

Sunday 9th of June	
03:30 pm – 03:40 pm	Opening Ceremony Piłsudski Hall Chair-Person: Joanna Wojewoda-Budka
03:40 pm – 04:40 pm	Plenary talks Piłsudski Hall Session chairs: Paweł Zięba, Tomasz Goryczka
03:40 pm – 04:10 pm	Angus Kirkland Making Every Electron Count; Ptychography under low dose conditions
04:10 pm – 04:40 pm	Jack Donoghue Recent developments in EBSD acquisition: automated in-situ testing and laser-FIB 3D volumes
04:40 pm – 05:00 pm	Coffee break
05:00 pm – 06:00 pm	Plenary talks Piłsudski Hall Session chairs: Maria Sozańska, Jerzy Morgiel
05:00 pm – 05:30 pm	Jan Dusza Deformation and fracture of high entropy ceramics at micro/nano/atomic level
05:30 pm – 06:00 pm	Christian Turquat Microscopic and spectroscopic investigations of LaFeO ₃ thin films
07:00 pm	Dinner The Szymanowski Restaurant

Monday 10th of June

08:30 am 09:00 am	Plenary talk Piłsudski Hall Session chairs: Angus Kirkland, Marek Niewczas		
08:30 am 09:00 am	Janos Labar A modular program suite for processing electron diffraction in the TEM		
09:00 am 10:00 am	Parallel sessions		
	TEM 1 Piłsudski Hall	SEM 1 Grabski A	SEM 2 Grabski B
Session chairs	Angus Kirkland, Marek Niewczas	Ehrenfried Zschech, Maciej Zubko	Paria Gharavi, Grzegorz Moskal
09:00 am 09:15 am	Sławomir Kret Exploring Structural Properties of Epitaxial Multilayer Transition Metal Dichalcogenides: Cross-Sectional TEM Investigations	Sian Odell Advanced 3D and Chemical Characterisation of Novel Magnesium Alloy Microstructures Using PFIB and EPMA	Łukasz Cieniek Structure and properties of magnetron-sputtered anti-wear TiB ₂ coatings doped with W, Cr, and Zr
09:15 am 09:30 am	Ruben Santamarta Long-term aging effects on the microstructure of Ni-Ti-Hf/Zr High-Temperature Shape Memory Alloys	Grzegorz Cios About EBSD at 0-degree tilt and TKD with thick samples at conventional detector geometry	Iwona Jóźwik Revealing semiconductor conductivity changes: low-kV SEM exploration
09:30 am 09:45 am	Andrzej Żak History and perspectives of light induced in-situ TEM	Tomasz Tokarski Virtual dark-field imaging in EBSD/TKD analysis	Kausik Mukhopathyay Electron Microscopy as a Tool to Study Hybrid Clay Membranes for Energy Applications
09:45 am 10:00 am	Jerzy Morgiel Effect of sub-surface plastic deformation of Ti6Al4V alloy on nitriding process	Yusuke Uetake New generation detectors for light elements analysis in SEM	Izabella Kwiecień Antipathogenic composite Cu-based coatings reinforced with TiO ₂ nanoparticles – electroless deposition process and microstructure analysis
10:00 am 10:30 am	Coffee break		

Monday 10th of June

10:30 am 11:00 am	Plenary talk Piłsudski Hall Session chairs: Jack Donoghue, Janos Labar		
10:30 am 11:00 am	Carol Trager-Cowan Pushing the Limits of Diffraction Imaging in the Scanning Electron Microscope for the Structural Characterisation of Semiconductor Thin Films and Microstructures		
11:00 am 12:15 pm	Parallel sessions		
Session chairs	TEM 2 Piłsudski Hall	SEM 3 Grabski A	SEM 4 Grabski B
Session chairs	Beata Dubiel, Janos Labar	Jack Donoghue, Sławomir Kret	Ruben Santamarta, Andrzej Żak
11:00 am 11:15 am	Marta Lipińska-Chwałek User access to advanced electron microscopes in the Ernst Ruska-Centre in Forschungszentrum Jülich	Tomasz Goryczka Evolution of the phase composition in Ti ₅₀ Ni _{50-x} Mo _x (X=2; 6) alloy during high-energy ball milling	Maria Sozańska Morphology, microstructure, chemical and phase composition of oxides formed after oxidation of Fe ₄₀ Al ₅ Cr _{0.2} TiB alloy
11:15 am 11:30 am	Witold Chromiński Short range ordering in (CrFeMn) _x Ni _y alloy	Maciej Szczerba Temperature dependence on detwinning of face-centered cubic deformation twins	Joanna Wojewoda-Budka Phenomena and relations in explosively welded plates
11:30 am 11:45 am	Wojciech Maziarz Microstructural characteristics of in-situ cast Al-based composites reinforced with carbides particles	Bogdan Kowalski Luminescence efficiency vs. microstructure of nanowire - based GaN/HfO _x core/shell heterostructures – electron microscopy and cathodoluminescence studies	Renato Pero <i>In situ</i> Extreme Micromechanics – Recent Innovations and Prospects
11:45 am 12:00 am	Nynke Kranz Advancing In Situ Electron Microscopy Techniques and Workflows for Operando Studies	Anna Reszka Electron microscopy and cathodoluminescence studies of gallium nitride nanowires modified by wet chemical treatments	Julita Smalc-Koziorowska Determination of the active InGaN quantum well based on studies of thermal degradation phenomenon
12:00 am 12:15 pm	Łukasz Major Characterization of the self-dry-lubrication and self-healing effects on nano- and atomic scale in Zn/MoS ₂ /graphite/Zn coatings	Andrzej Wiśniewski Hitachi EM product range overview 2024	Agnieszka Bigos Wetting and interfacial reactivity of tin-based lead-free solders with Ni-Mo coatings

	deposited by atmospheric pressure plasma spraying on ultra-light construction polymers		
12:15 am 01:00 pm	Lunch		
	The Szymanowski Restaurant		
Monday 10th of June			
01:00 pm 04:30 pm	Plenary ThermoFisher Session		
	Pilsudski Hall		
01:00 pm 01:30 pm	Duncan Alexander		
	Probing epitaxial layers and interfaces with aberration-corrected STEM imaging and EELS		
04:30 pm 06:00 pm	Poster session		
	Paderewski room		
07:00 pm 10:00 pm	ThermoFisher evening		
	Tavern		

Tuesday 11th of June				
09:00 am 09:30 am	Plenary talk Piłsudski Hall Session chairs: Beata Dubiel, Christian Turguat			
09:00 am 09:30 am	Paria Gharavi Interfacial Origins of Electrical Breakdown Strength Enhancement in AlScN through Multilayer Structure			
09:30 am 10:30 am	Parallel sessions			
	TEM 3 Piłsudski Hall	SEM 5 Grabski A	Young scientist session Grabski B	
Session chairs	Christian Turguat, Wojciech Maziarz	Julita Smalc-Koziorowska, Tomasz Tokarski	Tomasz Moskalewicz, Roman Major	
09:30 am 09:45 am	Min Wu Cryogenic large volume 3D and TEM sample prep with Helios 5 Hydra	Magdalena Bieda-Niemiec Qualitative and quantitative SEM/EBSD characterization of low-alloyed zinc for biomedical application	09:30 am 09:42 am	Karsten Glowka Microstructure characteristic of (TiTaNbZr) _{100-x} Cu _x high entropy alloys for potential antibacterial properties
09:45 am 10:00 am	Magdalena Parlińska-Wojtan In-situ LC-TEM versus ex-situ electrodeposition of PtNi nanofilms	Wiktor Bednarczyk Imaging challenges in novel biodegradable Zn-Li-Mn alloys	09:42 am 09:54 am	Karolina Budniak Antibacterial properties of Cu-containing stainless steel
10:00 am 10:15 am	Mirosława Pawlyta Structure of the graphite nodules in cast iron	Maria Wątroba Revealing the Effect of Microstructure on the Mechanical Behavior of High-Strength Zn Coating	09:54 am 10:06 am	Agnieszka Kowalczyk Characterization of electrophoretically deposited chitosan/bioglass coating on the modified titanium surfaces
10:15 am 10:30 am	Katarzyna Stan-Głowińska Structural aspects of microstructures formed during artificial aging of Al-Mg-Zn and Al-Mg-Zn-Ga alloys	Anna Kula Mechanical and microstructural aspects of plastic deformation of fine-grained magnesium between 298K and 4K	10:06 am 10:18 am	Karolina Wójciak Precision and accuracy during standard-less mapping of local lattice distortions using EBSD and CALM technique
			10:18 am 10:30 am	Magdalena Jakubowska Strain Analysis in Assessing Creep-Fatigue Damage in Ferritic Heat Resistant Steel
10:30 am 11:00 am	Coffee break			

Tuesday 11th of June

11:00 am 11:30 am	Plenary talk Piłsudski Hall Session chairs: Aimo Winkelmann, Roman Major			
11:00 am 11:30 am	Sebastian Glatt Translational control of eukaryotic gene expression			
Parallel sessions				
11:30 am 12:30 am	Biology Piłsudski Hall	SEM 6 Grabski A	Young scientist session Grabski B	
Session chairs	Sebastian Glatt, Lukasz Major	Aimo Winkelmann, Piotr Bała	Mirosława Pawlyta, Adam Zieliński	
11:30 am 11:45 am	Joanna Depciuch In-situ observation of differences in the absorption dynamics of nanoparticles with different shapes and sizes	Mark Taylor Using high-temperature automated in-situ EBSD and EDS to study phase transformations in high strength steels	11:30 am 11:42 am	Wiktoria Zajkowska-Pietrzak Magnetostrictive – piezoelectric phenomena generation in hybrid nanowires: in-situ TEM testing
11:45 am 12:00 am	Bartosz Kłębowski Two types of bimetallic gold-palladium nanostructures: core-shell vs nanoraspberries – synthesis and application	Alec Davis Heterogeneous Micro-Strain Characterisation in Graded Structures using Large-Area Automated In-Situ SEM Digital Image Correlation	11:42 am 11:54 am	Olha Khshanovska An in-situ TEM study of crystallization pathways of single AuGe nanoparticles
12:00 am 12:15 pm	Roman Major Microscopic methods and systems for analyzing the structural and biological suitability of meta-materials for the construction of laparoscopic instruments	Robert Chulist Adaptive phase or variant formation in shape memory alloys?	11:54 am 12:06 pm	Bowen Zhang In-situ study of failure mechanisms on two-dimensional covalent organic frameworks (COFs) in the transmission electron microscope
12:15 pm 12:30 pm	Michał A. Stróżyk Nanoindentation-induced plasticity in CrMnFeCoNi high entropy alloy studied using 3D EBSD and MD	Damian Kalita Irradiation effects in the refractory WTaCrV high entropy alloy (HEA) for nuclear fusion applications	12:06 pm 12:18 pm	Jakub Kasprzycki Effect of overpressure nitrogen on the microstructure and mechanical properties of titanium alloys synthesized by various methods
			12:18 pm 12:30 pm	Krzysztof Morgiel TEM/EDS analysis of M ₆ C carbides in SiMo cast iron
12:30 pm 01:30 pm	Lunch The Szymanowski Restaurant			

Tuesday 11th of June

**02:00 pm
05:00 pm**

Excursions

**06:00 pm
07:00 pm**

**Meeting of the PTMi members
Piłsudski Hall**

**08:00 pm
12:00 am**

**Gala dinner
Paderewski Hall**

Wednesday 12th of June

09:30 am 10:30 pm	Plenary talk Pilsudski Hall Session chairs: Carol Trager-Cowan, Duncan Alexander	
09:30 am 10:00 am	Aimo Winkelmann Kikuchi Diffraction for Materials Analysis in the SEM: Physics and Applications	
10:00 am 10:30 am	Marek Niewczas Applications of TEM in studies of plastically deformed materials	
10:30 am 11:00 am	Coffee break	
Parallel sessions		
11:00 am 11:45 am	TEM 4 Grabski A	SEM 7 Grabski B
Session chairs	Magdalena Parlińska-Wojtan, Sławomir Kaç	Robert Chulist, Bogdan Kowalski
11:00 am 11:15 am	Anna Kaleta TEM investigation of NbN/III-N heterostructures – unraveling crystallographic transformation $\delta \rightarrow \beta$ NbN	Marta Lipińska Microstructure characterization of the joints from aluminium alloys manufactured via electron beam welding
11:15 am 11:30 am	Joanna Moneta Novel mechanism of misfit dislocation multiplication in InGaN epitaxial layers	Hanna Myalska-Głowacka Microstructure evolution of Ti-TiC satellited powder in titanium-based cold sprayed coatings
11:30 am 11:45 am	Marta Lipińska-Chwałek Advanced (S)TEM as correlative tool for characterization of Mg alloys	Jarosław Opara Application of correlative electron microscopy and numerical modelling in the study of discontinuous precipitation in Al-22 at.% Zn alloy
11:45 am 12:00 pm	Closing remarks	
01:00 pm 02:00 pm	Lunch The Szymanowski Restaurant	