

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**

Chairperson: Hanuš Seiner

	09:00 - 09:20	Opening Session <u>O. Heczko</u>
L 01	09:20 - 09:40	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
L 02	09:40 - 10:00	What is the physical origin for the twinning stress in Ni-Mn-Ga? <u>Eilon Faran</u> , Itamar Benichou, Sefi Givli, Doron Shilo

10:00 - 10:30 Coffee break

Chairperson: Oleksii Sozinov

IL 01	10:30 - 11:00	Floating zone growth of low twinning stress MIR crystals with low chemical segregation <u>Ross H. Colman</u>
L 03	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, <u>Volodymyr Chernenko</u>
L 04	11:20 - 11:40	Magnetic Phase Diagrams in Co₂Cr(Ga,Si) Alloys with Reentrant Martensitic Transformation Behavior <u>Xiao Xu</u> , Takumi Kihara, Atsushi Miyake, Masashi Tokunaga, Toshihiro Omori, Takeshi Kanomata, Ryosuke Kainuma
L 05	11:40 - 12:00	Crystal structure and superelasticity in Pd-Mn-Ga alloys <u>Tatsuya Ito</u> , Yuta Kimura, Xiao Xu, Toshihiro Omori, Ryosuke Kainuma
L 06	12:00 - 12:20	Reversible martensite variant reorientation induced by martensite aging in ferromagnetic NiFeGaCo and NiMnGa single crystals <u>Elena Panchenko</u> , Ekaterina Timofeeva, Maria Pichkaleva, Anna Eftifeeva, Aida Tokhmetova, Nikita Surikov, Yuri Chumlyakov, Gregory Gerstein, Hans Jürgen Maier
L 07	12:20 - 12:40	Effects of Iron and Copper on the Martensitic Transformation of Ni-Mn-Ga <u>Andrew Armstrong</u> , Frans Nilsén, Michal Rameš, Tomas Kmjec, Ladislav Straka, Oleg Heczko, Peter Müllner

12:40 - 13:50 Lunch

IL 02	13:50 - 14:20	Soft shearing modes in NiMnGa martensites – the effects of modulation and doping <u>Lucie Bodnárová</u> , Petr Sedlák, Martin Zelený, Oleg Heczko, Ladislav Straka, Alexei Sozinov, Hanuš Seiner
L 08	14:20 - 14:40	Type I and Type II Twinning Shear Stress of Ni-Mn-Ga <u>Peter Müllner</u>
L 09	14:40 - 15:00	Twin Boundary Dynamics in 10M Ni-Mn-Ga Martensite <u>Andrey Saren</u> , Kari Ullakko
L 10	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
L 11	15:20 - 15:40	Hierarchical twin microstructure in modulated 10M Ni Mn-Ga single crystals. An analysis beyond the continuum mechanics <u>Robert Chulist</u> , Kinga Nalepka, Alexei Sozinov
L 12	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>

18:30 - 21:30 **Welcome Party****TUESDAY, JUNE 4, 2019**

IL 03	09:00 - 09:30	Ab initio design strategies for NiMn-based ferromagnetic shape memory alloys <u>Tilman Hickel</u> , Biswanath Dutta, Irina Stockem, Fritz Körmann, Jörg Neugebauer
L 13	09:30 - 09:50	Electron localization in Ni₂MnGa alloy <u>Martin Zelený</u> , Petr Sedlák, Ladislav Straka, Hanuš Seiner, Oleg Heczko
L 14	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

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L 15	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
L 16	11:00 - 11:20	Point defects in magnetic shape memory alloys: A first-principles study <u>Biswanath Dutta</u> , Poulumi Dey, Fritz Körmann, Tilman Hickel, Jörg Neugebauer

L 17	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
L 18	11:40 - 12:00	Site and magnetic configuration dependent phase stability in off-stoichiometric shape memory system Ni-Mn-Sb <u>Sheuly Ghosh</u> , <u>Subhradip Ghosh</u>
L 19	12:00 - 12:20	On Magneto-Mechanical Characterization Methods for Magnetic Shape Memory Component Models <u>Fabian Ehle</u> , Peter Neumeister, Holger Neubert
L 20	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

Chairperson: Ibrahim Karaman

IL 04	13:50 - 14:20	Neutron diffraction and the interplay between structure and magnetism in high temperature FSMAs <u>Jose Maria Porro</u> , Anabel Pérez-Checa, Patricia Lázpita, Jorge Feuchtwanger, Anne Stunault, Jose Manuel Barandiarán, Alexey Sozinov, Kari Ullakko, Volodymyr Chernenko
L 21	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
L 22	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, Victor Lvov, Jose M. Barandiarán
L 23	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
L 24	15:20 - 15:40	Magnetic Emission During Structural Changes in Ferromagnetic Shape Memory Alloys <u>Dezső Beke</u> , Lajos Daróczi, László Tóth, Melinda Bolgár, Nora Samy
L 25	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

Chairperson: Jaromír Kopeček

IL 05	09:00 - 09:30	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
L 26	09:30 - 09:50	Elastocaloric effect in Ni-Co-Mn-Ti all-d-metal Heusler alloy <u>Yi Shen</u> , Zhiyang Wei, Jian Liu

L 27	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
L 28	10:10 - 10:30	Enhanced Barocaloric Effect in Pd-In-Fe Shape Memory Alloys By Hydrostatic Pressure Training <u>Yanfeng Liu</u> , Qi Shen, Fenghua Chen, Jian Liu

10:30 - 11:00 Coffee break

Chairperson: Manfred Kohl

IL 06	11:00 - 11:30	Combining thermal and magnetic tripping of MSM in next-generation miniature circuit breakers <u>Sebastian Breisch</u> , Arda Tüysüz
L 29	11:30 - 11:50	Hardness measurements in a 10M NiMnGa single crystal <u>Emmanouel Pagounis</u> , Grzegorz Cios, Robert Chulist, Markus Laufenberg
L 30	11:50 - 12:10	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, Vojtech Uhlir, Franca Albertini
L 31	12:10 - 12:30	Tailoring magneto-structural transition and twinning microstructure towards large recoverable magnetostrain effect <u>Jingmin Wang</u> , Panpan Li, Hui Hua, Qijia Yu, Chengbao Jiang
L 32	12:30 - 12:50	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

12:50 - 14:00 Lunch

Chairperson: Peter Mullner

IL 07	14:00 - 14:30	Tailoring Hysteresis in magnetocaloric Ni-Mn-Ga-Co Films <u>Anett Diestel</u> , Robert Niemann, Sebastian Fähler
L 33	14:30 - 14:50	Microstructure, magnetic property and the extremely shortened homogenizing process of melt extracted La-Fe-Si microwires <u>Ruochen Zhang</u> , Xuexi Zhang, Mingfang Qian
L 34	14:50 - 15:10	Influence of microstructure and texture on hysteresis in epitaxial Ni-Mn-Ga-Co films <u>Klara Lünser</u> , Kornelius Nielsch, Sebastian Fähler
L 35	15:10 - 15:30	Large adiabatic temperature change driven by magnetostructural transition in a Ni₅₀Mn_{18.5}Ga₂₅Cu_{6.5} alloy Dewei Zhao, Jian Liu, <u>Yi Shen</u>
L 36	15:30 - 15:50	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

15:50 - 16:20 Coffee break

Chairperson: Oleg Heczko

L 37	16:20 - 16:40	Caloric effects in Ni₅₀Mn₁₉Cu₆Ga₂₅ alloy with paramagnetic austenite to ferromagnetic martensite transformation <u>Concepcio Seguí</u> , Joan Torrens-Serra, Eduard Cesari Patricia Lázpita
L 38	16:40 - 17:00	Strain induced dielectric enhancement in AlN based multiferroic layered structure. Shuvam Pawar, Anuj Kumar, <u>Davinder Kaur</u>
L 39	17:00 - 17:20	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
L 40	17:20 - 17:40	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
	18:30 - 21:00	Meeting of International Conference Committee for ICFSMA

THURSDAY, JUNE 6, 2019

Chairperson: Sebastian Fähler

IL 08	09:00 - 09:30	X-ray magnetic circular dichroism under pulsed magnetic field for Ni-Co-Mn-In ferromagnetic shape memory alloy <u>Rie Umetsu</u> , Hiromasa Yasumura, Yasuo Narumi, Yoshinori Kotani, Tetsuya Nakamura, Hiroyuki Nojiri, Ryosuke Kainuma
L 41	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
L 42	09:50 - 10:10	Magnetic domains observations in Ni-Mn-Ga alloys by advanced Kerr microscopy <u>Alexei Perevertov</u> , Oleg Heczko, Rudolf Schaefer
L 43	10:10 - 10:30	Evolution of Magnetic Domains during Magneto-Mechanical Loading of Ni-Mn-Ga <u>Heidi P. Feigenbaum</u> , Glen J. D'Silva, Constantin Ciocanel

10:30 - 11:00 Coffee break

Chairperson: Doron Shilo

L 44	11:00 - 11:20	Energies of magnetic domains in twinned Ni-Mn-Ga <u>Medha Veligatla</u> , Carlos J. Garcia-Cervera, Peter Müllner
L 45	11:20 - 11:40	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
L 46	11:40 - 12:00	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

L 47	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
L 48	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

Chairperson: Ladislav Straka

IL 09	13:50 - 14:20	Additive Manufacturing: Opportunities and Challenges for Functional Magnetic Materials <u>Markus Chmielus</u> , Erica Stevens, Amir Mostafaei, Pierangeli Rodriguez de Vecchis, Rafael Rodriguez de Vecchis, Aaron Acierno, Katerina Kimes, Jakub Toman
L 49	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
L 50	14:40 - 15:00	A Design Tool for Magnetic Shape Memory Actuators and Application <u>Annabell Effner</u> , Fabian Ehle, Tobias Zawada
L 51	15:00 - 15:20	Magnetoelectric Coupling In Ferromagnetic Shape Memory Alloys Based Multiferroic Heterostructure For Magnetic Field Sensing Application <u>Anuj Kumar</u> , Shuvam Pawar, Davinder Kaur
L 52	15:20 - 15:40	Laser based 4D printing of Ni-Mn-Ga MSM alloy <u>Ville Laitinen</u> , Alexei Sozinov, Andrey Saren, Kari Ullakko
L 53	15:40 - 16:00	NiMnGa/Si Bimorph Nanoactuation for Photonics Applications <u>Manfred Kohl</u> , Franziska Lambrecht, Randy Fechner, Ivan R. Aseguinolaza, Volodymyr Chernenko

19:00 - 22:00 Conference Dinner

FRIDAY, JUNE 7, 2019

Chairperson: Jaroslav Hamrle

IL 10	09:00 - 09:30	Instability of modulation in thin foils of magnetic shape memory alloy: from NM' to NM <u>Yanling Ge</u> , Ladislav Straka, Simo-Pekka Hannula, Oleg Heczko
L 54	09:30 - 09:50	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>
L 55	09:50 - 10:10	Ni-Mn-Ga magnetic shape memory alloy for high-speed actuation in micro-magneto-mechanical systems <u>Denys Musienko</u> , Andrey Saren, Ladislav Straka, Marek Vronka, Ladislav Klimša, Jaromír Kopeček, Oleksii Sozinov, Kari Ullakko, Oleg Heczko

10:10 - 10:40 Coffee break

L 56	10:40 - 11:00	Superelastic properties at cryogenic temperatures in Co-Cr-Al-Si shape memory alloys <u>Takumi Odaira</u> , Xiao Xu, Toshihiro Omori, Ryosuke Kainuma
L 57	11:00 - 11:20	First-principles calculations of phase stability and magnetic properties of Ni-Mn-Ga-Ti ferromagnetic shape memory alloys <u>Xiang Zhao</u> , Jing Bai, Jinlong Wang, Shaofeng Shi, Claude Esling, Liang Zuo
L 58	11:20 - 11:40	Understanding Heusler alloys for magnetic refrigeration and sensor applications <u>Chhayabrita Maji</u> , Sandeep Singh, Soumyadipta Pal, Priya Mahadevan
L 59	11:40 - 12:00	Magnetic martensitic transformation and associated electronic behaviors in NiMnTi(Fe) all-d-metal Heusler alloys <u>Qingqi Zeng</u> , Jianlei Shen, Hanning Zhang, Enke Liu
L 60	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, <u>Pratip Kumar Mukhopadhyay</u>
L 61	12:20 - 12:40	Cyclic stability of two-way shape memory effect in ferromagnetic CoNiAl single crystals <u>Anna Eftifeeva</u> , Elena Panchenko, Yuriy Chumlyakov, Gegory Gerstein, Hans Jürgen Maier

12:40 - 13:50 Lunch

IL 11	13:50 - 14:20	Decomposition of Heusler alloys <u>Vladimir Sokolovskiy</u> , Markus Gruner, Peter Entel, Mehmet Acet, Vasiliy Buchelnikov
L 62	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
L 63	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
L 64	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
L 65	15:20 - 15:40	Fe-doped ferromagnetic shape memory Ni-Mn-Sn alloys <u>Xuexi Zhang</u> , Hehe Zhang
	15:40 - 16:00	Closing Ceremony <u>O. Heczko</u>

POSTERS

Wednesday, 9:00 - Friday, 16:00

P 01	Large room-temperature elastocaloric effect in Sn-doped Ni-Mn-In metamagnetic shape memory alloys Yaning Xiao, Wen Sun, Jian Liu, Hu Zhang
P 02	Superelasticity Behavior in Ni-Mn-In-Co Polycrystalline Magnetic Shape Memory Alloys Binfeng Lu , Jian Liu
P 03	Effect of the k-mesh on the phonon spectrum of Ni₂MnGa Olga Miroshkina, Vasily Buchelnikov , Alexey Zayak, Vladimir Sokolovskiy, Mik Zagrebin, Yulia Sokolovskaya
P 04	Ab initio study of magnetic properties of Fe_{75-x}V_xAl₂₅ alloys Mariya Matyunina, Mikhail Zagrebin, Vladimir Sokolovskiy , Vasiliy Buchelnikov
P 05	T-x phase diagram in Heusler compounds Ni_{2+x}MnGa_{1-x} Tetsujiro Eto , Xiao Xu, Tatsuya Ito, Fuminori Honda, Dexin Li, Gendo Oomi, Ryosuke Kainuma, Takeshi Kanomata
P 06	Huge Superelasticity in Ferrous Single Crystalline Shape-Memory Alloy Monika Czerny , Grzegorz Cios, Wojciech Maziarz, Yury Chumlyakov, Norbert Schell, Robert Chulist
P 07	Ferromagnetic Ni-Mn-Ga-Cu shape memory alloy for microsystem technology Alexey Mashirov , Artemy Irzhak, Alexander Kamantsev, Dewei Zhao, Jian Liu, Victor Koledov, Vladimir Shavrov
P 08	The effect of γ' precipitates on the superelastic strain and martensitic transformation in Fe-based single crystals Wojciech Maziarz , Monika Czerny, Anna Wójcik, Grzegorz Cios, Yuri I. Chumlyakov, Norbert Schell, Robert Chulist
P 09	Zn- and Cd-doping in Ni-Mn-Ga alloys: A first-principles study Jozef Janovec , Martin Zelený, Alexei Sozinov, Ladislav Straka, Oleg Heczko
P 10	The effect of atomic order and microstructure on hysteresis behavior and inverse magnetocaloric effect in rapidly solidified ribbons Anna Wojcik , Pawel Czaja, Robert Chulist, Maciej Kowalczyk, Tomasz Czeppe, Wojciech Maziarz
P 11	Twin Boundary Mobility in Ni-Mn-Sn Magnetic Shape Memory Alloys Paweł Czaja , Robert Chulist, Tomasz Tokarski, Anna Wójcik, Wojciech Maziarz
P 12	Magnetic Anisotropy of Non-modulated Tetragonal Ni-Mn-Ga-Co-Cu Crystals Michal Rames , Oleg Heczko, Alexei Sozinov, Kari Ullakko, Ladislav Straka
P 13	Ferromagnetic transition metals doping Ni₂MnGa alloy Vít Kopecký , Michal Rameš and Oleg Heczko
P 14	First-Principles Study of Phase Stability in Mn-excess Ni-Mn-Ga Alloys Martin Zelený, Martin Heczko , Ladislav Straka, Oleg Heczko
P 15	Martensitic transformation in Fe₄₄Mn₂₅Ga₃₁ Heusler alloy studied by Mössbauer spectroscopy Denisa Kubániová , Tomáš Kmječ, Oleg Heczko

P 16	Fe₂MnSn: A hexagonal Heusler analogue <u>Marie Kratochvílová</u> , Michal Dušek, Ross Colman, Jiří Pospíšil
P 17	Thermally-induced changes in modulated structure of 10M Ni-Mn-Ga-Fe martensite <u>Petr Veřtát</u> , Ladislav Straka, Milan Klicpera, Oliva Pacherová, Alexei Sozinov, Oleg Heczko
P 18	EBSD observations of Laminates in 10 M martensite Ni-Mn-Ga magnetic shape memory single crystal <u>Jaromír Kopeček</u> , Ladislav Klimša, Jan Duchoň, Jan Drahokoupil and Oleg Heczko
P 19	Magneto-optical spectroscopy and electronic structure of ferromagnetic Fe-Mn-Ga Heusler alloys <u>Daniel Kral</u> , Lukáš Beran, Martin Zeleny, Jan Zemen, Roman Antos, Jaroslav Hamrle, Oleg Heczko, Martin Veis
P 20	Magnetic and Acoustic Emission During Superplastic Deformation of Martensitic Ni₂MnGa Single Crystal <u>Lajos Daróczy</u> , Aniko Hudák, Laszlo Tóth, Dezso Beke
P 21	Abnormal thermal expansion and correlated magnetic properties of antiperovskite Mn₃XN compounds <u>Ying Sun</u> , Kewen Shi, Sihao Deng, Qingzhen Huang, Cong Wang
P 22	Broadening refrigeration temperature regions in ferromagnetic shape memory alloys <u>Dunhui Wang</u>
P 23	The magnetoelastic transitions and magnetostriction in the Mn_{1.95}Cr_{0.05}Sb single crystal <u>Kun Xu</u> , Yiming Cao, Zhe Li
P 24	Manipulation of magnetic configuration by static isopressure in NdFeO₃ <u>Yiming Cao</u> , Kun Xu, Zhe Li, Yuanlei Zhang
P 25	Realization of reversible giant magnetocaloric effect based on applied external hydrostatic pressure for Ni-Co-Mn-In metamagnetic Heusler alloy <u>Zhe Li</u> , Yuanlei Zhang, Kun Xu, Chao Jing, Zongbin Li
P 26	Annealing effect on Magneto-transport property and Stress induced dynamic elastic moduli on a Co-Ni-Al FSMA <u>Bhogoju Rajini Kanth</u> , Md Sarowar Hossain, Pratip Kumar Mukhopadhyay
P 27	Large elastocaloric effect through two-step structural transformation in a Ni₅₅Mn₁₈Ga₂₇ alloy <u>Zongbin Li</u> , Dong Li, Bo Yang, Xiang Zhao, Liang Zuo
P 28	Point defects in magnetic shape memory alloys: A first-principles study <u>Biswanath Dutta</u> , Poulumi Dey, Fritz Körmann, Tilmann Hickel, Jörg Neugebauer
P 29	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, Oleksii Sozinov, Kari Ullakko, Oleg Heczko
P 30	Crystal structure and superelasticity in Pd-Mn-Ga alloys <u>Tatsuya Ito</u> , Yuta Kimura, Xiao Xu, Toshihiro Otori, Ryosuke Kainuma
P 31	Laser based 4D printing of Ni-Mn-Ga MSM alloy <u>Ville Laitinen</u> , Alexei Sozinov, Andrey Saren, Kari Ullakko
P 32	Twin Boundary Dynamics in 10M Ni-Mn-Ga Martensite <u>Andrey Saren</u> , Kari Ullakko

P 33	Superelastic properties at cryogenic temperatures in Co-Cr-Al-Si shape memory alloys <u>Takumi Odaira</u> , Xiao Xu, Toshihiro Omori, Ryosuke Kainuma
P 34	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
P 35	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
P 36	Additive Manufacturing: Opportunities and Challenges for Functional Magnetic Materials <u>Markus Chmielus</u> , Erica Stevens, Amir Mostafaei, Pierangeli Rodriguez de Vecchis, Rafael Rodriguez de Vecchis , Aaron Acierno, Katerina Kimes, Jakub Toman
P 37	Magnetoelectric Coupling In Ferromagnetic Shape Memory Alloys Based Multiferroic Heterostructure For Magnetic Field Sensing Application <u>Anuj Kumar</u> , Shuvam Pawar, Davinder Kaur
P 38	Strain induced dielectric enhancement in AlN based multiferroic layered structure. Shuvam Pawar, Anuj Kumar, <u>Davinder Kaur</u>
P 39	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