

6th INTERNATIONAL CONFERENCE ON FERROMAGNETIC SHAPE MEMORY ALLOYS

SCIENTIFIC PROGRAMME

SUNDAY, JUNE 2, 2019

17:00 - 20:00 **Registration & Welcome Drink**

MONDAY, JUNE 3, 2019

08:00 - 09:00 **Registration**

09:00 - 09:15 **Opening Session**

[O. Heczko](#)

09:15 - 10:00 **20 years with MIR**

PL 01

[K. Ullakko](#)

10:00 - 10:30 Coffee break

10:30 - 11:00 **Floating zone growth of low twinning stress MIR crystals with low chemical segregation**

IL 01

[Ross H. Colman](#)

11:00 - 11:20 **Combinatorial synthesis of Ni-Mn-Ga(Fe-Co-Cu) High Temperature Ferromagnetic Shape Memory Alloys**

[Vasileios Alexandrakis](#), [Anabel Pérez-Checa](#), [José Manuel Barandiaran](#), [Patricia Lázpita](#), [Peer Decker](#), [Steffen Salomon](#), [Jorge Feuchtwanger](#), [Alfred Ludwig](#), [Volodymyr Chernenko](#)

11:20 - 11:40 **Magnetic Phase Diagrams in Co₂Cr(Ga,Si) Alloys with Reentrant Martensitic Transformation Behavior**

[Xiao Xu](#), [Takumi Kihara](#), [Atsushi Miyake](#), [Masashi Tokunaga](#), [Toshihiro Omori](#), [Takeshi Kanomata](#), [Ryosuke Kainuma](#)

11:40 - 12:00 **Crystal structure and superelasticity in Pd-Mn-Ga alloys**

[Tatsuya Ito](#), [Yuta Kimura](#), [Xiao Xu](#), [Toshihiro Omori](#), [Ryosuke Kainuma](#)

12:00 - 12:20 **Reversible martensite variant reorientation induced by martensite aging in ferromagnetic NiFeGaCo and NiMnGa single crystals**

[Elena Panchenko](#), [Ekaterina Timofeeva](#), [Maria Pichkaleva](#), [Anna Eftifeeva](#), [Aida Tokhmetova](#), [Nikita Surikov](#), [Yuri Chumlyakov](#), [Gregory Gerstein](#), [Hans Jürgen Maier](#)

12:20 - 12:40 **Effects of Iron and Copper on the Martensitic Transformation of Ni-Mn-Ga**

[Andrew Armstrong](#), [Frans Nilsén](#), [Michal Rameš](#), [Tomas Kmjec](#), [Ladislav Straka](#), [Oleg Heczko](#), [Peter Müllner](#)

12:40 - 13:50 Lunch

13:50 - 14:20 **Soft shearing modes in NiMnGa martensites – the effects of modulation and doping**

IL 02

[Lucie Bodnárová](#), [Petr Sedlák](#), [Martin Zelený](#), [Oleg Heczko](#), [Ladislav Straka](#), [Alexei Sozinov](#), [Hanus Seiner](#)

14:20 - 14:40 **Type I and Type II Twinning Shear Stress of Ni-Mn-Ga**

[Peter Müllner](#)

14:40 - 15:00	Twin Boundary Dynamics in 10M Ni-Mn-Ga Martensite <u>Andrey Saren</u> , Kari Ullakko
15:00 - 15:20	Non-conventional twinning and macro-twinning in 10 M NiMnGa <u>Hanuš Seiner</u> , Robert Chulist, Alexei Sozinov, Ladislav Straka, Oleg Heczko
15:20 - 15:40	Hierarchical twin microstructure in modulated 10M Ni Mn-Ga single crystals. An analysis beyond the continuum mechanics Robert Chulist, Kinga Nalepka, Alexei Sozinov
15:40 - 16:00	The Effect of Loading Rate on Characteristics of Twin Boundary Motion in Ni-Mn-Ga Noam Zreihan, Eilon Faran, <u>Doron Shilo</u>

19:00 - 22:00 **Welcome Party**

TUESDAY, JUNE 4, 2019

09:00 - 09:30 IL 03	Ab initio design strategies for NiMn-based ferromagnetic shape memory alloys <u>Tilmann Hickel</u> , Biswanath Dutta, Irina Stockem, Fritz Körmann, Jörg Neugebauer
09:30 - 09:50	Electron localization in Ni₂MnGa alloy <u>Martin Zelený</u> , Petr Sedlák, Ladislav Straka, Hanuš Seiner, Oleg Heczko
09:50 - 10:10	Martensitic transformation sequence of Ni₂Mn_{1.2}Ga_{0.8} alloy by first-principles calculations <u>Jing Bai</u> , Jinlong Wang, Claude Esling, Xiang Zhao, Liang Zuo

10:10 - 10:40 Coffee break

10:40 - 11:00	Correlation effects on ground-state properties of Fe₂Ni_{1+x}Ga_{1-x} Heusler alloys: ab initio study <u>Vasily Buchelnikov</u> , Vladimir Sokolovskiy, Olga Miroshkina, Mikhail Zagrebin, Johannes Nokelainen, Aki Pulkkinen, Bernrdo Barbiellini, Erkki Lähderanta
11:00 - 11:20	Point defects in magnetic shape memory alloys: A first-principles study <u>Biswanath Dutta</u> , Poulumi Dey, Fritz Körmann, Tilmann Hickel, Jörg Neugebauer
11:20 - 11:40	The Effect of Various Model Features on Predicting the Macro-Scale Magneto-Mechanical Behavior of Magnetic Shape Memory Alloys <u>Heidi P. Feigenbaum</u> , J. Lance Eberle, Constantin Ciocanel, Glen J. D'Silva
11:40 - 12:00	Site and magnetic configuration dependent phase stability in off-stoichiometric shape memory system Ni-Mn-Sb Sheuly Ghosh, <u>Subhradip Ghosh</u>
12:00 - 12:20	On Magneto-Mechanical Characterization Methods for Magnetic Shape Memory Component Models <u>Fabian Ehle</u> , Peter Neumeister, Holger Neubert
12:20 - 12:40	Describing the hierarchical martensitic microstructure of modulated Heusler alloys by a single parameter Stefan Schwabe, Robert Niemann, Hanus Seiner, Oleg Heczko, Markus E. Gruner, Kornelius Nielsch, <u>Sebastian Fähler</u>

12:40 - 13:50 Lunch

13:50 - 14:20 IL 04	Neutron diffraction and the interplay between structure and magnetism in high temperature FSMA <u>Jose Maria Porro</u> , Anabel Pérez-Checa, Patricia Lázpita, Jorge Feuchtwanger, Anne Stunault, Jose Manuel Barandiarán, Alexey Sozinov, Kari Ullakko, Volodymyr Chernenko
14:20 - 14:40	Crystallographic evolution of martensite cluster in austenite Ni-Mn-Ga alloys under uniaxial loading <u>Long Hou</u> , Ying Niu, Yanchao Dai, Lansong Ba, Yves Fautrelle, Zongbin Li, Bo Yang, Zhongming Ren, Claude Esling, Xi Li
14:40 - 15:00	Combined Effect of Magnetic Field and Hydrostatic Pressure on Transformation Behaviour in Ni-Mn-In Alloy <u>Volodymyr A. Chernenko</u> , Patricia Lázpita, J. Rodríguez Fernández, Víctor Lvov, Jose M. Barandiarán
15:00 - 15:20	Stress-Induced Martensite and Mechano-Magnetic Energy Conversion of Co-Ni-Ga <u>Paul Lindquist</u> , Volodimir Chernenko, Eduard Cesari, Peter Müllner
15:20 - 15:40	Magnetic Emission During Structural Changes in Ferromagnetic Shape Memory Alloys <u>Dezső Beke</u> , Lajos Daróczy, László Tóth, Melinda Bolgár, Nora Samy
15:40 - 16:00	Mezoscopic Features of 10M Ni-Mn-Ga Martensite: a/b twin laminate, antiphase boundaries and magnetic domains walls <u>Oleg Heczko</u>

WEDNESDAY, JUNE 5, 2019

09:00 - 09:30 IL 05	Towards achieving prominent magnetocaloric and elastocaloric properties in magnetic shape-memory alloys <u>Daoyong Cong</u> , Yuhai Qu, Zhi Yang, Xiaoming Sun, Zhen Chen, Yandong Wang
09:30 - 09:50	Elastocaloric effect in Ni-Co-Mn-Ti all-d-metal Heusler alloy <u>Yi Shen</u> , Zhiyang Wei, Jian Liu
09:50 - 10:10	Caloric and multicaloric effects on Ni-Mn-In SMA subjected to uniaxial stress and magnetic field <u>Adrià Gràcia-Condal</u> , Tino Gottschall, Maximilian Fries, Lukas Pfeuffner, Oliver Gutfleisch, Antoni Planes, Lluís Mañosa

10:10 - 10:40 Coffee break

10:40 - 11:00	Enhanced Barocaloric Effect in Pd-In-Fe Shape Memory Alloys By Hydrostatic Pressure Training <u>Yanfeng Liu</u> , Qi Shen, Fenghua Chen, Jian Liu
11:00 - 11:20	Large adiabatic temperature change driven by magnetostructural transition in a Ni₅₀Mn_{18.5}Ga₂₅Cu_{6.5} alloy <u>Dewei Zhao</u> , Jian Liu
11:20 - 11:40	Microstructure, magnetic property and the extremely shortened homogenizing process of melt extracted La-Fe-Si microwires <u>Ruochen Zhang</u> , Xuexi Zhang, Mingfang Qian
11:40 - 12:00	Enhanced magnetocaloric effect in multi-dimensional Ni-Mn-based alloys through size effect <u>Mingfang Qian</u> , Xuexi Zhang, Lin Geng

12:00 - 12:20	Degradation of Magnetocaloric Effect in Ni-Mn-In Heusler Alloys in Cyclic Magnetic Fields <u>Akhmed Aliev</u> , Adler Gamzatov, Akhmed Batdalov, Lazer Khanov, Alexander Kamantsev, Alexey Mashirov, Victor Koledov, Vladimir Shavrov
12:20 - 12:40	Caloric effects in Ni₅₀Mn₁₉Cu₆Ga₂₅ alloy with paramagnetic austenite to ferromagnetic martensite transformation <u>Concepcio Seguí</u> , Joan Torrens-Serra, Eduard Cesari Patricia Lázpita

12:40 - 13:50 Lunch

13:50 - 14:20 IL 06	Tailoring Hysteresis in magnetocaloric Ni-Mn-Ga-Co Films <u>Anett Diestel</u> , Robert Niemann, Sebastian Fähler
14:20 - 14:40	Towards Engineering Magnetic Shape Memory Films and Nanostructures <u>Milad Takhsha Ghahfarokhi</u> , Francesca Casoli, Simone Fabbrici, Lucia Nasi, Federica Celegato, Riccardo Cabassi, Giovanna Trevisi, Davide Calestani, Paola Tiberto, <u>Vojtech Uhlir</u> , Franca Albertini
14:40 - 15:00	Influence of microstructure and texture on hysteresis in epitaxial Ni-Mn-Ga-Co films <u>Klara Lünser</u> , Kornelius Nielsch, Sebastian Fähler
15:00 - 15:20	Strain induced dielectric enhancement in AlN based multiferroic layered structure. Shuvam Pawar, Anuj Kumar, <u>Davinder Kaur</u>
15:20 - 15:40	Wide structural and magnetic successive transitions and related magnetocaloric properties in a directionally solidified polycrystalline Ni-Co-Mn-In alloy <u>Feng Chen</u> , José Luis Sánchez Llamazares, César Fidel Sánchez-Valdés, Peter Müllner, Yunxiang Tong, Li Li
15:40 - 16:00	Interfacial microstructure of Ni-Mn-Ga shape memory thin film on Silicon <u>Shanmugam Vinodh Kumar</u> , Manickam Mahendran, Hossain Md Sarowar, Pratip Kumar Mukhopadhyay

16:00- 16:30 Coffee break

16:30 - 16:50	Role of magnetic domains and macroscopic magnetization in “elastic” softening of Ni₂MnGa in the ferromagnetic cubic phase and during premartensitic transformation <u>Sergey Kustov</u> , Miguel Lluís Corró, Jaume Rosselló, Vladimir Kaminskii, Konstantin Sapozhnikov, Andrey Saren, Alexei Sozinov, Kari Ullakko
16:50 - 17:10	Tailoring magneto-structural transition and twinning microstructure towards large recoverable magnetostrain effect <u>Jingmin Wang</u> , Panpan Li, Hui Hua, Qijia Yu, Chengbao Jiang
17:10 - 17:30	Highly mobile type I and type II twin boundaries in 14M Ni-Mn-Ga-Fe martensite <u>Alexei Sozinov</u> , Denys Musiienko, Andrey Saren, Petr Veřtát, Ladislav Straka, Oleg Heczko, Martin Zelený, Robert Chulist, Kari Ullakko
17:30 - 17:50	Hardness measurements in a 10M NiMnGa single crystal <u>Emmanuel Pagounis</u> , Grzegorz Cios, Robert Chulist, Markus Laufenberg
17:50 - 18:10	A Simple Method to Characterize Twin Boundary Kinetics in Ni-Mn-Ga <u>Bibek Karki</u> , Yotam Bachar, Itay Harel, Eithan Kaplan, Arik Sabag, Doron Shilo, Peter Mullner, Eilon Faran
18:10 - 18:30	What is the physical origin for the twinning stress in Ni-Mn-Ga? <u>Eilon Faran</u> , Itamar Benichou, Sefi Givli, Doron Shilo

19:00 - 21:30 **Meeting of International Conference Committee for ICFSMA**

THURSDAY, JUNE 6, 2019

09:00 - 09:30	X-ray magnetic circular dichroism under pulsed magnetic field for Ni-Co-Mn-In ferromagnetic shape memory alloy IL 07 <u>Rie Umetsu</u> , Hiromasa Yasumura, Yasuo Narumi, Yoshinori Kotani, Tetsuya Nakamura, Hiroyuki Nojiri, Ryosuke Kainuma
09:30 - 09:50	Magneto-optics: how it can be useful in the research of martensitic transformation <u>Martin Veis</u> , Daniel Kral, Lukáš Nowak, Stefan Schwabe, Lukáš Beran, Sebastian Fähler, Martin Zeleny, Jan Zemen, Jaroslav Hamrle, Oleg Heczko
09:50 - 10:10	Magnetic domains observations in Ni-Mn-Ga alloys by advanced Kerr microscopy <u>Alexei Perevertov</u> , Oleg Heczko, Rudolf Schaefer

10:10 - 10:40 Coffee break

10:40 - 11:00	Evolution of Magnetic Domains during Magneto-Mechanical Loading of Ni-Mn-Ga <u>Heidi P. Feigenbaum</u> , Glen J. D'Silva, Constantin Ciocanel
11:00 - 11:20	Energies of magnetic domains in twinned Ni-Mn-Ga <u>Medha Veligatla</u> , Carlos J. Garcia-Cervera, Peter Müllner
11:20 - 11:40	Magnetic coercivity control for novel functionality in Ni-Mn-Ga(-B) single crystals <u>Ladislav Straka</u> , Ladislav Fekete, Michal Rameš, Eduard Belas, Oleg Heczko
11:40 - 12:00	Atomic order domain size effects on the martensitic transformation in metamagnetic shape memory alloys Daniel Salas, Thien Duong, Yuhao Wang, Yang Ren, Yuriy Chumlyakov, Raymundo Arroyave, <u>Ibrahim Karaman</u>
12:00 - 12:20	Nonlinear vibrational characteristics of 10M martensite of NiMnGa and NM martensite of NiMnGaCoCu <u>Petr Sedlak</u> , Hanus Seiner, Lucie Bodnarova, Ladislav Straka, Alexei Sozinov, Oleg Heczko
12:20 - 12:40	The Mechanism of Formation of Type II Twins in Ni₂MnGa <u>Robert Pond</u> , Bibek Karki, Peter Müllner

12:40 - 13:50 Lunch

13:50 - 14:20	Additive Manufacturing: Opportunities and Challenges for Functional Magnetic Materials IL 08 <u>Markus Chmielus</u> , Erica Stevens, Amir Mostafaei, Pierangeli Rodriguez de Vecchis, Rafael Rodriguez de Vecchis, Aaron Acierno, Katerina Kimes, Jakub Toman
14:20 - 14:40	Optimization of magneto-mechanical properties to increase the efficiency of actuator elements <u>Andrea Böhm</u> , Miguel Panesso, Kenny Pagel, Welf-Guntram Drossel
14:40 - 15:00	A Design Tool for Magnetic Shape Memory Actuators and Application <u>Annabell Effner</u> , Fabian Ehle, Tobias Zawada
15:00 - 15:20	Magnetolectric Coupling In Ferromagnetic Shape Memory Alloys Based Multiferroic Heterostructure For Magnetic Field Sensing Application <u>Anuj Kumar</u> , Shuvam Pawar, Davinder Kaur
15:20 - 15:40	FEM evaluation of strain distribution in NiMnGa/Silicone composites with various particle configurations Pimpet Sratong-on, Masaki Tahara, Volodymyr Chernenko, <u>Hideki Hosoda</u>

15:40 - 16:00	Laser based 4D printing of Ni-Mn-Ga MSM alloy Ville Laitinen, Alexei Sozinov, Andrey Saren, Kari Ullakko
16:00 - 16:30 IL 09	Combining thermal and magnetic tripping of MSM in next-generation miniature circuit breakers Sebastian Breisch, Arda Tüysüz

19:30 - 22:00 **Conference Dinner**

FRIDAY, JUNE 7, 2019

09:00 - 09:30 IL 10	Instability of modulation in thin foils of magnetic shape memory alloy: from NM' to NM Yanling Ge, Ladislav Straka, Simo-Pekka Hannula, Oleg Heczko
09:30 - 09:50	NiMnGa/Si Bimorph Nanoactuation for Photonics Applications Manfred Kohl, Franziska Lambrecht, Randy Fechner, Ivan R. Aseguinolaza, Volodymyr Chernenko
09:50 - 10:10	Ni-Mn-Ga magnetic shape memory alloy for high-speed actuation in micro-magneto-mechanical systems Denys Musienko, Andrey Saren, Ladislav Straka, Marek Vronka, Ladislav Klimša, Jaromír Kopeček, Oleksii Sozinov, Kari Ullakko, Oleg Heczko

10:10 - 10:40 Coffee break

10:40 - 11:00	Superelastic properties at cryogenic temperatures in Co-Cr-Al-Si shape memory alloys Takumi Odaira, Xiao Xu, Toshihiro Omori, Ryosuke Kainuma
11:00 - 11:20	First-principles calculations of phase stability and magnetic properties of Ni-Mn-Ga-Ti ferromagnetic shape memory alloys Xiang Zhao, Jing Bai, Jinlong Wang, Shaofeng Shi, Claude Esling, Liang Zuo
11:20 - 11:40	Understanding Heusler alloys for magnetic refrigeration and sensor applications Chhayabrita Maji, Sandeep Singh, Soumyadipta Pal, Priya Mahadevan
11:40 - 12:00	Magnetic martensitic transformation and associated electronic behaviors in NiMnTi(Fe) all-d-metal Heusler alloys Qingqi Zeng, Jianlei Shen, Hanning Zhang, Enke Liu
12:00 - 12:20	Studies on effect of temperature on the Photo Induced Micro-Actuation effect of a Co-based FSMA system Abhishek Bagchi, Suman Sarkar, Sandip Bysakh, Susenjit Sarkar, Pratib Kumar Mukhopadhyay
12:20 - 12:40	Cyclic stability of two-way shape memory effect in ferromagnetic CoNiAl single crystals Anna Eftifeeva, Elena Panchenko, Yuriy Chumlyakov, Gegory Gerstein, Hans Jürgen Maier

12:40 - 13:50 Lunch

13:50 - 14:20	Decomposition of Heusler alloys <u>IL 11</u> <u>Vladimir Sokolovskiy</u> , Markus Gruner, Peter Entel, Mehmet Acet, Vasiliy Buchelnikov
14:20 - 14:40	Strong Magnetic Field Suppression of the Martensitic Transformation in Mn-Ni(Fe)-Sn MetaMSMAs <u>Patricia Lázpita</u> , Anabel Pérez Checa, Jose M. Barandiarán, Andrew Ammerlaan, Uli Zeitler, Volodymyr Chernenko
14:40 - 15:00	Study of phase transformation temperatures of Ni-Mn-Ga-Fe-Cu <u>Frans Nilsén</u> , Andrew Armstrong, Michal Rameš, Ross Colman, Tomas Kmjec, Ladislav Straka, Peter Müllner, Oleg Heczko
15:00 - 15:20	The effect of γ phase on the martensite variant reorientation in Ni₅₈Mn₂₅Ga₁₇ alloys <u>Yanchao Dai</u> , Long Hou, Robert Chulist, Xi Li
15:20 - 15:40	Fe-doped ferromagnetic shape memory Ni-Mn-Sn alloys <u>Xuexi Zhang</u> , Hehe Zhang
15:40 - 16:00	Twin Boundary Mobility in Ni-Mn-Sn Magnetic Shape Memory Alloys <u>Paweł Czaja</u> , Robert Chulist, Tomasz Tokarski, Anna Wójcik, Wojciech Maziarz
16:00 - 16:20	Closing Ceremony <u>O. Heczko</u>

POSTERS

Wednesday, 9:00 - Friday, 16:30

Crystallographic evolution of martensite cluster in austenite Ni-Mn-Ga alloys under uniaxial loading <u>Long Hou</u> , Ying Niu, Yanchao Dai, Lansong Ba, Yves Fautrelle, Zongbin Li, Bo Yang, Zhongming Ren, Claude Esling, Xi Li
Large room-temperature elastocaloric effect in Sn-doped Ni-Mn-In metamagnetic shape memory alloys Yaning Xiao, Wen Sun, Jian Liu, <u>Hu Zhang</u>
Superelasticity Behavior in Ni-Mn-In-Co Polycrystalline Magnetic Shape Memory Alloys <u>Binfeng Lu</u> , Jian Liu
Effect of the k-mesh on the phonon spectrum of Ni₂MnGa <u>Olga Miroshkina</u> , Vasily Buchelnikov, Alexey Zayak, Vladimir Sokolovskiy, Mik Zagrebin, Yulia Sokolovskaya
Point defects in magnetic shape memory alloys: A first-principles study <u>Biswanath Dutta</u> , Poulumi Dey, Fritz Körmann, Tilmann Hickel, Jörg Neugebauer
Ni-Mn-Ga magnetic shape memory alloy for high-speed actuation in micro-magneto-mechanical systems <u>Denys Musiienko</u> , Andrey Saren, Ladislav Straka, Marek Vronka, Ladislav Klimša, Jaromír Kopeček ² , Oleksii Sozinov, Kari Ullakko, Oleg Heczko
Manipulating the martensitic phase transition of NiMnGa thin films <u>Bruno Weise</u> , Niclas Teichert, Klara Lünser, Kornelius Nielsch, Andreas Hütten, Maria Krautz, Anja Waske, Sebastian Fähler
Crystal structure and superelasticity in Pd-Mn-Ga alloys <u>Tatsuya Ito</u> , Yuta Kimura, Xiao Xu, Toshihiro Omori, Ryosuke Kainuma

<p>Ab initio study of magnetic properties of Fe_{75-x}V_xAl₂₅ alloys</p> <p><u>Mariya Matyunina</u>, Mikhail Zagrebin, Vladimir Sokolovskiy, Vasiliy Buchelnikov</p>
<p>T-x phase diagram in Heusler compounds Ni_{2+x}MnGa_{1-x}</p> <p><u>Tetsujiro Eto</u>, Xiao Xu, Tatsuya Ito, Fuminori Honda, Dexin Li, Gendo Oomi, Ryosuke Kainuma, Takeshi Kanomata</p>
<p>Laser based 4D printing of Ni-Mn-Ga MSM alloy</p> <p><u>Ville Laitinen</u>, Alexei Sozinov, Andrey Saren, Kari Ullakko</p>
<p>First-principles study of the structure and properties of Fe-Pd-Z Alloys</p> <p><u>Oksana Pavlukhina</u>, Vasily Buchelnikov, Vladimir Sokolovskiy, Mikhail Zagrebin</p>
<p>Twin Boundary Dynamics in 10M Ni-Mn-Ga Martensite</p> <p><u>Andrey Saren</u>, Kari Ullakko</p>
<p>Huge Superelasticity in Ferrous Single Crystalline Shape-Memory Alloy</p> <p><u>Monika Czerny</u>, Grzegorz Cios, Wojciech Maziarz, Yuri Chumlyakov, Norbert Schell, Robert Chulist</p>
<p>The magnetoelastic transitions and magnetostriction in the Mn_{1.95}Cr_{0.05}Sb single crystal</p> <p><u>Kun Xu</u>, Yiming Cao, Zhe Li</p>
<p>Manipulation of magnetic configuration by static isopressure in NdFeO₃</p> <p><u>Yiming Cao</u>, Kun Xu, Zhe Li, Yuanlei Zhang</p>
<p>Ferromagnetic Ni-Mn-Ga-Cu shape memory alloy for microsystem technology</p> <p><u>Alexey Mashirov</u>, Artemy Irzhak, Alexander Kamantsev, Dewei Zhao, Jian Liu, Victor Koledov, Vladimir Shavrov</p>
<p>Frequency Dependence of the Magnetocaloric Effect in Ni₅₀Mn₂₈Ga_{22-x}R_x (x=0, 1.5; R=Cu, Zn) alloys</p> <p><u>Adler Gamzatov</u>, Akhmed Aliev, Shakhban Khizriev, Ahmed Batdalov, Ismaeil Sarsari Abdolhosseini, Parviz Kameli, Ali Ghotbi</p>
<p>The effect of γ ' precipitates on the superelastic strain and martensitic transformation in Fe- based single crystals</p> <p><u>Wojciech Maziarz</u>, Monika Czerny, Anna Wójcik, Grzegorz Cios, Yuri I. Chumlyakov, Norbert Schell, Robert Chulist</p>
<p>Zn- and Cd-doping in Ni-Mn-Ga alloys: A first-principles study</p> <p><u>Jozef Janovec</u>, Martin Zelený, Alexei Sozinov, Ladislav Straka, Oleg Heczko</p>
<p>The effect of atomic order and microstructure on hysteresis behavior and inverse magnetocaloric effect in rapidly solidified ribbons</p> <p><u>Anna Wojcik</u>, Pawel Czaja, Robert Chulist, Maciej Kowalczyk, Tomasz Czeppe, Wojciech Maziarz</p>
<p>Superelastic properties at cryogenic temperatures in Co-Cr-Al-Si shape memory alloys</p> <p><u>Takumi Odaira</u>, Xiao Xu, Toshihiro Omori, Ryosuke Kainuma</p>
<p>Large elastocaloric effect through two-step structural transformation in a Ni₅₅Mn₁₈Ga₂₇ alloy</p> <p><u>Zongbin Li</u>, Dong Li, Bo Yang, Xiang Zhao, Liang Zuo</p>
<p>Realization of reversible giant magnetocaloric effect based on applied external hydrostatic pressure for Ni-Co-Mn-In metamagnetic Heusler alloy</p> <p><u>Zhe Li</u>, Yuanlei Zhang, Kun Xu, Chao Jing, Zongbin Li</p>
<p>Annealing effect on Magneto-transport property and Stress induced dynamic elastic moduli on a Co-Ni-Al FSMA</p> <p><u>Bhagoju Rajini Kanth</u>, Md Sarowar Hossain, Pratib Kumar Mukhopadhyay</p>

<p>Strain induced dielectric enhancement in AlN based multiferroic layered structure.</p> <p>Shuvam Pawar, Anuj Kumar, Davinder Kaur</p>
<p>Magnetoelectric Coupling In Ferromagnetic Shape Memory Alloys Based Multiferroic Heterostructure For Magnetic Field Sensing Application</p> <p>Anuj Kumar, Shuvam Pawar, Davinder Kaur</p>
<p>Magnetic Anisotropy of Non-modulated Tetragonal Ni-Mn-Ga-Co-Cu Crystals</p> <p>Michal Rames, Oleg Heczko, Alexei Sozinov, Kari Ullakko, Ladislav Straka</p>
<p>Degradation of Magnetocaloric Effect in Ni-Mn-In Heusler Alloys in Cyclic Magnetic Fields</p> <p>Akhmed Aliev, Adler Gamzatov, Akhmed Batdalov, Lazer Khanov, Alexander Kamantsev, Alexey Mashirov, Victor Koledov, Vladimir Shavrov</p>
<p>Ferromagnetic transition metals doping Ni₂MnGa alloy</p> <p>Vít Kopecký, Michal Rameš and Oleg Heczko</p>
<p>First-Principles Study of Phase Stability in Mn-excess Ni-Mn-Ga Alloys</p> <p>Martin Zelený, Martin Heczko, Ladislav Straka, Oleg Heczko</p>
<p>Magnetic coercivity control for novel functionality in Ni-Mn-Ga(-B) single crystals</p> <p>Ladislav Straka, Ladislav Fekete, Michal Rameš, Eduard Belas, Oleg Heczko</p>
<p>Martensitic transformation in Fe₄₄Mn₂₅Ga₃₁ Heusler alloy studied by Mössbauer spectroscopy</p> <p>Denisa Kubániová, Tomáš Kmječ, Oleg Heczko</p>
<p>Fe₂MnSn: A hexagonal Heusler analogue</p> <p>Marie Kratochvílová, Michal Dušek, Ross Colman, Jiří Pospíšil</p>
<p>Additive Manufacturing: Opportunities and Challenges for Functional Magnetic Materials</p> <p>Markus Chmielus, Erica Stevens, Amir Mostafaei, Pierangeli Rodriguez de Vecchis, Rafael Rodriguez de Vecchis , Aaron Acierno, Katerina Kimes, Jakub Toman</p>
<p>Thermally-induced changes in modulated structure of 10M Ni-Mn-Ga-Fe martensite</p> <p>Petr Veřtát, Ladislav Straka, Milan Klicpera, Oliva Pachterová, Alexei Sozinov, Oleg Heczko</p>
<p>EBSD observations of Laminates in 10 M martensite Ni-Mn-Ga magnetic shape memory single crystal</p> <p>Jaromír Kopeček, Ladislav Klimša, Jan Duchoň, Jan Drahokoupil and Oleg Heczko</p>
<p>Magneto-optical spectroscopy and electronic structure of ferromagnetic Fe-Mn-Ga Heusler alloys</p> <p>Daniel Kral, Lukáš Beran, Martin Zeleny, Jan Zemen, Roman Antos, Jaroslav Hamrle, Oleg Heczko, Martin Veis</p>
<p>Magnetic and Acoustic Emission During Superplastic Deformation of Martensitic Ni₂MnGa Single Crystal</p> <p>Lajos Daróczy, Aniko Hudák, Laszlo Tóth, Dezso Beke</p>
<p>Abnormal thermal expansion and correlated magnetic properties of antiperovskite Mn₃XN compounds</p> <p>Ying Sun, Kewen Shi, Sihao Deng, Qingzhen Huang, Cong Wang</p>
<p>Broadening refrigeration temperature regions in ferromagnetic shape memory alloys</p> <p>Dunhui Wang</p>
<p>The microstructure and magnetism of all-d Ni-Co-Mn-Ti thin films</p> <p>Shengcan Ma, Kai Liu, Changcai Chen, Xiaohua Luo, Zhenchen Zhong</p>