

**55th INTERNATIONAL CONFERENCE
ON MICROELECTRONICS,
DEVICES AND MATERIALS
and the WORKSHOP on
LASER SYSTEMS and PHOTONICS**



CONFERENCE 2019

CONFERENCE PROGRAM

**September 25th – September 27th, 2019
Bled, SLOVENIA**



The Investment No. 2130-17-090102 is Co-financed by The Republic of Slovenia and The European Union
Through European Regional Development Fund.

55th INTERNATIONAL CONFERENCE ON MICROELECTRONICS, DEVICES AND MATERIALS
with the WORKSHOP ON LASER SYSTEMS and PHOTONICS
September 25th - 27th, Bled Rose Hotel, Bled, Slovenia

time	Wednesday 25-9-2019	Thursday 26-9-2019	Friday 27-9-2019
	CONFERENCE	WORKSHOP	CONFERENCE
8:00- 8:45	REGISTRATION	REGISTRATION	REGISTRATION
8:45 - 9:00	OPENING CEREMONY	OPENING CEREMONY FOR WORKSHOP and SRIP TOP presentation	
9:00 - 9:15	INVITED PLENARY TALK Prof. Dr. Martin Stutzmann: <i>Integrated optoelectronic group III-nitride nano-devices for photo-catalysis</i>	WORKSHOP INVITED TALK: Prof. dr. Fatih Ömer Ilday: <i>Ultra-efficient laser-material processing in the ablation-cooled regime</i>	INVITED TALK Prof. Dr. Andreas Klein <i>The Fermi energy in polar compounds: Understanding the limits and consequences</i>
9:15 - 9:30			
9:30 - 9:45			
9:45 - 10:00	OPTO 1: A. Debevc, J. Krč and M. Topič <i>Simulation of optical waveguides with all-dielectric metamaterial cladding in silicon photonic integrated circuits</i>	WORKSHOP INVITED TALK: Prof. dr. Ivo Antonio Hernandez: <i>Optimisation of magnetic domains refinement on GO SiFe electrical steel by laser processing</i>	MTD 2: Uroš Prah, Tadej Rojac, Magdalena Wencka, Mirela Dragomir, Andreja Benčan, Rachel Sherbondy, Geoff Brennecke and Hana Uršič <i>MULTICALORIC PROPERTIES OF (1-x)Pb(Fe_{0.5}Nd_{0.5})O₃-xBiFeO₃ CERAMICS</i>
10:00 - 10:15	OPTO 2: M. Kovačič, J. Krč, B. Lipovšek, W-C Chen, M. Edoff, P.J. Bolt, J. van Deelen, M. Zhukova, J. Lontchi, D. Flandre, P. Salomé and M. Topič <i>MODELLING SUPPORTED DESIGN OF LIGHT MANAGEMENT STRUCTURES IN ULTRA-THIN CIGS PHOTOVOLTAIC DEVICES</i>	WORKSHOP INVITED TALK: Prof. dr. Udo Christian Loeschner: <i>MACH-X laser technology for large-scale and high-throughput micro fabrication: prospects and limitations</i>	MTD 3: Mojca Otoničar, Minghai Yao, Maja Makarovič, Andraž Bradeško, Brahim Dkhil, Barbara Malič <i>MULTIFERROIC PARTICULATE COMPOSITES VIA COLD SINTERING METHOD</i>
10:15 - 10:30	COFFEE BREAK		COFFEE BREAK
10:30 - 10:45			
10:45 - 11:00	OPTO 3: Jošt Balent, Janez Krč and Marko Topič <i>INFLUENCE/ANALYSIS OF DEFECT STATES AT INTERFACES AND IN DOPED THIN-FILM LAYERS ON THE PERFORMANCE OF SILICON HETEROJUNCTION SOLAR CELLS</i>	COFFEE BREAK	MTD 4: Kristian Radan, Brigita Kmet, Silvo Drnovšek, Barbara Malič <i>Alkaline-niobate based piezoceramics for energy harvesting application</i>

11:00 - 11:15	OPTO 4: Miha Kikelj, Benjamin Lipovšek, Matevž Bokalič and Marko Topič <i>SPICE Modelling of Stress Induced Inhomogeneities in Crystalline Silicon Solar Cells and Photovoltaic Modules</i>	WORKSHOP INVITED TALK: <u>Prof. dr. Ferdinand Bammer</u> : <i>Inline imaging-ellipsometry</i>	MTD 5: D. Kuščer, B. Kmet, S. Drnovšek, B. Malič, F. Levassort <i>Miniature, single-element ultrasound transducer from potassium sodium niobate-based materials</i>	
11:15 - 11:30	OPTO 5: Julián Ascencio-Vásquez, Kristijan Brecl, Franc Smole, Marko Topič <i>Application of the full thermal model for PV devices</i>		MTD 6: Mirela Dragomir, Qianli Ma, J. Patrick Clancy, Ashfia Huq, Hanna A. Dabkowska, Bruce D. Gaulin <i>REVISITING THE PHASE DIAGRAM OF Nd-LSCO SUPERCONDUCTORS</i>	
11:30 - 11:45	OPTO 6: Kristijan Reba, Jakob Bevc, Julián Ascencio-Vásquez, Marko Jankovec, Marko Topič <i>Photovoltaic Energy Production Forecasting using LightGBM</i>	WRP1: J. Mur, J. Schille, U. Loeschner, J. Petelin, R. Petkovšek : <i>Ultra-fast laser pulse positioning for direct material processing</i>	MTD 7: A. Bradeško, M. Vrabelj, L. Fulanović, M. Otoničar, H. Uršič, A. Henriques, C. C. Chung, J. L. Jones, Z. Kutnjak, B. Malič and T. Rojac <i>Electrocaloric ceramic materials under cyclic electrical loads</i>	
11:45 - 12:00	OPTO 7: Stefan Mitterhofer, Chiara Barretta, Luis Castillon, Gernot Oreski, Marko Topič, Marko Jankovec <i>Analysis of ethylene vinyl acetate degradation under UV-A LED light</i>	WRP2: J. Petelin, B. Podobnik, U. Buentig, V. Agrež, R. Petkovšek : <i>QCW laser for high-speed laser transfer printing</i>	COFFEE BREAK	
12:00 - 12:15	LUNCH BREAK	LUNCH BREAK		
12:15 - 12:30				MTD 8: M. Šadl, U. Eckstein, N. H. Khansur, K. G. Webber, U. Prah, A. Bradeško, B. Malič and H. Ursič <i>Pb(Mg_{1/3}Nb_{2/3})O₃-PbTiO₃ thick films prepared by aerosol deposition onto low-cost substrates</i>
12:30 - 12:45				MTD 9: Genorio Boštjan, Velišček Žiga and Pejovnik Stane <i>Li-B alloys and borophene materials – current status</i>
12:45 - 13:00				MTD 10: Matejka Podlogar, Tina Radošević, Blaž Leskovar, Zoran Jovanović, Aleš Omerzu, Nina Daneu, Sašo Šturm <i>PREPARATION OF THIN LAMELLAS FOR TEM CHARACTERIZATION USING FIB TECHNOLOGY</i>
13:00 - 13:15				CLOSING CEREMONY
13:15 - 13:30				

13:30 - 13:45	ICSOC 1: Tomo Markočič, Janez Trontelj <i>Lateral bipolar transistor in CMOS technology</i>	WORKSHOP INVITED TALK: Dr. Anthony Bertrand: <i>Recent advances on laser amplification in Rod-type optical fibers</i>
13:45 - 14:00	ICSOC 2: Damjan Berčan, Janez Trontelj <i>Ultra-Fast Signal Processing Circuit in 0.35μm CMOS Technology</i>	
14:00 - 14:15	ICSOC 3: Miha Gradišek, Damjan Berčan, Janez Trontelj <i>Automatic Hall Element Sensitivity Regulator Electronics</i>	WORKSHOP INVITED TALK: Prof. Dr. Stefano Sellerj: <i>Heat Load Effect in Coupled-Uncoupled Modes of Yb doped Multi-Core Fibers</i>
14:15 - 14:30	ICSOC 4: Mario Trifkovič, Drago Strle <i>DPS for a Miniature Multi-Channel, Vapor Trace Detection System</i>	
14:30 - 14:45	ICSOC 5: Rok Ražman, Aleksander Sešek, Jurij Tasič, Janez Trontelj <i>BLOOD SUGAR LEVEL MONITORING</i>	WRP3: V. Agrež, J. Petelin, R. Petkovšek: <i>Gain switched fiber lasers and pulses on demand</i>
14:45 - 15:00	ICSOC 6: Tadej Skuber, Janez Trontelj <i>High voltage electrical motor drive</i>	COFFEE BREAK
15:00 - 15:15	COFFEE BREAK	
15:15 - 15:30	COFFEE BREAK	
15:30 - 15:45	EL 1: Timotej Derstvenšek, Andrej Žemva <i>Electronic system for analysis and diagnosis of analog incremental position and angle encoders</i>	WORKSHOP Plenary TALK: Prof. Dr. Rick Trebino: <i>Good News and Bad News from the World of Ultrashort-Laser-Pulse Measurement</i>
15:45 - 16:00	EL 2: Marija Manevska, Janez Trontelj <i>MELT POOL RADIATION MODEL FOR ADDITIVE MANUFACTURING</i>	

16:00 - 16:15	EL 3: Matej Možek, Borut Pečar, Drago Resnik and Danilo Vrtačnik <i>DESIGN OF AN ADVANCED MINIATURE PIEZOELECTRIC MICROPUMP DRIVING MODULE</i>	WRP4: P. Šušnjar, T. Jones, R. Trebino, R. Petkovšek: <i>High sensitivity frog for charectarization of weak ps and sub-ps pulses</i>
16:15 - 16:30	EL 4: Aleksander Sešek, Janez Trontelj <i>THz field – the blurred frequency region between optics and electronics</i>	WRP5: L. Černe, P. Šušnjar, R. Petkovšek: <i>Characterisation of ps and fs laser pulses by using FROG method</i>
16:30 - 16:45	EL 5: Tadej Krmac, Andrej Švigelj, Janez Trontelj <i>Distance Measurement with 300 GHz Frequency Modulated Source</i>	COFFEE BREAK
16:45 - 17:00	COFFEE BREAK	
17:00 - 17:15	MTD 11: Eva Levičnik, Rok Zaplotnik, Gregor Primc <i>CHARACTERIZATION OF NON-EQUILIBRIUM INDUCTIVELY COUPLED SO2 PLASMA</i>	
17:15 - 17:30	POSTERS - PRESENTATIONS AND POSTERS	MTD 12: Vasył Shvalya, Gregor Filipič, Damjan Vengust, Janez Zavašnik, Martina Modic, Ibrahim Abdulhalim, Uroš Cvelbar <i>REUSABLE COPPER OXIDES BASED PLASMONIC TEMPLATES FOR IMPROVED SERS-DETECTION</i>
17:30 - 17:45		MEMS 1: Vera Gradišnik and Darko Gumbarevič <i>a-Si:H p-i-n Photodiode as a Label-free Biosensors</i>
17:45 - 18:00		MEMS 2: Borut Pečar, Matej Možek and Danilo Vrtačnik <i>Influence of excitation signal amplitude asymmetry on micropump operation</i>
18:00 - 18:15		MEMS 3: D. Resnik, B. Pečar, M. Možek, N. Lokar and D. Vrtačnik <i>Potential stability of thin film planar Ag/AgCl reference electrodes</i>
18:15 - 18:30	MEMS 4: Zumret Topčagić, Thomas E. Tsovilis and Dejan Križaj <i>Modeling of the Varistor Microstructure</i>	
18:30 - 18:45		
18:45 - 19:00		
19:00 - 19:15	WELCOME PARTY	
19:15 - 19:30		
19:30---		CONFERENCE DINNER

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MIDEM - Society for Microelectronics, Electronic Components and Materials,
Stegne 7, 1000 Ljubljana, SLOVENIA

CO – ORGANIZERS

SRIP Factories of The Future, Ljubljana, Slovenia

Ministry of Economic Development and Technology, Ljubljana, Slovenia

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The Investment No. 2130-17-090102 is Co-financed by The Republic of Slovenia and European Union Through European Regional Development Fund.

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European Regional Development Fund, Ljubljana, Slovenia

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Olga Zakrajšek, MIDEM, Slovenia

Iztok Šorli, MIKROIKS d.o.o., Slovenia

GENERAL INFORMATION

Welcome to the 55th International Conference on Microelectronics, Devices and Materials, (MIDEM 2019) and the joint Workshop on Laser Systems and Photonics. The conference continues the tradition of annual, international meetings organized by MIDEM – Society for Microelectronics, Devices and Materials, Ljubljana, Slovenia. These conferences have always attracted a large number of Slovene and foreign experts, as well as distinguished guest speakers, giving the opportunity to present their activities and research progress to the international audience and to discuss trends and problems related to their fields of work with other colleagues.

This year, 34 reviewed regular papers and 9 invited papers will be presented over the three days in the period September 25 – 27, 2019. Conference contributions are grouped into the following sections: Materials, Technology and Devices; Electronics; Optoelectronics; Thin and Thick Films; Integrated Circuits and System on Chip; Sensors and MEMS. On the second day of the conference the Workshop on Laser Systems and Photonics is organized.

We would like to express our thanks to the invited speakers and the contributors of regular papers for their valuable scientific contributions to the conference sessions and to the workshop. The members of the International Scientific Board of the conference, who made the review of the contributions, are gratefully acknowledged. We also thank all the Session Chairs and the members of the Conference Organizing Committee, who did their best to make the conference a success.

We hope that you will remember this event, not only for the importance of the papers and discussions, but also for the new friendships and the pleasant memories of the country.

We wish you a pleasant stay in Bled and in Slovenia.

Janez Krč, Chairman of the conference MIDEM 2019 and

Rok Petkovšek, Chairman of the workshop and co-chairman of the conference MIDEM 2019

Ljubljana, September 2019

CONFERENCE VENUE

The Conference is held from September 25th to September 27th, 2019 at Bled Rose Hotel in Bled, Slovenia.

CONFERENCE PROCEEDINGS

Invited and accepted papers are published in the Conference Proceedings distributed at the Conference registration.

LANGUAGE

The official Conference language is English.

REGISTRATION

The registration fees are as follows:

- FULL registration fee: **300 EUR with tax included**
- MIDEM Society members, MIDEM Sponsors: **244 EUR with tax included**

The fee includes Conference Proceedings and free access to all Conference events (Social Networking and Gala dinner).

Accompanying persons may join Social Networking at an extra charge.

Undergraduate students have free access to all Conference sessions on submitting their student card / index. For other Conference events, there will be an additional charge.

SOCIAL EVENTS

The Social Networking will be held on Wednesday, September 25th at Bled Rose Hotel in Bled, Slovenia.

The Gala Dinner will be held on Thursday, September 27th at 19:00 at Bled Rose Hotel in Bled, Slovenia.

ACCOMMODATION

Accommodation is available in:

- **Bled Rose Hotel**, Cesta svobode 8, 4260 Bled – Slovenija

<https://www.bledrose.com/en/>

Programme and Organizing Committee, MIDEM 2019 Conference

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CONFERENCE PROGRAM

WEDNESDAY, SEPTEMBER 25

08:00 REGISTRATION

08:45 WELCOME AND OPENING CEREMONY

09:00 CONFERENCE PLENARY TALK

CHAIRPERSON: M. Topič

09:00 M. Stutzmann

Integrated Optoelectronic Group III-nitride Nano-devices for Photo-catalysis

09:45 SESSION on OPTOELECTRONICS

CHAIRPERSON: M. Topič

09:45 A. Debevc, J. Krč and M. Topič

Simulation of Optical Waveguides with All-dielectric
Metamaterial Cladding in Silicon Photonic Integrated Circuits

**10:00 M. Kovačič, J. Krč, B. Lipovšek, W-C Chen, M. Edoff,
P. J. Bolt, J. van Deelen, M. Zhukova, J. Lontchi,
D. Flandre, P. Salomé and M. Topič**

Modelling Supported Design of Light Management Structures in
Ultra-thin CIGS Photovoltaic Devices

10:15 COFFEE BREAK

10:45 J. Balent, J. Krč and M. Topič

Influence/Analysis of Defect States at Interfaces and in Doped Thin-film Layers
on The Performance of Silicon Heterojunction Solar Cells

11:00 M. Kikelj, B. Lipovšek, M. Bokalič and M. Topič

SPICE Modelling of Stress Induced Inhomogeneities in
Crystalline Silicon Solar Cells and Photovoltaic Modules

11:15 J. Ascencio-Vásquez, K. Brecl, F. Smole, M. Topič

Application of The Full Thermal Model for PV Devices

11:30 K. Reba, J. Bevc, J. Ascencio-Vásquez, M. Jankovec, M. Topič

Photovoltaic Energy Production Forecasting using LightGBM

**11:45 S. Mitterhofer, C. Barretta, L. Castillon, G. Oreski,
M. Topič, M. Jankovec**

Analysis of Ethylene Vinyl Acetate Degradation Under
UV-A LED Light

12:00 LUNCH

13:30 SESSION on INTEGRATED CIRCUITS and SYSTEM on CHIP

CHAIRPERSON: A. Sešek

13:30 T. Markočič, J. Trontelj

Lateral Bipolar Transistor in CMOS Technology

13:45 D. Berčan, J. Trontelj

Ultra-Fast Signal Processing Circuit in 0.35 μ m CMOS Technology

14:00 M. Gradišek, D. Berčan, J. Trontelj

Automatic Hall Element Sensitivity Regulator Electronics

14:15 M. Trifković, D. Strle

DPS for a Miniature Multi-channel, Vapor Trace Detection System

14:30 R. Ražman, J. Tasič, J. Trontelj

Blood Sugar Level Monitoring

14:45 T. Skuber, J. Trontelj

High Voltage Electrical Motor Drive

15:00 COFFEE BREAK

15:30 SESSION on ELECTRONICS

CHAIRPERSON: A. Žemva

15:30 T. Derstvenšek, A. Žemva

Electronic System for Analysis and Diagnosis of Analog Incremental Position and Angle Encoders

15:45 M. Manevska, J. Trontelj

Melt Pool Radiation Model for Additive Manufacturing

16:00 M. Možek, B. Pečar, D. Resnik and D. Vrtačnik

Design of an Advanced Miniature Piezoelectric Micropump Driving Module

16:15 A. Sešek, J. Trontelj

THz Field – The Blurred Frequency Region Between Optics and Electronics

16:30 T. Krmac, A. Švigelj, J. Trontelj

Distance Measurement with 300 GHz Frequency Modulated Source

16:45 COFFEE BREAK

17:15 POSTER SESSION

CHAIRPERSON: A. Sešek

V. Ivačić, Ž. Kralj, A. Volčini

Testing the Reliability of ZFS File System

M. Šifrar, mentor A. Volčini

On Rendering Physically Correct Computer Graphics Imagery

J. Birk, L. Jerant, M. Fortuna, T. Medica, A. Volčini

Customizing SCADA System in High School

J. Oražem, mentor: A. Volčini

Assembling a DIY Printer

Ž. Kralj, mentor: A. Volčini

Retrocomputing With a Genuine C64

B. Baras, V. Jovanov, T. Poljanšek, A. Volčini

On the Usability of the Arduino Vidor FPGA

Enhanced Development Board

19:00 SOCIAL NETWORKING IN BLED ROSE HOTEL

THURSDAY, SEPTEMBER 26

08:00 REGISTRATION

08:45 OPENING CEREMONY – WORKSHOP on LASER SYSTEMS and PHOTONICS and SRIP ToP presentation

09:00 WORKSHOP - INVITED PAPERS

CHAIRPERSON: R. Petkovšek

09:00 F. Ö. Ilday

Ultra –efficient Laser Material Processing in the Ablation Cooled Regime

09:30 I. A. Hernandez

Optimization of Magnetic Domains Refinement on GO SiFe
Electrical Steel by Laser Processing

10:00 U. Loeschner, J. Schille, L. Schneider, S. Mauersberger, K. Kujawa, A. Gruner

Mach-X Laser Technology For Large-scale And High-throughput
MICRO Fabrication: Prospects and Limitations

10:30 COFFEE BREAK

11:00 F. Bammer

Inline Imaging-ellipsometry

11: 30 WORKSHOP - REGULAR PAPERS

CHAIRPERSON: R. Petkovšek

11:30 J. Mur, R. Petkovšek

Ultra-fast Laser Pulse Positioning for Direct Material Processing

11:45 J. Petelin, B. Podobnik, U. Buentig, V. Agrež, R. Petkovšek

QCR Laser for High-speed Laser Transfer Printing (LPT)

12:00 LUNCH

13:30 WORKSHOP - INVITED PAPERS

CHAIRPERSON: R. Petkovšek

13:30 A. Bertrand, J-P. Yehouessi, M-A. Malleville, B. Leconte, R. Dauliat, R. Jamier, J. Boulet, P. Roy Recent Advances on Laser Amplification in ROD-type Optical Fibres
14:00 S. Selleri Heat Load Effect in Coupled-uncoupled Modes of Yb Doped Multi-core Fibers
14:30 WORKSHOP - REGULAR PAPERS CHAIRPERSON: R. Petkovšek
14:30 V. Agrež, J. Petelin, R. Petkovšek Gain Switched Fiber Lasers and Pulses on Demand
14:45 COFFEE BREAK

15:15 WORKSHOP - INVITED PAPERS

CHAIRPERSON: R. Petkovšek

15:15 R. Trebino

Good News and Bad News from The World of Ultrashort-laser-pulse Measurement

16:00 WORKSHOP - REGULAR PAPERS

CHAIRPERSON: R. Petkovšek

16:00 P. Šušnjar, T. Jones, R. Trebino, R. Petkovšek

High Sensitivity Frog for Characterization of Weak PS and Sub-PS Pulses

16:15 L. Černe, P. Šušnjar and R. Petkovšek

Characterization of Picosecond and Femtosecond Laser Pulses by Using Frog Method

16:30 COFFEE BREAK

**17:00 SESSION on MATERIALS, TECHNOLOGY and
DEVICES / THIN and THICK FILMS**

CHAIRPERSON: B. Malič

17:00 E. Levičnik, R. Zaplotnik, G. Prime
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Characterization of Non-Equilibrium Inductively Coupled SO ₂ Plasma
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17:15 V. Shvalya, G. Filipič, D. Vengust, J. Zavašnik, M. Modic, I. Abdulhalim, U. Cvelbar

Reusable Copper Oxides Based Plasmonic Templates for Improved SERS-detection

17:30 SESSION on SENSORS and MEMS

CHAIRPERSON: D. Resnik

17:30 V. Gradišnik and D. Gumbarevič

a-Si:H p-i-n Photodiode as a Label-free Biosensors

17:45 B. Pečar, M. Možek and D. Vrtačnik

Influence of Excitation Signal Asymmetry on Micropump Performance

18:00 D. Resnik, B. Pečar, M. Možek, N. Lokar and D. Vrtačnik

Potential Stability of Thin Film Planar

Ag/AgCl Reference Electrodes

18:15 Z. Topčagić, T. E. Tsovilis and D. Križaj

Modeling of the Varistor Microstructure

19:00 GALA DINNER IN BLED ROSE HOTEL

FRIDAY, SEPTEMBER 27

08:00 REGISTRATION

09:00 CONFERENCE INVITED TALK

CHAIRPERSON: B. Malič

9:00 A. Klein

The Fermi Energy in Polar Compounds: Understanding the Limits and Consequences

09:30 SESSION on MATERIALS, TECHNOLOGY and DEVICES / THIN and THICK FILMS

CHAIRPERSON: B. Malič

09:30 N. Bein, P. Machado, M. Coll, M. Makarovič, T. Rojac,

A. Brunier, M. Alexe, F. Chen, H. Schmidt and A. Klein

The Fermi Energy in BiFeO₃

09:45 U. Prah, T. Rojac, M. Wencka, M. Dragomir,

A. Benčan, R. Sherbondy, G. Brennecka and H. Uršič

Multicaloric Properties of (1-x)Pb(Fe_{0.5}Nb_{0.5})O_{3-x}BiFeO₃ Ceramics

10:00 M. Otoničar, M. Yao, M. Makarovič, A. Bradeško,

B. Dkhil, B. Malič

Multiferroic Particulate Composites Via Cold Sintering Method

10:15 COFFEE BREAK

10:45 K. Radan, B. Kmet, S. Drnovšek, B. Malič

Alkaline-niobate Based Piezoceramics for Energy

Harvesting Application

11:00 D. Kuščer, B. Kmet, S. Drnovšek, B. Malič, F. Levassort

Miniature, Single-element Ultrasound Transducer From

Potassium Sodium Niobate-based Materials

11:15 M. Dragomir, Q. Ma, J. P. Clancy, A. Huq,

H. A. Dabkowska, B. D. Gaulin

Revisiting The phase Diagram of Nd-LSCO Superconductors

11:30 A. Bradeško, M. Vrabelj, L. Fulanović, M. Otoničar,

H. Uršič, A. Henriques, C. C. Chung, J. L. Jones,

Z. Kutnjak, B. Malič and T. Rojac

Electrocaloric Ceramic Materials Under Cyclic Electrical Loads

11:45 COFFEE BREAK

**12:15 M. Šadl, U. Eckstein, N. H. Khansur, K. G. Webber,
U. Prah, A. Bradeško, B. Malič and H. Ursič**
Pb(Mg_{1/3}Nb_{2/3})O₃-PbTiO₃ Thick Films Prepared by
Aerosol Deposition Onto Low-cost Substrates

12:30 B. Genorio, Ž. Velišček and S. Pejovnik
Li-B Alloys and Borophene Materials – Current Status

**12:45 M. Podlogar, T. Radošević, B. Leskovar, Z. Jovanović,
A. Omerzu, N. Daneu, S. Šturm**
Preparation of Thin Lamellas for TEM Characterization
Using FIB Technology

13:00 CLOSING CEREMONY