y\text{O}_{12}$, Probed with Muon Spin Spectroscopy	
J. Sugiyama, H. Nozaki, I. Umegaki, E.J. Ansaldo, J.H. Brewer, H. Sakurai, M. Isobe, H. Takagi	435
Elastic Softening in the Tetrahedrite $\text{Cu}_{12}\text{Sb}_4\text{S}_{13}$	
T. Suzuki, H. Goto, I. Ishii, Y. Noguchi, S. Kamikawa, K. Suekuni, H.I. Tanaka, T. Takabatake	443
Laser-induced Phase Transitions of Topological Kondo Insulators	
K. Takasan, M. Nakagawa, N. Kawakami	447
Hole Doping Effects on Physical Properties of the Layered Antiferromagnetic Insulator ($\text{LaO})\text{MnPn}$ ($\text{Pn}=\text{P}, \text{As}, \text{Sb}$)	
K. Takase, A. Naito, A. Higashiyama, T. Kadono, S. Imada	455
Thermal Expansion and Magnetostriction of YbAuCu_4	
T. Tkeuchi, Y. Hirose, R. Tsunoda, F. Honda, R. Settai	460
Slow Thermodynamics in the Phase Separated State of the Bilayered Manganite $(\text{La}_{0.4}\text{Pr}_{0.6})_{1.2}\text{Sr}_{1.8}\text{Mn}_2\text{O}_7$	
H. Taniguchi, Y. Nakamura, T. Konno, M. Matsukawa, R. Suryanarayanan	468
Anomalous Thermal Expansion in $(\text{Pr,Ca})\text{MnO}_3$ Due to Orbital Ordering	
J. Tikkanen, S. Kauhala, H. Huhtinen, P. Paturi	475
Unconventional Quantum Criticality in $\beta\text{-YbAlB}_4$ Detached from its Magnetically Ordered Phase	
T. Tomita, K. Kuga, Y. Uwatoko, P. Coleman, S. Nakatsuji	482
Structural Optical and Electrical Transport Properties of ALD-fabricated CuCrO_2 Films	
T.S. Tripathi, M. Karppinen	488
Analysis of Charge-spin-orbital Fluctuations by <i>Ab Initio</i> Calculation and Random Phase Approximation: Application to Non-coplanar Antiferromagnet $\text{Cd}_2\text{Os}_2\text{O}_7$	
A. Uehara, H. Shinaoka, Y. Motome	495
On-Chip ESR Measurements of DPPH at mK Temperatures	
W. Voesch, M. Thiemann, D. Bothner, M. Dressel, M. Scheffler	503
Ferromagnetic Transition in a Caged Compound $\text{NdOs}_2\text{Zn}_{20}$	
K. Wakiya, K.T. Matsumoto, T. Onimaru, K. Umeo, T. Takabatake	511
Elastic Softening and Phase Transition Characteristics in YbPtGe	
X. Xi, I. Ishii, Y. Noguchi, H. Goto, S. Kamikawa, K. Araki, K. Katoh, T. Suzuki	516
Unconventional $-\log T$ Dependent Resistivity in $\text{Sm}_x\text{La}_{1-x}\text{Ta}_2\text{Al}_{20}$	
A. Yamada, R. Higashinaka, T.D. Matsuda, H. Sato, A. Miyake, M. Tokunaga, Y. Aoki	522
Common Anomalies of Transport Properties in $\text{PrTr}_x\text{Zn}_{20}$ ($\text{Tr}=\text{Ir}, \text{Rh}$) with Non-Kramers Doublet Ground State	
T. Yoshida, Y. Machida, K. Izawa, Y. Shimada, N. Nagasawa, T. Onimaru, T. Takabatake	529
Metal-Insulator Transition in 1T-TaS ₂ : A Real-Space Dynamical Mean-Field Study	
Y.-Y. Zhao, Y. Liu, L.-J. Zou, Y. Song	537
Spin Systems & Magnetic Structures	
Single Crystal Growth and Magnetic Characterization of RNiSi_3 ($R = \text{Dy, Ho}$)	
D. Aristizábal-Giraldo, F.R. Arantes, F.N. Costa, F.F. Ferreira, R.A. Ribeiro, M.A. Avila	545
Magnetism in Two-Leg Ladder Compound $\text{Ba}_6\text{Fe}_8\text{S}_{15}$ with Mixed Oxidation State of Iron	
H.A. Katori, T. Adachi, H. Ohta, S. Nakamura, A. Fuwa	552
Phase Transition of Mobile Potts Model for Liquid Crystals	
A. Bailly-Reyre, H.T. Diep	557
Instability of Ferromagnetic Nanoclusters in Fe Implanted Amorphous SiO_2	
K. Bharuth-Ram, T.B. Doyle, K. Zhang, H. Masenda, H. Hofsäss	565
Investigation of Magnetic and Magnetoelastic Properties of the Unconventional Heavy-fermion Compound CeCu_2Ge_2	
M. Doerr, S. Granovsky, M. Rotter, M. Loewenhaupt, A. Schneidewind, Z.-S. Wang	572
Spin-glass Magnetism in RFeTi_2O_7 ($\text{R}=\text{Lu and Tb}$) Compounds	
T.V. Drokina, G.A. Petrakovskii, M.S. Molokeev, A. Arauzo, J. Bartolomé	580

¹ H-NMR Study of Spin-1/2 Triple-chain Magnet Cu ₃ (OH) ₄ MoO ₄	589
Y. Fujii, H. Kikuchi, K. Nakagawa, S.-y. Takada, M. Fujisawa	
Dilatometric Studies on Single Crystalline Barlowite – A Structurally Perfect Spin-1/2 Kagome System	597
E. Gati, B. Wolf, J.A. Schlueter, M. Lang	
Exact Solutions on the Ground States of Ising Models in Magnetic Fields with Frustration on a Diamond Hierarchical Lattice	605
Y. Hirose, A. Oguchi, Y. Fukumoto	
NMR Study on the Ru-dimer System with Valence Fluctuation	613
Y. Hosoya, T. Goto, A. Endo, T. Hashimoto, T. Hayashita, S. Iguchi, T. Sasaki	
Magnetic Properties of the RAuBi ₂ (R = Ce, Pr, Nd, Gd, Sm) Series of Intermetallic Compounds	618
C.B.R. Jesus, M.M. Piva, P.F.S. Rosa, C. Adriano, Z. Fisk, P.G. Pagliuso	
Molecular Spin Dynamics Analysis of Complex Magnetic Structure on the FCC Lattice in Itinerant Electron System	625
Y. Kakehashi, S. Nohara, S. Chandra, T. Uchida	
Systematic Study of Anisotropic Magnetoresistance in (Ga,Mn)As	634
Z. Kašpar, K. Olejník, K. Výborný, H. Reichlová, M. Maryško, V. Novák	
Cu-NMR Study on the Quasi One Dimensional Antiferromagnet Cu ₃ Mo ₂ O ₉	641
T. Kawase, T. Goto, H. Kuroe, T. Sekine, T. Sasaki, M. Hase, K. Oka, T. Ito, H. Eisaki	
Transport Properties of the Metallic Two-dimensional Triangular Antiferromagnet Ag ₂ CrO ₂	647
T. Kida, A. Okutani, H. Yoshida, M. Hagiwara	
Magnetic Properties of the Novel Frustrated Lattice Magnet Likasite	653
H. Kikuchi, K. Kunieda, T. Asano, Y. Fujii, Y. Inagaki, A. Matsuo, K. Kindo	
Demagnetization of K _{0.4} (Cr(CN) ₆)(Mn((R/S)-pn))(R/S)-pnH _{0.6} Molecular Magnets Accompanied by Discrete Transitions in the Incommensurate Magnetic Phase	659
M. Kirman, A. Talantsev, R. Morgunov	
Crystal Structure of the Caged Magnetic Compound DyFe ₂ Zn ₂₀ at Low Temperature Magnetic Ordering State	664
N. Kishii, S. Tateno, M. Ohashi, Y. Isikawa	
Key Role of Rutile Structure for Layered Magnetism in Chromium Compounds	671
Y. Kondo, T. Hotta	
Low Temperature Magnetic Properties of a New Quasi-one-dimensional Organic Magnet α-2-Cl-4-F-V	679
Y. Kono, S. Kittaka, H. Yamaguchi, Y. Hosokoshi, T. Sakakibara	
Dimer-dimer Correlations and Magnetothermodynamics of S=1/2 Spherical Kagome Clusters in W ₇₂ V ₃₀ and Mo ₇₂ V ₃₀	687
N. Kunisada, Y. Fukumoto	
Hysteresis and Domain Behaviors Analysis of High Purity Fe-(5, 6) wt% Si Alloys	695
Z. Lei, T. Horiuchi, I. Sasaki, C. Kaido, H. Yochi, S. Hata, T. Ogawa, H. Era	
Low Temperature Spin-glass Behavior in Nonmagnetic Atom Disorder Compound Pr ₂ CuIn ₃	703
D. Li, Y. Homma, F. Honda, T. Yamamura, D. Aoki	
Universal Memory Effects in Heisenberg Spin Glasses and Spontaneous Restoration of the Spin Configuration	711
H. Mamiya	
Specific Heats of Triangular Spin Tube in Magnetic Fields	718
H. Manaka, M. Hagihara, S. Hayashida, M. Soda, T. Masuda, Y. Miura	
¹⁹ F-NMR Study on the Equilateral Triangular Spin Tube CsCrF ₄	726
K. Matsui, T. Goto, H. Manaka, Y. Miura	
Problem of Phase Transition in Spin-fluctuation Theory	731
N.B. Melnikov, G.V. Paradezhenko	
Short-range Order Above T _C in Ferromagnetic Metals	739
N.B. Melnikov, B.I. Reser	
Spin Order in FeCr ₂ O ₄ Observed by Mössbauer Spectroscopy	747
S. Nakamura, A. Fuwa	
Phase Diagram of the Kitaev-type Model on a Decorated Honeycomb Lattice in the Isolated Dimer Limit	755
J. Nasu, Y. Motome	
Studies of ²⁷ Al NMR in SrAl ₄	763
H. Niki, N. Higa, H. Kuroshima, T. Toji, M. Morishima, M. Minei, M. Yogi, A. Nakamura, M. Hedo, T. Nakama, Y. Ōnuki, H. Harima	
First Principles Study on Solid Oxygen Using van der Waals Density Functional	771
M. Obata, I. Hamada, T. Oda	
High Field Magnetization of Single Crystals of the S=1/2 Quasi-1D Ising-like Antiferromagnet SrCo ₂ V ₂ O ₈	779
A. Okutani, T. Kida, T. Usui, T. Kimura, K. Okunishi, M. Hagiwara	
Pressure-induced Novel Electronic State of Fe ₇₀ Ni ₃₀ Invar Alloy	785
G. Oomi, R. Saito, M. Ohashi, T. Nakano	
Magnetization Study of Cobalt Ferrite by Mean Field Approximation	792
S. Ouassa, A. Benyoussef, G.S. Abo, M. Ouassa, M. Hafid	
Spin Glass Field Theory with Replica Fourier Transforms	802
I.R. Pimentel, C. De Dominicis	
High-temperature Expansion for Frustrated Magnets: Application to the J ₁ -J ₂ Model on the BCC Lattice	813
J. Richter, P. Müller, A. Lohmann, H.-J. Schmidt	

Exotic Field Induced Quantum Phase Transition of the Kagome Lattice Antiferromagnet	
T. Sakai, H. Nakano	821
Phase Transitions of α-Sr₂VO₄ with K₂NiF₄-type Structure	
H. Sakurai	829
Crystal Field Effects in Polymorphic Compound TbIr₂Si₂	
T. Shigeoka, Y. Kurata, T. Nakata, T. Fujiwara, K. Matsubayashi, Y. Uwatoko	837
The Successive Component-separated Magnetic–Transitions on Pseudoternary Compounds Ho_{1-x}Gd_xRh₂Si₂	
T. Shigeoka, T. Morita, T. Fujiwara, K. Matsubayashi, Y. Uwatoko	845
Magnetic Properties of Ce_{n+1}Co_{3n+5}B_{2n} ($n = 0, 1, 2$, and 3) Compounds Investigated by ⁵⁹Co NMR	
K. Shimizu, K. Kakiuchi, T. Ito, H. Ido	853
Quasi-Spin Correlations in a Frustrated Quantum Spin Ladder	
T. Sugimoto, M. Mori, T. Tohyama, S. Maekawa	861
Magnetic Ground State of Novel Zigzag Chain Compounds, NaCr₂O₄ and Ca_{1-x}Na_xCr₂O₄, Determined with Muons and Neutrons	
J. Sugiyama, H. Nozaki, M. Harada, Y. Higuchi, H. Sakurai, E.J. Ansaldi, J.H. Brewer, L. Keller, V. Pomjakushin, M. Måansson	868
De Haas-van Alphen Effect and Fermi Surface Properties in Ferromagnet LaCo₂P₂ and Related Compounds	
A. Teruya, A. Nakamura, T. Takeuchi, F. Honda, D. Aoki, H. Harima, K. Uchima, M. Hedo, T. Nakama, Y. Ōnuki	876
Pressure Effect on Transport Properties of EuNi(Si_{1-x}Ge_x)₃ Compounds	
K. Uchima, Y. Takaesu, N. Arakaki, S. Hirakawa, M. Kakihana, Y. Ashitomi, K. Nishimura, F. Suzuki, T. Yara, M. Hedo, T. Nakama, K. Yagasaki, K. Matsubayashi, Y. Uwatoko	884
Spin Stiffness Constant of Half-metallic Ferrimagnet in Mn-based Heusler Alloys	
R.Y. Umetsu, T. Kanomata	890
Elastic Anomalies in Orbital-Degenerate Frustrated Spinel CoV₂O₄	
T. Watanabe, S. Yamada, R. Koborinai, T. Katsufuji	898
Quantum Interference of Surface-Induced Friedel Oscillations Enhanced by Fermi-Surface Nesting in Layered Manganites	
R. Yamamura, T. Hotta	902
Non-equilibrium Behavior of the Magnetization in the Helimagnetic Phases of the Rare Earth Alloys R_{1-x}Y_x ($R = \text{Gd, Tb, Dy}$)	
T. Yamazaki, J. Ishiyama, Y. Noya, M. Kurihara, H. Yaguchi	911
Magnetic Properties of Cr-based Ternary Compound CrAlGe	
S. Yoshinaga, Y. Mitsui, R.Y. Umetsu, K. Koyama	918
Magnetic Resonance in the Chiral Helimagnet CrNb₃S₆	
D. Yoshizawa, J.-i. Kishine, Y. Kousaka, Y. Togawa, M. Mito, J. Akimitsu, K. Inoue, M. Hagiwara	926
Spin electronics and transport & magnetization dynamics and micromagnetics	
Longitudinal Spin Seebeck Effect in Bi-substituted Neodymium Iron Garnet on Gadolinium Gallium Garnet Substrate Prepared by MOD Method	
H. Asada, A. Kuwahara, K. Sueyasu, T. Ishibashi, Q. Liu, G. Lou, K. Kishimoto, T. Koyanagi	932
Non-equilibrium Thermodynamics of the Longitudinal Spin Seebeck Effect	
V. Basso, E. Ferraro, A. Sola, A. Magni, M. Kuepferling, M. Pasquale	939
Relativistic Effects on Electron Transport in Magnetic Alloys	
V. Drchal, J. Kudrnovský, I. Turek	948
Electrical Writing of Magnetic and Resistive Multistates in CoFe Films Deposited onto Pb[Zr_xTi_{1-x}]O₃	
V. Iurchuk, B. Doudin, J. Bran, B. Kundys	956
Anomalous Quasiparticles on the Domain Wall between Topological Insulators and Spin Ice Compounds	
I. Kanazawa, T. Sasaki	967
Analytical Modelling of Magnetic DW Motion	
S.A. Nasser, B. Sarma, G. Durin, C. Serpico	974
Magnetization Dynamics of Iron Garnet Crystals in Oscillating Magnetic Field	
L.A. Pamyatnykh, L.Y. Agafonov, D.S. Mekhonoshin, S.E. Pamyatnykh, M.S. Lysov, G.A. Shmatov	986
Resonant Magnetoresistance in Asymmetric Double-Barrier Magnetic Tunnel Junctions	
N. Useinov, L. Tagirov	995
Magnetization Dynamics of a Single-domain Magnet under a Spin-polarized Current with a Tilted Polarization	
T. Wang, Y. Chen, Z. Wang, Z.Z. Sun	1003
Magnetism of nanoscale systems: thin films, nanostructures and nanoparticles	
Thickness Dependent Properties of Sr₂FeMoO₆ Thin Films Grown on SrTiO₃ and (LaAlO₃)_{0.3}(Sr₂AlTaO₆)_{0.7} Substrates	
I. Angervo, M. Saloaro, H. Palonen, S. Majumdar, H. Huhtinen, P. Paturi	1011
Structural Changes in Ferronematic Liquid Crystals Studied by Surface Acoustic Waves	
P. Bury, Š. Hardoň, J. Kúdelčík, M. Timko, P. Kopčanský	1022
Acoustic Investigation of Biocompatible Fluid under Magnetic Field	
P. Bury, J. Kúdelčík, Š. Hardoň, M. Kubovčíková, M. Timko, P. Kopčanský	1029
Electronic Properties and Magnetic Moment Distribution on Perovskite Type Slabs: Sr₂FeMoO₆, SrFeO₃ and SrMoO₃	
J. Pilo, J.L. Rosas, E. Carvajal, M. Cruz-Irisson, O. Navarro	1035

The Magnetic Properties of $Mn_{0.3}Mg_{0.2}Zn_{0.5}Fe_2O_4$ and $Mn_{0.3}Mg_{0.2}Co_{0.5}Fe_2O_4$: The Effect of Milling W.B. Dlamini, J.Z. Msomi, T. Moyo	1041
Magnetic Anisotropy of Maghemite Nanoparticles Probed by RF Transverse Susceptibility A.I. Figueroa, J. Bartolomé, L.M. García, F. Bartolomé, A. Arauzo, A. Millán, F. Palacio	1050
Tuning the Granular Contribution to Exchange Bias by Varying the Antiferromagnetic Material but without Affecting the Ferromagnetic/Antiferromagnetic Interface L. Frangou, K. Akmaldinov, C. Ducruet, I. Jourdan, B. Dieny, V. Baltz	1058
Dependence of the Exchange Bias on the Thickness of Antiferromagnetic Layer in the Trilayered NiFe/IrMn/NiFe Thin-films Ch. Gritsenko, I. Dzhun, N. Chechenin, G. Babaytsev, V. Rodionova	1066
Domain Structure and Magnetoresistance in Co _x MnGe Zigzag Structures K. Gross, K. Westerholz, M.E. Gómez, H. Zabel	1072
Mechanism and Control of Antiferromagnetic Coupling in Fe/Fe ₃ O ₄ Junctions S. Honda, H. Yanagihara, J.-i. Inoue, E. Kita, H. itoh, K. Mibu	1080
Full-Potential KKR Calculations for Lattice Distortion around Impurities in Al-based Dilute Alloys, Based on the Generalized-Gradient Approximation C. Liu, M. Asato, N. Fujima, T. Hoshino	1088
Soft Magnetic Multilayered Thin Films for HF Applications G. Loizos, G. Giannopoulos, C. Serletis, T. Maity, S. Roy, N. Lupu, H. Kijima, M. Yamaguchi, D. Niarchos	1096
Effects of Milling Conditions on Nano-scale MnFe(P,Si) Particles by Surfactant-assisted High-energy Ball Milling N.V. Thang, N.H. van Dijk, E. Brück	1104
A New Approach to Include Surface Contributions in Micromagnetic Simulations of Nanoparticles N. Ntallis, K.G. Efthimiadis, K.N. Trohidou	1112
Epitaxially Textured Pr _{0.6} Ca _{0.4} MnO ₃ Thin Films under Considerably low Substrate Temperature M. Nyman, T. Elovaara, J. Tikkainen, S. Majumdar, H. Huhtinen, P. Paturi	1122
Influence of Annealing Process on the Structure and Magnetic Behavior of Ba _{0.5} Co _{0.5} Fe ₂ O ₄ Nanoparticles N.S.E. Osman, T. Moyo	1133
Effect of Planar Anisotropy in Vortex Configuration of Micro-scale Disks S.O. Parreira, M.D. Martins	1142
Dynamics of CoFe ₂ O ₄ Single-Core Nanoparticles in Viscoelastic Media H. Remmer, J. Dieckhoff, A. Tschöpe, E. Roeben, A.M. Schmidt, F. Ludwig	1150
The Diverse Nanostructure of Electroless Plated CoNiFeB Alloy: Thin Film, Nanotubes and Nanoparticles D. Richardson, F.M.F. Rhen	1158
Ferromagnetism in Pd(100) Ultrathin Films Enhanced by Distortion S. Sakuragi, H. Tajiri, T. Sato	1167
Large Magnetoresistance in Diluted Magnetic Semiconductors in Quasi-two Dimensional Geometry T. Sasaki, I. Kanazawa	1172
Magnetic Properties and Crystal Structure of DyMn ₂ O ₅ Nanoparticles Embedded in Mesoporous Silica T. Tajiri, Y. Ando, H. Deguchi, M. Mito, A. Kohno	1181
Magnetic Materials and Technologies for: energy, information & life	
Magnetic Phase Diagram of Heusler Alloy System Ni ₂ Mn _{1-x} Cr _x Ga Y. Adachi, R. Kouta, M. Fujio, T. Kanomata, R.Y. Umetsu, X. Xu, R. Kainuma	1187
Optimum Laser Exposure for Setting Exchange Bias in Spin Valve Sensors M.J. Almeida, P. Matthes, O. Ueberschär, M. Müller, R. Ecke, H. Exner, M. Albrecht, S.E. Schulz	1192
Magnetic Structure and Magnetocaloric Properties of Ho(Co _{1-x} Fe _x) ₂ Quasibinary Intermetallic Compounds M. Anikin, E. Tarasov, N. Kudrevatykh, A. Inishev, A. Zinin, A. Teplykh, A. Pirogov	1198
Palladium Activated Self-Assembled Monolayer for Magnetics on Silicon Applications R. Anthony, C. Ó Mathúna, J.F. Rohan	1207
New Improvements in Magnetic Measurements Laboratory of the ALBA Synchrotron Facility J. Campmany, J. Marcos, V. Massana	1214
A New Bench Concept for Measuring Magnetic Fields of Big Closed Structure J. Campmany, L. Ribó, C. Colledram, F. Becheri, J. Marcos, V. Massana	1222
Study of the Temperature Dependence of Coercivity in MnBi C. Curcio, E.S. Olivetti, L. Martino, M. Küpferling, V. Basso	1230
Bulk CoNiFe-SiB Amorphous and Nanostructured Alloys Produced by Plasma Spray Deposition and Dynamic Compaction: Formation of Soft Magnetic Properties E. Denisova, L. Kuzovnikova, R. Iskhakov, A. Kuzovnikov, A. Lepeshev, I. Nemtsev, V. Saunin, S. Telegin, G. Bondarenko, V. Mal'tsev	1238
Rotational Electromagnetic Energy Harvesting System D. Dinulovic, M. Brooks, M. Haug, T. Petrovic	1244
Improved Microtransformer Design Utilizing Fe-Co Magnetic Core D. Dinulovic, A. Gerfer, M. Haug, M. Kaiser, M.C. Wurz, L. Rissing	1252
Phase Transformations and Magnetocaloric Effect in Ni-Mn-(Co)-In Heusler Alloys R. Fayzullin, V. Buchelnikov, A. Mashirov, M. Zhukov	1259

Discontinuities of Plastic Deformation in Metallic Glasses with Different Glass Forming Ability M. Hurakova, K. Csach, J. Miskuf, A. Jurikova, S. Demcak, V. Ocelik, J. Th.M. De Hosson	1265
Enhancement of Sensitivity on Miniaturized Thin-film Magnetoimpedance with Ellipsoidal Element H. Kikuchi, S. Oe, H. Uetake, S. Yabukami, T. Nakai, S. Hashi, K. Ishiyama	1271
Magnetic and Hardness Analysis during Precipitation and Recovery Process of Deformed Fe–Cu Alloy H. Kikuchi, T. Sasaki, T. Murakami, F. Ito	1279
New MnZn Ferrite with low Losses at 500 kHz over a Broad Temperature Range G. Kogias, V. Zaspalis	1286
Coercivity Enhancement in La Coated Nd-Fe-B Thin Films K. Koike, H. Ishikawa, D. Ogawa, H. Kato, T. Miyazaki, Y. Ando, M. Itakura	1294
Large Magnetocaloric Effect and Magnetic Properties in ErCoAl D. Li, Y. Homma, F. Honda, T. Yamamura, D. Aoki	1300
Cobalt Doping Effect on Ni-Zn-Cu Ferrites Produced by Reactive Sintering A. Mercier, G. Chaplier, A. Pasko, V. Loyau, F. Mazaleyrat	1306
Effect of Milling Conditions on the Microstructure and Interphase Exchange Coupling of Nd ₂ Fe ₁₄ B/α-Fe Nanocomposites S. Mican, R. Hirian, O. Isnard, I. Chicinaş, V. Pop	1314
<i>In-situ</i> Observation and Differential Thermal Analysis of MnBi in High Magnetic Fields D. Miyazaki, Y. Mitsui, K.-i. Abematsu, K. Takahashi, K. Watanabe, S. Uda, K. Koyama	1324
<i>Ab-initio</i> Based Analytical Evaluation of Entropy in Magnetocaloric Materials with First Order Phase Transitions M. Piazzi, J. Zemen, V. Basso	1332
Structure and Magnetic Properties of Sputtered Sm _x Co _{100-x} (20 < x < 32) Films Prepared at Low Temperatures F.M.F. Rhen, S. Belochapkine, F.P. Missell	1345
Peculiarities of Giant Magnetocaloric Effect in Ni ₅₀ Mn ₃₅ In ₁₅ Alloys in the Vicinity of Martensitic Transition I.D. Rodionov, Y.S. Koshkid'ko, J. Cwik, A. Quetz, S. Pandey, A. Aryala, I.S. Dubenko, S. Stadler, N. Ali, I.S. Titov, M. Blinov, V.N. Prudnikov, E. Lahderanta, I. Zakharchuk, A.B. Granovsky	1353
Dielectric and Magnetic Properties of Two-Phase Composite System: Mn-Zn or Ni-Zn Ferrites in Dielectric Matrices M.M. Salem, A.T. Morchenko, L.V. Panina, V.G. Kostishyn, V.G. Andreev, S.B. Bibikov, A.N. Nikolaev	1360
Strain-controlled MO Effect on Highly Bi-substituted Neodymium Iron Gallium Garnet Thin Films M. Sasaki, G. Lou, T. Hashinaka, A. Meguro, M. Ninomiya, T. Ishibashi, T. Taniyama	1370
Structural Heterogeneity of the Melt-spun (Fe, Co)-Si-B-P-Cu Alloy with Excellent Soft Magnetic Properties K. Sato, K. Takenaka, A. Makino, Y. Hirotsu	1376
Predictions of a Large Magnetocaloric Effect in Co- and Cr-Substituted Heusler Alloys Using First-Principles and Monte Carlo Approaches V.V. Sokolovskiy, V.D. Buchelnikov, M.A. Zagrebin, A. Grünebohm , P. Entel	1381
High Frequency Properties of Ferrite/Fe-Si-Al Alloy Soft Magnetic Composites C.A. Stergiou, V. Zaspalis	1389
Study of AC Magnetic Properties and Core Losses of Fe/Fe ₃ O ₄ -epoxy Resin Soft Magnetic Composite Laxminarayana T. A., S.K. Manna, Fernandes B.G., Venkataramani N	1396
Influence of Severe Plastic Deformation on Magnetic Properties of Fe ₄₈ Ni ₄₈ Zr ₄ , Fe _{49.5} Co _{16.5} B ₃₃ Ta and Co ₈₀ Zr ₁₆ B ₄ Alloys S. Taskaev, K. Skokov, V. Khovaylo, D. Gunderov, D. Karpenkov	1404
<i>Ab-Initio</i> Study on the Hard Magnetic Properties of MnBi P. Toson, A. Asali, G.A. Zickler, J. Fidler	1410
Anisotropy of Paramagnetic Susceptibility Observed at the Surface of an Indochinite Tektite Detected by Field-Induced Rotational-Oscillation C. Uyeda, K. Hisaoshi	1415
Multicore Off-Diagonal Magnetoimpedance Sensors Utilising Amorphous Wires N.A. Yudanov, A.A. Rudenok, L.V. Panina, A.T. Morchenko, D.P. Makhnovskiy, A. Zhukov	1419
First Principles Investigation of Magnetic Properties of Fe-Ni-Mn-Al Heusler Alloys M.A. Zagrebin, V.V. Sokolovskiy, V.D. Buchelnikov, M.A. Klyuchnikova	1427
Study of the Magnetocaloric Effect in (Pr, Dy) ₂ Fe ₁₇ and Pr ₂ (Fe, Al) ₁₇ Intermetallic Compounds K. Zehani, R. Guetari, N. Mliki, L. Bessais	1435
Nanoanalytical TEM Studies and Micromagnetic Modelling of Nd-Fe-B Magnets G.A. Zickler, P. Toson, A. Asali, J. Fidler	1442
Magnetically Modified TiO ₂ Powders – Microstructure and Magnetic Properties O. Životský, J. Seidlerová, I. Šafařík, J. Luňáček, M. Šafaříková, K.M. Kutláková, Y. Jirásková	1450
Thermal and Rheological Properties of Water-based Ferrofluids and their Applicability as Quenching Media J. Župan, M.M. Renjo	1458
Keyword Index	
Author Index	