

Programme of E-MRS Fall Meeting 2003

Conference Programme

SYMPOSIUM A, Room 219:

Novel Wide Bandgap Materials for Optoelectronic and Electronic Applications

SYMPOSIUM B, Room 134:

Development of Methods for Characterizing the Microstructure of Novel Materials

SYMPOSIUM C, Room 213:

5th International Workshop on Molecular Beam Epitaxy and Vapour Phase Epitaxy Growth Physics and Technology

SYMPOSIUM D, Room 144:

Colossal Magnetoresistance – New Materials and New Ideas

SYMPOSIUM E, Room 206:

Materials for Medical Applications

SYMPOSIUM F, Small Hall (Mała Aula):

Functional Nanostructured Materials for Optoelectronics and other Applications

SYMPOSIUM G, Room 208:

Bulk and Graded Nanometals

PRE-SCHOOLS:

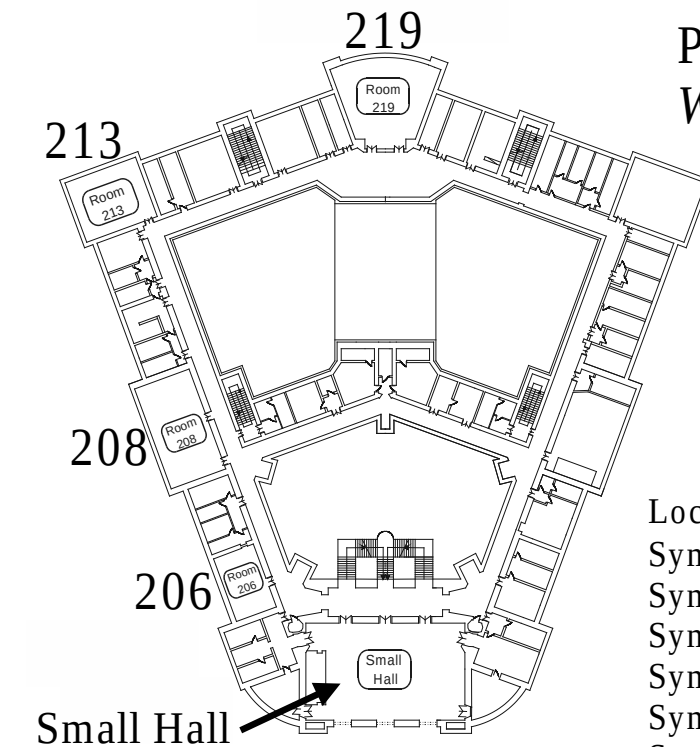
▷ **Syposium B Pre-School** Development of methods for Characterisation of the Microstructure of Novel Materials

▷ **Symposium F&G Pre-School** Nanocrystalline Materials: Fabrication Structure, Modelling and Applications

▷ **Vth High Pressure School on High Pressure Methods for
Biotechnology**

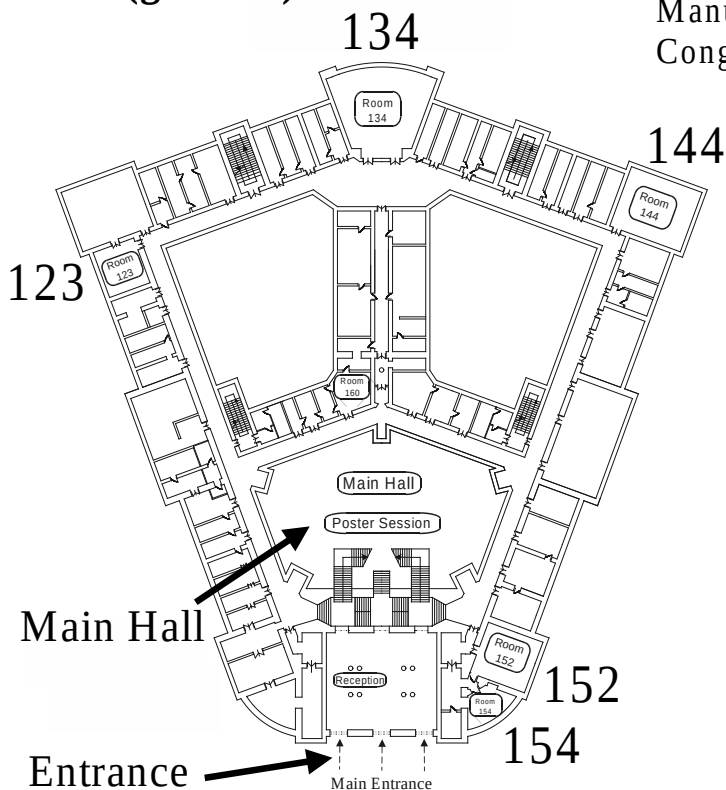
Location of lecture rooms

Politechnika Warszawska Warsaw University of Technology



Second floor

First (ground) floor



Locations:

Symposium A: 2nd floor, Room 219

Symposium B: 1st floor, Room 134

Symposium C: 2nd floor, Room 213

Symposium D: 1st floor, Room 144

Symposium E: 2nd floor, Room 206

Symposium F: 2nd floor, Small Hall

Symposium G: 2nd floor, Room 208

Poster Session: Main Hall (Duza aula)

Manuscript Office: 1st floor, Room 152

Congressor Office: 1st floor, Room 154

Timetable of Events

Sunday 14th September

19:00 – 21:00 **Welcome reception, Physics Building**

Monday 15th September

08:30 – 08:45 **OPENING CEREMONY** Small Hall (Mała Aula)
Włodzimierz Kurnik,
Vice-Rector, Warsaw University of Technology

08:45 – 10:30 **PLENARY SESSION** Small Hall (Mała Aula)
Chairman: Paul Siffert,
General Secretary of E-MRS

10:30 – 11:00 **Coffee Break** Main Hall (Duża Aula)

11:00 – 12:30 **PLENARY SESSION** - continued, Small Hall (Mała Aula)
Chairman: Peter A.Glasow, E-MRS,
IUMRS Imm. Past President

12:30 – 14:00 **Luncheon**

14:00 **PARALLEL SYMPOSIA**
See plan of WUT for the location of each symposium

19:00 – 21:00 **POSTER SESSION** Main Hall (Duża Aula)

Tuesday 16th September

- 09:00 – 10:30** **PLENARY SESSION** Small Hall (Mała Aula)
Chairman: Marcel H. Van de Voorde
- 10:30 – 11:00** **Coffee Break** Main Hall (Duża Aula)
- 11:00** **PARALLEL SYMPOSIA**
See plan of WUT for the location of each symposium
- 12:30 – 14:00** **Luncheon**
- 14:00** **PARALLEL SYMPOSIA**
See plan of WUT for the location of each symposium
- 19:00** **Dinner** Polish cuisine, Hotel Novotel Forum

Wednesday 17th September

- 09:00 – 10:30** **PLENARY SESSION** Small Hall (Mała Aula)
Chairman: Thomas A. Weber
- 09:00 – 10:30** **SYMPOSIUM C** – see programme of Symposium C (Room 213)
- 10:30 – 11:00** **Coffee Break** Main Hall (Duża Aula)
- 11:00** **PARALLEL SYMPOSIA A-E**
See plan of WUT for the location of each symposium
SYMPOSIA F & G SPECIAL JOINT SESSION
Small Hall (Mała Aula)
- 12:30 – 14:00** **Luncheon**
- 14:00** **PARALLEL SYMPOSIA**
See plan of WUT for the location of each symposium
- 19:00 – 21:00** **POSTER SESSION** Main Hall (Duża Aula)

Special Join Session of Symposia F & G

Small Hall (Mała Aula)

PERSPECTIVES OF NANOTECHNOLOGY

11:00 – 12:30 **Chairman: Thomas A. Weber**

12:30 – 14:00 **Luncheon**

14:00 – 15:30 **Chairman: Witold Łojkowski**

15:30 – 15:50 **Coffee Break** Main Hall (Duża Aula)

15:50 – 17:20 **Chairman: Mathias Werner**

19:00 – 21:00 **POSTER SESSION** Main Hall (Duża Aula)

Thursday 18th September

09:00 – 10:30 **PARALLEL SYMPOSIA**

See plan of WUT for the location of each symposium

10:30 – 11:00 **Coffee Break** Main Hall (Duża Aula)

11:00 – 12:30 **PARALLEL SYMPOSIA**

See plan of WUT for the location of each symposium

12:30 – 14:00 **Luncheon**

14:00 **PARALLEL SYMPOSIA**

See plan of WUT for the location of each symposium

Friday 19th September

09:00 – 10:30 **PARALLEL SYMPOSIA**

See plan of WUT for the location of each symposium

10:30 – 11:00 **Coffee Break** Main Hall (Duża Aula)

11:00 – 12:30 **PARALLEL SYMPOSIA**

See plan of WUT for the location of each symposium

12:30 – 14:00 **Luncheon**

14:00 **PARALLEL SYMPOSIA**

See plan of WUT for the location of each symposium

Plenary session

PLENARY SESSION

Monday, September 15th

8:30 - Opening Ceremony - Włodzimierz Kurnik – *Main Building, Small Hall (Mała aula)*

Plenary session and Czochralski Award ceremony - Paul Siffert – *Main Building, Small Hall (Mała aula)*

8:45 - 9:30
invited plenary **Professor CZOCHRALSKI - Distinguished Scientist and Inventor, Founder of the Modern Materials Science**
Krzysztof Kurzydłowski, Stanisław Mankowski

9:45 - 10:30
invited plenary **Funding of Materials Science Research at the US National Science Foundation**
Thomas A. Weber

Coffee break – *Main Building, Main Hall (Duża aula)*

Plenary session - continued - Peter A. Glasow – *Main Building, Small Hall (Mała aula)*

11:00 - 11:45
invited plenary **Short wavelength optoelectronics: Status and challenges**
Detlef Hommel

11:45 - 12:30
invited plenary **Gallium nitride single crystals grown under high pressure for optoelectronics applications**
Izabella Grzegory

Lunch break –

Tuesday, September 16th

Morning session - Marcel H. Van de Voorde – *Main Building, Small Hall (Mała aula)*

9:00 - 9:45
invited plenary **Materials Science at the European Synchrotron Radiation Facility**
William G. STIRLING

9:45 - 10:30
invited plenary **Recent Development in Spin Electronics and Perspective**
Albert Fert

Coffee break – *Main Building, Main Hall (Duża aula)*

Wednesday, September 17th

Morning Session - - Thomas A. Weber – *Main Building, Small Hall (Mała aula)*

9:00 - 9:45 invited plenary	Markets and Economical Aspects of Nano- and Microtechnology Related Products <u>Mathias Werner</u> , Stephan Mietke, Jürgen Ilgner, Hans-Jörg Fecht
9:45 - 10:30 invited plenary	Diamond- an emerging material for medical and technical applications <u>Peter Gluche</u> , André Flöter, Hans-Jörg Fecht
Coffee break – <i>Main Building, Main Hall (Duża aula)</i>	

Symposium A

NOVEL WIDE BANDGAP MATERIALS FOR OPTOELECTRONIC AND ELECTRONIC APPLICATIONS

Monday, September 15th

Opening address - - Marek Godlewski- *Main Building, room 219*

Afternoon session - - Marek Godlewski- *Nitrides I Main Building, room 219*

14:00 - 14:45
invited oral **AlGaIn/GaN based optical and electrical sensors**
Oliver Ambacher

14:45 - 15:30
invited oral **Thermal effects and current instabilities in group III-Nitride-based devices**
Alexander E. Belyaev

Coffee break –

Afternoon session - continued – Nitrides II D. Hommel *Main Building, room 219*

15:50 - 16:35
invited oral **Unusual properties of nitrogen containing III-V semiconductors; ab-initio calculations**
Izabella Gorczyca, Niels E. Christensen, Axel Svane

16:35 - 17:20
invited oral **Optical properties of low-dimensional systems based on group-III nitride ternary and quaternary alloys.**
Pierre LEFEBVRE

Poster session –

19:00 -
poster A-1 **Theoretical study on electronic, positron and structural properties of Ga-
 $_{1-x}$ Al $_x$ N**
Yarub Al-Douri

19:00 -
poster A-2 **Self-heating and microwave noise in AlGaIn/GaN**
L. Ardaravicius, J. Liberis, A. Matulionis, L.F. Eastman, J.R. Shealy, A. Verti-
atchikh

19:00 -
poster A-3 **Schottky Barrier and Aging Effect studies in Au(Cu)/p-CdTe Contacts**
Yevgen O. Bilevych, Andriy V. Sukach, Volodymyr V. Tetyorkin, Volodymyr M.
Popov

19:00 -
poster A-4 **Optical properties of CuInTe $_2$ single crystals by photoacoustic spectroscopy**
Abdeslam Bouloufa, A. Messous, A. Zegadi, M.V. Yakushev, R.D. Tomlinson

19:00 -
poster A-5 **Synthesis and luminescent investigation of KTiOPO $_4$ and NaTi $_2$ (PO $_4$) $_3$ crystals doped with rare earth ions**
Oksana V. Chukova, Roman Boyko, Pavlo Nagorny, Sergiy G. Nedilko

- 19:00 - poster A-6 **Deep UV Detection by CVD diamond position sensitive devices**
Gennaro CONTE, Maria C. Rossi, Giovanni Mazzeo, Stefano Salvatori, Viktor Ralchenko
- 19:00 - poster A-7 **Thermodynamic stability of partially ordered $\text{Si}_{1-x}\text{C}_x$**
 Vitaliy G. Deibuk, Yuriy G. Korolyuk
- 19:00 - poster A-8 **Optical characteristics and structural ordering of quasi - two - dimensional TlGaS_2 crystals doped by rare-earth ions.**
 Gadjibala I. Abutalybov, Sevda Z. Dzhafarova, Nailja A. Ragimova
- 19:00 - poster A-9 **UV-written channel waveguides in Er-doped Bi_2O_3 -based glass**
Angelique Favre, Eric Lee, Vasilis Apostolopoulos, Corin B. Gawith, Chao-Yi Tai, Elizabeth Taylor, Yuki Kondo, Fumihito Koizumi
- 19:00 - poster A-10 **In-depth and in-plane profiling of InGaN-based laser diodes and heterostructures**
Marek Godlewski, E. M. Goldys, Matthew R. Phillips
- 19:00 - poster A-11 **Cathodoluminescence study of n-type doped GaN epilayers and GaN/InGaN quantum well structures**
Marek Godlewski, Elzbieta Lusakowska, E. M. Goldys, Matthew R. Phillips, T. Bottcher, S. Figge, Detlef Hommel
- 19:00 - poster A-12 **Compensation mechanisms in magnesium doped GaN**
Marek Godlewski, H. Przybylinska, E. M. Goldys, J. P. Bergman, B. Monemar, I. Gregory, S. Porowski
- 19:00 - poster A-13 **Study of Long-Term Stability of Ohmic Contacts to GaN**
Krystyna Golaszewska, Eliana Kaminska, Anna Piotrowska, Renata Kruszka, Andrian Kuchuk, Ewa Papis, Roman Szeloch, Pawel Janus, Teodor Gotszalk, Adam Barcz, Andrzej Wawro
- 19:00 - poster A-14 **The interaction of Pr_2O_3 with 4H-SiC(0001) surfaces**
Andriy Goryachko, Ioanna Paloumpa, Guido Beuckert, Karsten Henkel, Patrick Hoffmann, Dieter Schmeißer, Yevgen Burkov
- 19:00 - poster A-15 **Fabrication and characterization of SiC/Si heterojunction diode.**
Taupin Héloïse, Philippe MARIE, Laurent PICHON, Richard RIZK
- 19:00 - poster A-16 **Self-Assembly Synthesis of Hexagonal Boron Nitride Buckling Nanowires at Room Temperature**
 Ming-Chan Lu, Hsi-Lien Hsiao, Po-Wen Lin, An-Ban Yang, L-J Chen
- 19:00 - poster A-17 **Optical and magnetic resonance investigations of ZnO crystals doped with transition metal ions**
Vitalii Y. Ivanov, Marek Godlewski, S. Yatsunenko, A. Khachapuridze, Z. Golacki, Maciej Sawicki, A. Omel'chuk, M. Bulany, A. Gorban'
- 19:00 - poster A-18 **Optical and ODMR study of GaN-based HEMT structures**
Vitalii Y. Ivanov, Marek Godlewski, A. Khachapuridze, S. Yatsunenko, Yu. Sveshnikov, A. Arendarenko
- 19:00 - poster A-19 **Impact of post-growt thermal annealing on emission of InGaN/GaN multiple quantum wells**
Saulius Jursenas, Yung-Chen Cheng, Shih-Wei Feng, C.C. Yang, Cheng-Ta Kuo, Jian-Shih Tsang

- 19:00 - poster A-20 **Nanotechnology methods for wide forbidden zone semiconductors (boron, carbon, their compounds) preparation.**
P. Kervalishvili
- 19:00 - poster A-21 **Investigation of thermo- and photoluminescence in heterostructures PbS/ZnTe**
Halyna Khlyap, V. Blashkiv, L. Bochkariova
- 19:00 - poster A-22 **Advanced transparent beryllium ceramics for ionizing radiation dosimetry**
Victor S. Kijko, Sergei V. Gladkovsky, Ivan A. Dmitriev, Andrei A. Sofronov, Yuri N. Makurin, Alexander L. Ivanovsky
- 19:00 - poster A-23 **Influence of the substrate on the structural properties of sputter-deposited ZnO films**
Hyoun Woo Kim, Nam Ho Kim
- 19:00 - poster A-24 **Electrical properties the five-component chalcogenides of silver**
Olga L. Kobeleva, Viktor B. Zlokazov, Nina V. Melnikova, Larisa L. Nugaeva, Leonid Y. Kobelev, Yakov L. Kobelev
- 19:00 - poster A-25 **Diffusion and diffusion induced defects in GaN**
Dmytro Kolesnikov, Witold Lojkowski, Christian Jäger, Wolfgang Jäger, M. Bockowski, Rafal Jakiela
- 19:00 - poster A-26 **Optical characterization of GaN doping superlattices as grown, hydrogen implanted and annealed.**
Herbert Willi Kunert, D J. Brink, M. Hayes, J. Malherbe, L. Prinsloo, J. Barnas
- 19:00 - poster A-27 **Morphology and structural perfection of vapor-grown PbI₂ crystals**
I. V. Kurilo, O. V. Rybak
- 19:00 - poster A-28 **Energy transfer to Er³⁺ ions in silicon-rich-silicon-oxide: efficiency limitations.**
Dmitry Kuritsyn, A Kozanecki, H. Przybylinska, W Jantsch
- 19:00 - poster A-29 **Studies on sub-band gap absorption in AlGaN photoconductors and solar-blind photodetectors**
Vadim B. Lebedev, Irina Cimalla, Oliver Ambacher
- 19:00 - poster A-30 **Growth and Characterisation of AgIn₅S₈ and CuIn₅S₈ Thin Films**
Liudmila V. Makhova, Igor Kononov, Rüdiger Szargan
- 19:00 - poster A-31 **Growth and Radiation Induced Color Centers in Oxide Laser Crystals**
A. Matkovskij, D. Sugak, P. Potera, A. Suchocki, Ya. Zhydachevskii, A. Durygin, A. Shakhov
- 19:00 - poster A-32 **Stimulated emission in InGaN/GaN structures with different quantum well width**
Saulius Miasojedovas, Saulius Jursenas, Genadij Kurilčik, Arturas Zukauskas, Shih-Wei Feng, Yung-Chen Cheng, C.C. Yang, Cheng-Ta Kuo, Jian-Shih Tsang
- 19:00 - poster A-33 **1.54 μ m Luminescence quenching in erbium-doped hydrogenated amorphous silicon deposited by D.C. Magnetron Sputtering**
KECHOUANE Mohamed, MOUHEB Ouiza, BIGGEMAN Daniel, TESSLER Léonardo
- 19:00 - poster A-34 **Low dimension porous silicon based heterostructures for possible optoelectronic and accessory applications**
Liubomyr S. Monastyrsky, Volodymyr I. Savchyn

- 19:00 - poster A-35 **Local complex emission centers in the wide band gap materials: theoretical predictions and experimental diagnostic possibilities**
Sergiy G. Nedilko
- 19:00 - poster A-36 **GaN related LED and LD on Si substrates**
Suzuka Nishimura, Satoru Matsumoto, Kazutaka Terashima
- 19:00 - poster A-38 **Light scattering topography of excimer grade CaF₂ crystal.**
Yasunao Oyama, Suzuka Nishimura, Kazutaka Terashima
- 19:00 - poster A-39 **Conductivities and waveguide properties of ZnO films and multilayer structures**
Armen R. Poghosyan, Ruben K. Hovsepyan, Eduard S. Vardanyan, Vahe G. Lazaryan
- 19:00 - poster A-40 **Color centers in YAP:Pr crystals**
P. Potera, A. Matkovskii, Ya. Zhydachevskii, Larisa Grigorjeva, Donats Millers, T. Lukasiewicz, Z. Galazka
- 19:00 - poster A-41 **Sensitive InGaAs /InP (SI) magnetic field sensors**
Tomasz R. Przesławski, Andrzej Wolkenberg, Kazimierz Regiński, Janusz Kaniewski
- 19:00 - poster A-42 **Self-passivation mechanisms of N clusters in SiC**
Riccardo Rurali, Eduardo Hernández, Philippe Godignon, José Rebollo, Pablo Ordejón
- 19:00 - poster A-43 **Electroluminescence of thin films prepared by photopolymerization**
pedro l. saez, carlos aguilerá
- 19:00 - poster A-44 **Reactive Pulsed Laser Deposition of Doped Zinc Oxide Films as Emitting Layers of Thin Film Electroluminescent Devices**
Victor Savchuk, Bohdan Kotlyarchuk, Maciej Oszwaldowski
- 19:00 - poster A-45 **Electroconductivity and thermo-stimulated conductivity of cubic boron nitride**
Nikolai A. Shishonok, Gennadii V. Gatalskii, Anatolii A. Leusenko, Aleksandr Y. Erosh, Viktor L. Semenov
- 19:00 - poster A-46 **Optical, EPR and RBS studies in Tm implanted ZnO samples**
T. Monteiro, M. J. Soares, A. Neves, M. Oliveira, E. Rita, U. Wahl, E. Alves
- 19:00 - poster A-47 **Micro-Raman study of laser damage in CdTe surfaces**
M. J. Soares, J. C. Lopes, M. C. Carmo, A. J. Neves
- 19:00 - poster A-48 **Photo-ESR and optical studies of Cr photoionization transition in CdZnSe:Cr crystals**
Krzysztof Swiatek, Marek Godlewski, Tanya Surkova
- 19:00 - poster A-49 **Cu(I) complexes with perfluorinated carboxylates as potential CVD precursors**
Iwona Szymańska, Edward Szłyk, Piotr Piszczek, Lilianna Dobrzańska
- 19:00 - poster A-50 **Temperature, pressure, strain and composition effects on band offsets in III-nitride heterostructures**
Hilmi Unlu
- 19:00 - poster A-51 **Effect of deposition conditions and annealing on residual stress of ITO films magnetron sputtered on silica**
Arnoldas Užupis, Renata Butkute, Bonifacas Vengalis, Vaclovas Lissauskas, Sigitas Tamulevičius

- 19:00 - poster A-52 **Effect of ordering on the optical properties of III-nitrides alloys**
Oleksandr Voznyy, Vitaliy Deibuk, Stepan Melnychuk
- 19:00 - poster A-53 **Thermoelectric properties of amorphous AlInN thin films**
Shigeo Yamaguchi, Ryohei Izaki, Yasuo Iwamura, Atsushi Yamamoto
- 19:00 - poster A-54 **Modelling of quantum wells with smooth boundaries**
Adam J. Zakrzewski
- 19:00 - poster A-55 **Kinetics of the donor-acceptor and "pseudo-donor-acceptor" pairs in nitrides**
Adam J. Zakrzewski
- 19:00 - poster A-56 **High-resistance low-doped GaAs and AlGaAs thin films for high power electronics**
Dmytro M. Zayachuk, S I. Krukovsky, M. Kaniewska, N Strukhlyak
- 19:00 - poster A-57 **Thermoluminescence of doped YAlO₃ crystals**
Ya. Zhydachevskii, A. Durygin, A. Suchocki, A. Matkovskii, D. Sugak, Z. Frukacz, G. B. Loutts, M. A. Noginov
- 19:00 - poster A-58 **The luminescent convertors based on single crystalline films**
Yurij V. Zorenko

Tuesday, September 16th

Morning session - - Oliver Ambacher- Wide band gap materials for optoelectronics I *Main Building, room 219*

- 11:00 - 11:45 invited oral **Cathodoluminescence properties of Zinc Oxide nano-particles**
Matthew R. Phillips, Olaf Gelhausen, Ewa M. Goldys
- 11:45 - 12:30 invited oral **Solid-state lighting**
Arturas Zukauskas, Michael S. Shur, Remis Gaska

Lunch break –

Afternoon session - - Arturas Zukauskas- Wide band gap materials for optoelectronics II *Main Building, room 219*

- 14:00 - 14:45 invited oral **Electronic structure of shallow impurities in GaN studied via bound exciton magnetooptics**
Roman Stepniewski, Andrzej Wyszomolek, Marek Potemski
- 14:45 - 15:30 invited oral **Wide band-gap light emitters with improved hole injection**
V. A. Kochelap

Coffee break –

Afternoon session - continued - - Roman Stepniewski- Oral session I *Main Building, room 219*

- 15:50 - 16:10 oral **Studies of symmetry of erbium centers in GaN.**
Vasyl Glukhanyuk, A Kozanecki, H. Przybylinska
- 16:10 - 16:30 oral **Luminescent properties of wide bandgap materials at room temperature**
Aleksandra Sokolowska, A Werbowy, A Barcz, Marek Godlewski, Jan Szmids, A. Olszyna

- 16:30 - 16:50
oral **Luminescence transients in highly excited GaN grown by hydride vapor-phase epitaxy**
Saulius Jursenas, Saulius Miasojedovas, G. Kurilcik, Arturas Zukauskas, P.R. Hageman
- 16:50 - 17:10
oral **Simulation of localized exciton hopping in quaternary AlInGaN**
Karolis Kazlauskas, G. Tamulaitis, Arturas Zukauskas, M. A. Khan, J. W. Yang, J. Zhang, G. Simin, M. S. Shur, R. Gaska

Wednesday, September 17th

Morning session - - Lauri Niinisto- Oxides I *Main Building, room 219*

- 11:00 - 11:45
invited oral **ZnO and its low dimensional systems**
Bernard Gil
- 11:45 - 12:30
invited oral **ZnO - a promising semiconductor for application**
Axel Hoffmann, U. Haboeck, M. Strassburg, A. Rodina, M. Dworzak, A. Zeuner, D.M. Hofmann, H.R. Alves, B.K. Meyer

Lunch break -

Afternoon session - - Luis Arizmendi- Wide band gap materials: Optical properties *Main Building, room 219*

- 14:00 - 14:45
invited oral **Optical performance of Yb³⁺ in LiNbO₃ laser crystals**
Luisa E. Bausá, María O. Ramírez
- 14:45 - 15:30
invited oral **Wide bandgap materials for detection of ionizing radiation**
Andrzej J. Wojtowicz

Coffee break -

Afternoon session - continued - - Andrzej J. Wojtowicz- Oral session II *Main Building, room 219*

- 15:50 - 16:10
oral **Magnetotransport studies of Ga(Mn,Fe)N bulk crystals**
C. Jastrzebski, W. Gebicki, M. Bockowski, B. Strojek, T. Szyszko, S. Podsiadlo
- 16:10 - 16:30
oral **Optical Detection of 2DEG in GaN/AlGaIn Structures - High Magnetic Field Studies**
Barbara Chwalisz, A Wyszomolek, Roman Stepniewski, Marek Potemski, W Knap, Jacek Baranowski, Nicolas Grandjean, J Massies, P Prystawko, I Grzegory
- 16:30 - 16:50
oral **Sub-micron InGaIn Ring Structures for High-efficiency LEDs**
Hoi Wai Chai, Paul R. Edwards, Chan-wook Jeon, Robert W. Martin, Martin D. Dawson, Sudhiranjan Tripathy, Soo Jin Chua
- 16:50 - 17:10
oral **Surprisingly low built-in electric fields in quaternary InAlGaIn heterostructures**
S. Anceau, Pierre LEFEBVRE, L. Kończewicz, T. Suski, S. P. Lepkowski, H. Teisseyre, Agata Kamińska, Andrzej Suchocki, H. Hirayama, Y. Aoyagi

Poster session -

Thursday, September 18th

Morning session - Lithium niobate A. Suchocki *Main Building, room 219*

9:00 - 9:45
invited oral **Photonic applications of lithium niobate**
Luis Arizmendi

9:45 - 10:30
invited oral **Phase relations in the growth of stoichiometric LiNbO₃**
Katalin Polgar, Ágnes Péter, Michel Ferriol

Morning session - continued - - Axel Hoffmann- Wide band gap materials: Technology and Applications I *Main Building, room 219*

11:00 - 11:45
invited oral **Novel substrates for heteroepitaxy by lateral overgrowth technology**
Zbigniew R. Zytkiewicz

11:45 - 12:30
invited oral **Lasers and medicine**
Przemysław Deren

Lunch break –

Afternoon session - - Bernard Gil- Wide band gap materials: Technology and Applications II *Main Building, room 219*

14:00 - 14:45
invited oral **SiC - Present Status and Material Challenges**
Peder Bergman, Liutauras Storasta, Carlsson Fredrik, Magnusson Björn, Jakobs-son Henrik, Hallin Christer, Janzen Erik

14:45 - 15:30
invited oral **Applications of dislocation loop engineering to silicon**
Kevin Homewood, M A. Lourenco, R M. Gwilliam, S A. Siddiqui, M Milosavljevic, Gousheng Shao

Coffee break –

Afternoon session - continued - - Peder Bergman- Oral session III *Main Building, room 219*

15:50 - 16:10
oral **Phonon band population inversion in GaN**
Romuald BRAZIS, Romas RAGUOTIS, Daniel NAUSEVIC

16:10 - 16:30
oral **Novelties about cubic boron nitride luminescence properties**
Elena M. Shishonok, J. W. Steeds

16:30 - 16:50
oral **Defects dynamics in P+ implanted 6H-SiC, studied by AFM and positron annihilation**
Grzegorz P. Karwasz, Riccardo Rurali, Giovanni Consolati, Philippe Godignon

16:50 - 17:10
oral **XPS and AFM investigations of buffer layer between Si(100) and 3C-SiC, created by interaction with C₂H₂**
Andriy Goryachko, Yevgen Yeromenko, Karsten Henkel, Yevgen Burkov, Jürgen Wollweber, Dieter Schmeißer

17:10 - 17:30
oral **Multi-Phonon process in C6v4 (P63mc) hexagonal semiconductors: GaN, ZnO, 2H - SiC, 6H - SiC, ZnS, CdS**
Herbert Willi Kunert

17:30 - 17:50
oral **Temporal response of CVD diamond detectors to modulated low energy x-ray beams**
Gennaro CONTE, Maria C. Rossi, Stefano Salvatori, Fabio Spaziani, Paolo Ascarelli, Daniele Trucchi

Friday, September 19th

Morning session - - Matthew R. Phillips- Oxides II *Main Building, room 219*

9:00 - 9:45 invited oral	Advanced electronic and optoelectronic materials by Atomic Layer Deposition: An overview with special emphasis on recent progress in processing of high-k dielectrics <u>Lauri Niinisto</u> , Minna Nieminen, Jaakko Niinistö, Matti Putkonen, Jani Päiväsaari
9:45 - 10:30 invited oral	Atomic Layer Deposition of Oxide Dielectric Films for Microelectronics <u>Markku Leskela</u> , Kaupo Kukli, Mikko Ritala
Coffee break –	
Morning session - continued - - Kevin Homewood- Oral session IV <i>Main Building, room 219</i>	
11:00 - 11:20 oral	An Atomistic view of the oxidation mechanism of silicon clusters on (0001) SiC 3x3 reconstructed surface Kian Ping Loh, Jia Mei Soon, Ida Ma
11:20 - 11:40 oral	Mechanisms of optical control of domain structures in ferroelectrics <u>Armen R. Poghosyan</u>
11:40 - 12:00 oral	Cr³⁺ IONS IN HYDROGENATED AND PROTON EXCHANGED LiNbO₃ CRYSTALS Agata Kaminska, Luis Arizmendi, Andrzej Suchocki
12:00 - 12:20 oral	Elementary energy bands in band structure calculations of some wide bandgap crystals <u>Malgorzata Sznajder</u> , D. M. Bercha, K. Z. Rushchanskii
12:20 - 12:40 oral	Field Emission from Si nanoclusters embedded into insulating SiO₂ films <u>Anatoli A. Evtukh</u> , Ivan Z. Indutnyy, Igor P. Lisovskyy, Vladimir G. Litovchenko, Denis O. Mazunov, Hans Hartnagel, Oktay Yilmazoglu
12:40 - 13:00 oral	Properties of ultrathin SiO₂ films grown on hydrogenated silicon <u>Igor Lisovskyy</u> , Vladimir G. Litovchenko, D. A. Mazunov, A. Szekeres, S. Alexandrova
Closing address –	

Symposium B

DEVELOPMENT OF METHODS FOR CHARACTERIZING THE MICROSTRUCTURE OF NOVEL MATERIALS

Monday, September 15th

Opening address - - Krystyna Lawniczak-Jablonska, Bronislaw A. Orlowski- Main Building, room 134

Afternoon session - - Maria Lefeld-Sosnowska- Main Building, room 134

- | | |
|-------------------------------|--|
| 14:00 - 14:30
invited oral | X-ray imaging of semiconductor micro- and nanostructures in real and reciprocal space
<u>Tilo Baumbach</u> |
| 14:30 - 15:00
invited oral | In-Situ High Energy Ultra-Fast X-Ray Micro-Tomography
<u>Marco Di Michiel</u> , David Fernandez, Veijo Honkimaeki, Thomas Buslaps, Thierry Martin, Peter Falus, Luc Salvo, Olivier Ludwig, Daniel Bellet, Olivier Lame, Didier Bouvard |
| 15:00 - 15:30
invited oral | High resolution x-ray scattering from self-organized nanostructures
<u>Julian Stangl</u> , Vaclav Holy, Anke Hesse, Rainer T. Lechner, Günther Bauer |

Coffee break – Main Building, Main Hall (Duża aula)

Afternoon session - continued - - Czesław Kapusta- Main Building, room 134

- | | |
|-----------------------|---|
| 15:50 - 16:05
oral | Characterization of defects in protein crystals by means of synchrotron multiple-crystal topography and reciprocal space mapping
Bernard Capelle, Yves Epelboin, Jürgen Härtwig, Anna B. Moraleda, Fermin Otálora, Vivian Stojanoff |
| 16:05 - 16:20
oral | Multifractal analysis in diagnostics of nanostructures
<u>Natalia M. Shmidt</u> , S. V. Ivanov, A. V. Kamanin, A. G. Kolmakov, A. V. Loskutov, A. N. Titkov |
| 16:20 - 16:35
oral | Modelling of indium rich clusters in MOCVD InGaN/GaN multilayers
<u>Grzegorz Jurczak</u> , Grzegorz Maciejewski, Sławomir Kret, Paweł Dłużewski, Pierre Ruterana |
| 16:35 - 16:50
oral | Structure characterisation of MBE-grown ZnSe:Cr layers
Michel Jouanne, Jean-Francois Morhange, Elzbieta Dynowska, Elzbieta Lusakowska, Wojciech Szuszkiewicz, Laurens W. Molenkamp, Grzegorz Karczewski |

Poster session – Main Building, Main Hall (Duża aula)

- 19:00 - poster B-1 **Transmission Electron Microscopy of Iridium Silicide Contacts for Advanced MOSFET Structures with Schottky Source and Drain**
Adam Laszcz, Jerzy Kątki, Jacek Ratajczak, Guilhem LARRIEU, Emmanuel DUBOIS
- 19:00 - poster B-2 **Nanostructure of laser annealed Ge-implanted near-surface Si layers**
Julian Auleytnner, Dorota Klinger, Sławomir Kret, Maria Lefeld-Sosnowska, Elżbieta Lusakowska, Danuta Zymierska
- 19:00 - poster B-3 **Structural and optical properties of high temperature and high pressure treated Si:H,D**
Jadwiga Bak-Misiuk, Andrzej Misiuk, Artem Shalimov, A. Whuk, Barbara Surma, I.V Antonova, V.P Popov, Jadwiga Trela
- 19:00 - poster B-4 **CBN-Ti/TiN composites: hardness and chemical equilibrium as function of temperature**
Ewa Benko, Piotr Klimczyk, Krystyna Lawniczak-Jablonska, Edyta Piskorska, Tery L. Barr, Sudipta Seal, Vladimir S. Urbanovich, Agata Ormaniec
- 19:00 - poster B-5 **Quantum Chemistry Analysis of Electron Density in Cyclophosphazenes and in their Supramolecular Complexes**
Mikhail F. Bobrov, Vladimir G. Tsirelson, Galina V. Popova
- 19:00 - poster B-6 **X-Ray diffraction studies of radiation defects in CdTe single crystals and epitaxial layers**
Oleksandr Y. Bonchuk, Andrij P. Vlasov, Igor M. Fodchuk, Ruslan M. Zaplitnyy, Zbigniew T. Swiatek
- 19:00 - poster B-7 **XANES and X-MCD study of Nd₂TM₁₇A_x (TM=Fe, Co; A=N,H) compounds**
Marta Borowiec, Czesław Kapusta, Marcin Sikora, Dariusz A. Zajac, Damian Rybicki, Bartosz Sobanek, Colin J. Oates, Peter Fischer, Gisela Schütz
- 19:00 - poster B-8 **Characteristics of the interface dependent silicide formation for Gd on Si substrate**
Kwun-Bum Chung, Y. K. Choi, M. H. Jang, SeongJun Kang, H. J. Kim, M. Noh, C. N. Whang
- 19:00 - poster B-9 **Investigation of Ge quantum dots buried in silicon matrix by x-ray absorption**
Iraida N. Demchenko, Krystyna Lawniczak-Jablonska, Konstantin S. Zhuravlev, Edyta Piskorska
- 19:00 - poster B-10 **Lattice parameters changes of GaMnAs layers induced by annealing**
Jaroslav Domagala, Jadwiga Bak-Misiuk, Janusz Sadowski, Artem Shalimov, Jadwiga Trela
- 19:00 - poster B-11 **High-pressure phase transition and compressibility of zinc-blende HgZnSe mixed crystals**
Elzbieta Dynowska, Wojciech Szuszkiewicz, Jaroslav Domagala, Witold Daniel Dobrowolski, Christian Lathe
- 19:00 - poster B-12 **A set of equations of stress-mediated evolution of the nonequilibrium dopant-defect system in semiconductor crystals**
Alexander K. Fedotov, Oleg I. Velichko, Vladimir A. Dobrushkin
- 19:00 - poster B-13 **Simulation of oxygen-contained complexes in silicon-silicon interface in cluster approximation**
Alexander K. Fedotov, Alexander L. Pushkarchuk, S A. Kuten

- 19:00 - poster B-14 **Studies of Interface Carbon Layer Formation on the Cleavage Surfaces of In₄Se₃ Layered Crystals by X-ray Photoelectron and Auger Electron Spectroscopy**
Pavlo V. Galiy, Anna V. Musyanovych, Taras M. Nenchuk
- 19:00 - poster B-15 **X-ray study of quartz single crystals implanted with fast Ar ions**
Krzysztof Godwód, Danuta Zymierska, Stefan Jedynak, Julian Auleytner, Andrzej Turos, Jarosław Choiński
- 19:00 - poster B-16 **Transmission electron microscopy and X-ray diffraction study of α' -Al₂CO crystals**
Joanna N. Gorecka, Piotr A. Dłuzewski, Adam Gorecki, Wojciech Paszkowicz, Mirosław Kozłowski, A. Yamaguchi
- 19:00 - poster B-17 **Sub-surface Investigation of Open-volume Defects induced by Ion Implantation in Zirconia Single Crystals**
Sebastien Saude, Robert I. GRYNSPAN, Wolfgang ANWAND, Gerhard BRAUER
- 19:00 - poster B-18 **Examination of the atomic Pair Distribution Function (PDF) of SiC nanocrystals by in-situ high pressure diffraction**
Ewa Grzanka, Svetlana Stelmakh, Stanisław Gierlotka, Yusheng Zhao, Bogdan F. Palosz, Witold Palosz
- 19:00 - poster B-19 **Separation of vibrational and static disorder in amorphous In-Se films by EXAFS**
Adrianna W. Jabłońska, Andrzej Burian
- 19:00 - poster B-20 **Polymeric flocculation of ceramic slurry obtained by the Direct Coagulation Casting**
Katarzyna Jach, Mikołaj Szafran
- 19:00 - poster B-21 **Processing of the ceramic materials by the gelcasting method**
Dariusz Jach, Mikołaj Szafran
- 19:00 - poster B-22 **Characteristics of the optimized pentacene thin film transistor via OTS treatment of gate insulator and thermal treatment of pentacene layer**
SeongJun Kang, D. S. Park, H. J. KIM, Kwun-Bum Chung, M. H. Jang, M. Noh, C. N. Whang
- 19:00 - poster B-23 **XANES and X-MCD study of Nd₂TM₁₇A_x (TM=Fe, Co; A=N,H) compounds**
Marta Borowiec, Czesław Kapusta, Marcin Sikora, Dariusz A. Zajac, Damian Rybicki, Bartosz Sobanek, Colin J. Oates, Peter Fischer, Gisela Schütz
- 19:00 - poster B-24 **Positron-annihilation monitoring of reduction processes in conducting glasses**
Damian Pliszka, Bogdan Kusz, Maria Gazda, Konrad Trzebiatowski, Grzegorz P. Karwasz, Roberto S. Brusa, Antonio Zecca
- 19:00 - poster B-25 **Pr⁺³ and Tm⁺³ containing transparent glass ceramic in the GeO₂-PbO-PbF₂-LnF₃ system**
Barbara Klimesz, Grażyna Dominiak-Dzik, Piotr Solarz, Michał Zelechower, Witold Ryba-Romanowski
- 19:00 - poster B-26 **Defect structure of Sn-implanted Si crystal annealed by nanosecond laser pulse**
Dorota Klinger, Julian Auleytner, Danuta Zymierska, Bolesław Kozankiewicz, Elżbieta Lusakowska

- 19:00 - poster B-27 **Microstructure of Fe₃O₄ film grown on Si(100) substrate, investigated by TEM and X-ray methods**
Mirosław Kozłowski, M. Bari, C. De Nardi, R. Diduszko, P. A. Dłużewski, A. Szczepańska
- 19:00 - poster B-28 **Use of element selective methods for characterization of thin films**
Krystyna Lawniczak-Jablonska, Elzbieta Dynowska, Markku Heinonen, Taina Laiho, Natalia V. Babushkina, Sergei A. Malyshev, L. I. Romanova
- 19:00 - poster B-29 **Conventional and SR reflection topography of GdCa₄O(BO₃)₃ crystals**
Maria Lefeld-Sosnowska, E. Olszyńska, W. Wierzchowski, K. Wieteska, W. Gräff, A. Pajączkowska, A. Kłos
- 19:00 - poster B-30 **Structure and Properties of dynamically compressed Al_{99,5} and AlCuZr alloy.**
 Maria Richert, Beata Leszczyńska
- 19:00 - poster B-31 **The electrodeposition of amorphous Ni-P coatings containing TiO₂ and Ti powders**
Bożena Losiewicz, Antoni Budniok, Eugeniusz Łagiewka
- 19:00 - poster B-32 **Determination of vanadium valence in hydrated compounds**
 Vladimir Bondarenko, Sergej Grebinkij, Sigitas Mickevicius, Henrikas Tvardauskas, Saulius Kaciulis
- 19:00 - poster B-33 **Photoemission study of the LT-GaAs**
Sigitas Mickevicius, Janusz Sadowski, Saulius Balakauskas, Maks Leanderson
- 19:00 - poster B-34 **Geometrical description of the X-ray capillary and total reflection mirror surfaces with assumed reflection features**
Robert Mroczka, Grzegorz Zukociński, Andrzej Kuczumow
- 19:00 - poster B-35 **Electrolytic production and heat-treatment of Ni-based composite layers containing intermetallic phases**
Iwona Napłoszek-Bilnik, Antoni Budniok, Eugeniusz Łagiewka
- 19:00 - poster B-36 **Phase transitions in the spinel Li_xMn_{3-x}O₄ intercalation compounds. Synchrotron X-ray diffraction studies.**
Waldemar Nowicki, Emilia Wolska, Jolanta Darul, Paweł Piszora
- 19:00 - poster B-37 **Mn doped ZnTe (110) (1x1) surface in Resonant Photoemission study**
Bronisław A. Orlowski, Sigitas Mickevicius, B. J. Kowalski, I. A. Kowalik, K. Kopalko, A. Mycielski, R. L. Johnson
- 19:00 - poster B-38 **Differential Reflectivity and Photoemission study of ZnTe and CdTe(110) surface**
Bronisław A. Orlowski, I. A. Kowalik, B. J. Kowalski, M. Suffczynski, A. Mycielski, S. Colonna, C. Ottaviani, F. Ronci, A. Cricenti
- 19:00 - poster B-39 **Thermo- and galvanomagnetic characterisation of heterophase structures with variable configuration of inclusions**
Sergey V. Ovsyannikov, Grigoriy V. Vorontsov, Vladimir V. Shchennikov
- 19:00 - poster B-40 **Investigation of PbSe single crystals under the neutron irradiation**
 Vladimir V. Shchennikov, Sergey V. Ovsyannikov, Alexander E. Kar'kin, Boris N. Goshchitskii, Eugeni P. Skipetrov
- 19:00 - poster B-41 **X-Ray Study of Lattice Parameters of GaN in a Broad Temperature Range**
Wojciech Paszkowicz, Michael Knapp, Helmut Ehrenberg, Sławomir Podsiadło, Tomasz Szyszko

- 19:00 - poster B-42 **Electron backscatter diffraction as a useful method for alloys microstructure characterization**
Leszek Klimek, Bożena Pietrzyk
- 19:00 - poster B-43 **X-ray powder diffraction investigation of lithium manganese spinel oxides with cubic, tetragonal and orthorhombic structure.**
Paweł Piszora
- 19:00 - poster B-44 **GISAXS study of hydrogen implanted silicon**
Branko Pivac, Pavo Dubcek, Sigrid Bernstorff, Federico Corni, Rita Tonini
- 19:00 - poster B-45 **Twin structure of LSGMO crystals studied by Laue method**
Dmytro I. Savytskii, Dmytro Trots, A. Matkovskii, Carsten Paulmann, Ulrich Bismayer, Marek Berkowski
- 19:00 - poster B-46 **Thermal expansion of NdGaO₃ perovskite**
Anatoliy Senyshyn, Leonid Vasylechko, Carsten Bähitz, Ulrich Bismayer, A. Matkovskii
- 19:00 - poster B-47 **Influence of substrate miscut angle on dislocation density in GaAs/Si heterostructures obtained by HRXRD**
Artem Shalimov, J Bak-Misiuk, Andrzej Misiuk, Maria M. Calamiotou, A Georgi-lakilas
- 19:00 - poster B-48 **Time-resolved SAXS data analysis of a lamellar two-phase polymer system by means of the correlation function**
Czesław Slusarczyk
- 19:00 - poster B-49 **Moessbauer spectroscopy, interlayer coupling and magnetoresistance of irradiated Fe/Cr multilayers**
Feliks Stobiecki, Michał Kopcewicz, Jacek Jagielski, Bogdan Szymański, Marek Schmidt, Janusz Dubowik, Maciej Urbaniak, Justyna Kalinowska
- 19:00 - poster B-50 **XPS investigations of NdGaO₃ wafers**
Ewa Talik, Magdalena Kruczek, Halina Sakowska
- 19:00 - poster B-51 **The Hg_{1-x}Cd_xTe Epilayers Investigation and Characterization**
Zinoviya F. Tsybriy-Ivasiv, Larysa O. Darchuk, Fedor F. Sizov
- 19:00 - poster B-52 **Crystal structure and thermal expansion of PrGaO₃ in the temperature range 10-1253 K**
Leonid Vasylechko, Anatoliy Senyshyn, Michael Knapp, Marek Berkowski, Carsten Paulmann, Ulrich Bismayer, A. Matkovskii
- 19:00 - poster B-53 **Characterisation of Permalloy based thin films and magnetic multilayers using the magnetoresistance and Hall effect measurements**
Marius Volmer, Jenica Neamtu
- 19:00 - poster B-54 **Synchrotron X-ray Diffraction studies of silicon implanted with high energy Ar ions after thermal annealing**
Wojciech Wierzchowski, Julian Auleytner, Krzysztof Wieteska, Walter Graeff, Danuta Zymirska
- 19:00 - poster B-55 **New water thinnable acrylic - allyl dispersions in die pressing of alumina**
Paweł Wiśniewski, Mikołaj Szafran, Gabriel Rokicki
- 19:00 - poster B-56 **Surface morphology, nanomechanical and tribological behaviours of ultra-thin nitride superlattice films.**
HANNA WRZESIŃSKA, M. Ekwińska, M. Misiak, Z. Rymuza, S.A. Chizhik

- 19:00 - poster B-57 **X-ray diffractometric study of micro-precipitates created by fast nitrogen ions in GaAs single crystal**
Danuta Zymierska, Krzysztof Godwod, Julian Auleytner, Jarosław Choiński
- 19:00 - poster B-58 **New Technique for Magnetic Phase Transitions Diagnostics**
Tim G. Zagurenko, Aleksei N. Lachinov, Michael Matlak, Victor M. Kornilov
- 19:00 - poster B-59 **Metastable state in $\text{Hg}_{1-x}\text{Cd}_x\text{Te}$ crystals**
Oleksandr Zakharyash
- 19:00 - poster B-60 **The segregation of Arsenic and Boron in the interface of a polysilicon on silicon during rapid thermal annealing**
 Abdelali Merabet
- 19:00 - poster B-61 **Auger Electron Spectroscopy studies of the microstructure and diffusion processes at interfaces of multilayer platings used in laser diode technology**
Valentina V. Arbenina, R. H. Akchurin, A. A. Marmalyuk, O. I. Govorkov
- 19:00 - poster B-62 **Breakdown of passivity in Al-Ta and Al-Nb amorphous alloys**
Artur Jaśkiewicz, Maria Janik-Czachor, Piotr Kędzierzawski, Zbigniew Werner
- 19:00 - poster B-63 **Photoemission studies of very thin ($<10\text{nm}$) silicon oxynitride (SiO_xN_y) layers formed by PECVD**
Patrick Hoffmann, Romuald B. Beck, M. Cuch, M. Giedz, A. Jakubowski, Dieter Schmeisser
- 19:00 - poster B-64 **Tautomeric preferences in solution and crystalline state of new ylidene-malonodinitrile, fungicidal species precursor.**
Jacek M. Grochowski, Paweł Serda, Michał Markiewicz, Bartłomiej Kozik, Janusz J. Sepioł
- 19:00 - poster B-65 **Towards In-Situ Pulsed Laser Deposition**
Vedran Vonk, Sybolt Harkema, Guus Rijnders, Heinz Graafsma
- 19:00 - poster B-66 **Structure modifications in materials irradiated by ultra-short pulses of VUV free electron laser**
Jerzy B. Pełka, Andrzej Andrejczuk, Henryk Reniewicz, Norbert Schell, Jacek Krzywiński, Ryszard Sobierajski, Andrzej Wawro, Zbigniew R. Zytewicz, Dorota Klinger
- 19:00 - poster B-67 **SAXS and WAXD real time studies on nanostructures of selected polymer materials**
Jarosław Janicki
- 19:00 - poster B-68 **Effect of cathodic hydrogen charging on catalytic activity of Cu-Hf amorphous alloys**
Marcin Pisarek, Maria Janik-Czachor, Annett Gebert, Piotr Kędzierzawski, Bulcsú Rác
- 19:00 - poster B-69 **X-ray diffraction studies of thermal properties of bulk- and surface-atoms of nanocrystalline SiC**
Svetlana Stelmakh, Stanisław Gierlotka, Ewa Grzanka, Bogdan F. Palosz

Tuesday, September 16th

Morning session - - Jürgen Härtwig- Main Building, room 134

- 11:00 - 11:30 invited oral **Quantitative TEM analysis of quantum structures**
Wolfgang Neumann, Holm Kirmse, Ines Häusler, Reinhard Otto, Irmela Hähnert

11:30 - 12:00
invited oral **Electron diffraction and microscopy investigations of nanocrystals envelope**
Piotr A. Dłużewski, Elzbieta Czerwosz

12:00 - 12:30
invited oral **Soft X-Ray Spectroscopy of Clusters, Surfaces, and Interfaces**
Wilfried Wurth

Lunch break –

Afternoon session - Jacek M. Grochowski- *Main Building, room 134*

14:00 - 14:30
invited oral **Materials characterization using high flux diffraction.**
Wroblewski Thomas

14:30 - 15:00
invited oral **Application of positron annihilation techniques in semiconductor studies**
Grzegorz P. Karwasz, Bogdan Kusz, Roberto S. Brusa, Antonio Zecca

15:00 - 15:30
invited oral **Diffraction studies of the thickening transition in ideal polymers**
Ann E. Terry, Jamie K. Hobbs

Coffee break – *Main Building, Main Hall (Duża aula)*

Afternoon session - continued - Elisabeth Holub-Krappe- *Main Building, room 134*

15:50 - 16:20
oral **Precise determination of full Grain Size Distribution from diffraction peak profile as a result of kinematical theory of diffraction for polydisperse nanomaterials**
Roman Pielaszek, Witold Lojkowski

16:20 - 16:35
oral **Diamond as X-ray Wavelength Standard for Thermal-Expansion Studies Using Synchrotron Sources**
Wojciech Paszkowicz, Pawel Piszora, Roman Minikayev, Jianzhong Jiang, Michael Knapp, Carsten Baehtz, Rajmund Bacewicz

16:35 - 16:50
oral **Computation of powder diffraction patterns for carbon nanotubes.**
Jacek Kołoczek, Andrzej Burian

16:50 - 17:05
oral **Characterization of the c- BN/ TiC, Ti₃SiC₂, TiN systems by element selective spectroscopy**
Edyta Piskorska, Krystyna Lawniczak-Jablonska, Ewa Benko, Iraida N. Demchenko, Piotr Klimczyk, Roman Minikayev

Wednesday, September 17th

Morning session conducted by A. Kvick – *Main Building, room 134*

11:00 - 11:30
invited oral **Neutron and synchrotron radiation non-destructive methods for the characterisation of materials for different applications**
FRANCO RUSTICHELLI

11:30 - 11:45
oral **Microstructure of high temperature - pressure treated nitrogen doped Si determined by TEM, PL and X-Ray methods**
Deren Yang, Jin Xu, Andrzej Misiuk, Barbara Surma, J Bak-Misiuk

11:45 - 12:00
oral **Complete description of structure features of textured metal materials by use of modified X-ray methods and computer data treatment**
Yuriy Perlovich, Margarita Isaenkova, Vladimir Fesenko

12:00 - 12:15
oral **The modern techniques used in the Institute of Nonferrous Metals for manufacturing of metallic materials of specific structure and properties.**
Mieczysław Woch, Ludwik Ciura, Wiesław Kazana, Stanisław Księżarek, Roman Kolano, Juliusz Senderski, Tomasz Stuczyński, Bartłomiej Płonka

- 12:15 - 12:30
oral
Industrial Research and Development with Synchrotron Radiation
Wroblewski Thomas, Servicegroup Industry
- Lunch break –**
- Afternoon session conducted by J. Ghijsen – Main Building, room 134**
- 14:00 - 14:30
invited oral
Microstructure Development in 3D studied by Synchrotron X Rays
Larry Margulies, Henning F. Poulsen, Erik M. Lauridsen, Soeren S. Schmidt, Grethe Winther, Dorte Juul Jensen
- 14:30 - 15:00
invited oral
Gallium nitride surface formation and modification by Mn deposition - photoemission studies with use of synchrotron radiation
Bogdan J. Kowalski, Iwona A. Kowalik, Ryszard J. Iwanowski, Bronislaw A. Orłowski, Elzbieta Lusakowska, Janusz Sadowski, Robert L. Johnson, Izabella Grzegory, Sylwester Porowski
- 15:00 - 15:15
oral
Quantitative transmission electron microscopy investigation of localised stress in heterostructures
Slawomir Kret, Paweł Dłużewski, Grzegorz Maciejewski, Grzegorz Jurczak, Pierre Ruterana, Jun Chen, Piotr Dłużewski, Elżbieta Janik
- 15:15 - 15:30
oral
Study of GdSi_{2-x} formation in the presence of an interfacial SiO_2 layer
Kwun-Bum Chung, Y. K. Choi, M. H. Jang, SeongJun Kang, D. S. Park, M. Noh, C. N. Whang
- Coffee break – Main Building, Main Hall (Duża aula)**
- Poster session –**

Thursday, September 18th

- Morning session - - Piotr Dłużewski- Main Building, room 134**
- 9:00 - 9:30
invited oral
Surfaces and interfaces characterisation by neutron reflectometry.
Frederic OTT
- 9:30 - 10:00
invited oral
Magnetic and crystalline microstructure of nanocrystalline metals studied by neutron and synchrotron radiation scattering
Radosław Przeniosło, Rolf Hempelmann, Izabela Sosnowska
- 10:00 - 10:30
invited oral
Atomic structure of nanoparticles: X-ray diffraction and XAFS studies
Yuri L. Slovokhotov
- Coffee break – Main Building, Main Hall (Duża aula)**
- Morning session - continued - - Bogdan J. Kowalski- Main Building, room 134**
- 11:00 - 11:30
invited oral
Spectroscopic investigation of buried interfaces and liquids with soft x-rays
Clemens Heske
- 11:30 - 11:45
oral
The transition to perpendicular magnetization in an ultrathin Co film studied by XMCD and SXRR based magnetometry
Elisabeth Holub-Krappe, Anders Hahlin, Hansjörg Maletta, Cecilia Andersson, Olof Karis, Jonathan Hunter Dunn, Dimitri Arvanitis
- 11:45 - 12:00
oral
NMR study of $\text{La}_{1-x}\text{Sr}_x\text{MnO}_3$ compounds
Czesław Kapusta, Dariusz A. Zajac, Peter C. Riedi, Damian Rybicki, Marcin Sikora, Colin J. Oates, Jose M. De Teresa, Clara Marquina, Ricardo M. Ibarra
- 12:00 - 12:15
oral
SAXS studies on materials inhomogeneous in nanoscale
Bozena Bierska, Eugeniusz Lagiewka, Lucjan Pajak

12:15 - 12:30 **RF-Mossbauer study of the magnetic properties of nanocrystalline alloys**
oral Michal Kopcewicz

12:30 - 12:45 **Correlation between the dielectric constant and porosity of nanoporous
silica based thin films**
oral Ilanit Fisher, Wayne D. Kaplan, Moshe Eizenberg

Closing remarks - - Jacek M. Grochowski- *Main Building, room 134*

Lunch break –

Afternoon session - - Bronislaw A. Orlowski- General Meeting of Polish Synchrotron Radiation Society *Main Building, room 134*

Coffee break –

Afternoon session - continued - - Bronislaw A. Orlowski- General Meeting of Polish Synchrotron Radiation Society *Main Building, room 134*

Symposium C

5th INTERNATIONAL WORKSHOP ON MBE AND VPE GROWTH PHYSICS AND TECHNOLOGY

Monday, September 15th

Opening address - J. Kossut – *Main Building, room 213*

Afternoon session – *Main Building, room 213*

14:00 - 14:45
invited oral **MBE growth of ZnO layers and their physical properties**
Christian Morhain, Stéphane Vézian, Christiane Deparis, Monique Teisseire,
Philippe Lorenzini, Phillipe Vénégues, Frédéric Raymond

14:45 - 15:30
invited oral **Quantum dot formation induced by surface energy change of a strained
two-dimensional layer**
Henri Marriete

Coffee break –

Afternoon session - continued – *Main Building, room 213*

15:50 - 16:35
invited oral **Controlling the growth of InAs/GaAs quantum dots for long wavelength
applications**
Tim S. Jones

16:35 - 17:20
invited oral **MBE growth of HgCdTe layers and their properties in the context of IR
applications**
Sergei Dvoretzky

Break –

Afternoon session - continued – *Main Building, room 213*

17:35 - 17:50
oral **The optimisation of the GaN and GaN/AlGaIn heterojunctions on bulk
crystals using plasma-assisted molecular beam epitaxy**
Czesław Skierbiszewski, M. Siekacz, A. Feduniewicz, K. Dybko, B. Wasilewski, I.
Grzegory, M. Leszczynski, B. Pastuszka

17:50 - 18:05
oral **Kinetic Monte Carlo simulation of SiC nucleation on Si(111)**
A. A. Schmidt, Yu. V. Trushin, P. Weih, Oliver Ambacher, J. Pezoldt, V. Cimalla

18:05 - 18:20
oral **The role of Ge predeposition temperature in the epitaxy of SiC on Silicon**
F. M. Morales, Ch. Zgheib, S. I. Molina, D. Araújo, R. García, C. Fernández, A.
Sanz-Hervás, P. Masri, P. Weih, Th. Stauden, V. Cimalla, Oliver Ambacher, J.
Pezoldt

18:20 - 18:35
oral

Problems with cracking of $\text{Al}_x\text{Ga}_{1-x}\text{N}$ layers

Ewa Dumiszewska, Dariusz Lenkiewicz, Włodzimierz Strupiński, Agata Jasik, Rafal S. Jakiela, Marek Wesołowski

Poster session –

19:00 -
poster C-1

Optimization of Zn profiles in MOCVD grown AlGaAs/GaAs QW heterostructures.

R. Akchurin, A. Y. Andreev, P. V. Bulaev, A. A. Marmalyuk, D. B. Nikitin, A. A. Padalitsa, I. D. Zalevsky

19:00 -
poster C-2

Structural characterization of original 3D gallium structures grown by LP-MOCVD.

Luc IMHOFF, Marco SACILOTTI, Claudie JOSSE COURTY, Marie MESNIER, Carmen MARCO DE LUCAS, Sylvie BOURGEOIS

19:00 -
poster C-3

Optical quality improvement of InGaAs/AlAs/AlAsSb coupled double quantum wells grown by molecular beam epitaxy

Jun-ichi Kasai, Teruo Mozume, Haruhiko Yoshida, Takasi Simoyama, Achanta V. Gopal, Hiroshi Ishikawa

19:00 -
poster C-4

Some aspects to the RHEED behaviour of LT GaAs growth

A. Nemcsics

19:00 -
poster C-5

Growth of InSb Thin Films on GaAs(100) substrates by Flash Evaporation Epitaxy

Maciej Oszwaldowski, T. Berus, A. Borowska, R. Czajka, M. Zimniak

19:00 -
poster C-6

MBE growth and characterization of InAs/GaAs for infrared detectors

Kazimierz Regiński, Janusz Kaniewski, Kamil Kosiel, Tomasz R. Przesławski, Jadwiga Bąk-Misiuk

19:00 -
poster C-7

Evidence of threading and misfit dislocations in partially relaxed InGaAs/GaAs heterostructures

O. Yastrubchak, E. Lusakowska, A. Morawski, O. Demchuk, T. Wosinski

19:00 -
poster C-8

Resistivity and mobility in ordered InGaP grown by MOVPE

Stanislav Hasenöhr, Julius Betko, Marian Morvic, Jozef Novák, Ján Fedor

19:00 -
poster C-9

(Ga,Gd)As thin film growth by mass-analyzed low energy IBE

Song S. Lin, Chen N. Fu, Zhou J. Ping, Yang S. Yan, Liu Z. Kai

19:00 -
poster C-10

Light induced contrast in Kelvin Force Microscopy of GaN epilayers

Rafał Bożek, Krzysztof Pakuła, Jacek Baranowski

19:00 -
poster C-11

Mg diffusion in GaN:Mg grown by metalorganic vapor-phase epitaxy MOVPE

R. Jakiela, A. Jasik, Ewa Dumiszewska, Dariusz Lenkiewicz, Włodzimierz Strupiński

19:00 -
poster C-12

Optical properties of nitride diluted (Ga, In)(As, Sb) layers and quantum wells: character of optical transitions and carrier localization effect

R. Kudrawiec, G. Sjk, J. Misiewicz, L. H. Li, J. C. Harmand

19:00 -
poster C-13

Growth kinetics of (0001)GaN from Ga and NH_3 fluxes

Vladimir Mansurov, Yurii G. Galitsyn, Valerii V. Preobrazhenskii, Konstantin S. Zhuravlev

19:00 -
poster C-14

Comparative analysis of (0001)GaN and (001)GaAs growth kinetics

Vladimir Mansurov, Yurii G. Galitsyn, Konstantin S. Zhuravlev

- 19:00 - poster C-15 **Correlation between nitrogen incorporation and optical quality in MOCVD-grown Ga(In)NAs investigated by photoluminescence and modulation spectroscopy.**
Wojciech Rudno-Rudziński, Robert Kudrawiec, Krzysztof Ryczko, Piotr Sitarek, Jan Misiewicz, Joff Derluyn, Ingrid Moerman
- 19:00 - poster C-16 **Predictive Use of Ab Initio MO Methods In PDECB-Based Approach to Low-Temperature Epitaxy of Stoichiometric Group-III Nitrides**
Keiji Hayashi, Takuo Kanayama, Noriyoshi Omote
- 19:00 - poster C-17 **CdTe thin films properties fabricated by hot wall epitaxy**
Yevgen O. Bilevych, Andriy I. Boka, Joanna V. Gumenjuk-Sichevska, Fedor F. Sizov
- 19:00 - poster C-18 **Properties of MBE CdxHg1-xTe/GaAs structures modified by ion-beam milling**
I. I. Izhnin, V. V. Bogoboyashchyy, Sergei Dvoretzky, N. N. Mikhailov, Yu. G. Sidorov, V. S. Varavin, V. A. Yudenkov
- 19:00 - poster C-19 **Investigation of Si-Ge whisker growth by CVD**
Anatoly A. Druzhinin, Igor P. Ostrovskii
- 19:00 - poster C-20 **Stress analysis of strained superlattices**
Halyna Khlyap, R. Peleshchak
- 19:00 - poster C-21 **Medium scale modeling of the CdTe/ZnTe islands the empirical potential and finite element approach**
Piotr Traczykowski, Sławomir Kret, Piotr Dłużewski, Paweł Dłużewski, Sebastian Maćkowski, G Karczewski
- 19:00 - poster C-22 **Optical and structural properties of films based on CdHgTe**
I. S. Virt, I. O. Rudyi, I. V. Kurilo, O. I. Vlasenko, I. V. Petrovych
- 19:00 - poster C-23 **Photoemission study of manganese thin films deposited on layered semiconductors surfaces**
Frederic Mirabella, Bruce A. Parkinson, Jacques Ghijsen
- 19:00 - poster C-24 **Magnetic properties of V atoms in ultra-thin epitaxial Gd/V bilayers**
Piotr Pankowski, Lech T. Baczewski, A. Wawro, K. Mergia, S. Messoloras, F. Ott
- 19:00 - poster C-25 **Development of Indium Tin Oxide (ITO) films for the Bragg reflectors application**
HANNA WRZESIŃSKA, Lidia Lilka, Dorota Wawer, Krzysztof Hejduk, Andrzej Kudła
- 19:00 - poster C-26 **Optical investigations of two dimensional electron gas in the AlGaIn/GaN heterostructures**
R. Kudrawiec, M. Motyka, M. Sypererek, J. Misiewicz, R. Paszkiewicz, B. Paszkiewicz, M. Tlaczala, Włodzimierz Strupiński

Tuesday, September 16th

Afternoon session – Main Building, room 213

- 14:00 - 14:45 invited oral **Magnetotransport investigations of AlGaIn/GaN heterostructures grown on bulk GaN, SiC, and sapphire substrates**
Wojciech Knap

14:45 - 15:30
invited oral **Homoepitaxy of GaN-based blue and UV lasers**
Piotr Perlin

Coffee break –

Afternoon session - continued – Main Building, room 213

15:50 - 16:35
invited oral **Multiscale modelling of group-III nitride growth**
Joerg Neugebauer, Liverios Lymperakis, Chris G. Van de Walle, John E. Northrup, Randy Feenstra

16:35 - 17:20
invited oral **Control of the polarity and crystal face of GaN epilayers grown by MBE**
S. Pezzagna, Nicolas Grandjean, A. Dussaigne, P. Vennegues

Break –

Afternoon session - continued – Main Building, room 213

17:35 - 17:50
oral **Growth and Characterization of GaN Epilayers on Si Substrates**
Olga Kryliouk, Michael Mastro, Sang Won Kang, Kee Chan Kim, Tim Anderson

17:50 - 18:05
oral **Raman scattering study of InGaAs/AlAsSb and InGaAs/AlAs/AlAsSb heterostructures**
TERUO MOZUME, Nikolai Georgiev, Jun-ichi Kasai

18:05 - 18:20
oral **Defects in GaMnAs - influence of annealing and growth conditions**
J. Sadowski, J. Kanski, L. Ilver, Jaroslaw Domagala, J. Bak-Misiuk, A. Mikkelsen, E. Lundgren, F. Tuomisto, K. Saarinen, M. Adell

18:20 - 18:35
oral **Alignment of SiC quantum dots on silicon substrates**
V. Cimalla, A. A. Schmidt, K. Zekentes, Ch. Fvrster, P. Weih, Oliver Ambacher, J. Pezoldt

Wednesday, September 17th

Morning session – Main Building, room 213

9:00 - 9:45
invited oral **Technology of high power lasers**
Peter Unger

9:45 - 10:30
invited oral **Sensitivity of quantum dot lasers to optical feedback**
Guillaume Huyet

Coffee break –

Morning session - continued – Main Building, room 213

11:00 - 11:45
invited oral **III-V quantum dots: from lasers to single photons**
Andrea Fiore

11:45 - 12:30
invited oral **Heteroepitaxial growth instabilities on Si and their modelling by kinetic Monte Carlo simulations**
Friedrich Schaffler

Lunch break –

Afternoon session – Main Building, room 213

14:30 - 14:45
oral **Indium segregation effects in InGaAs/GaAs multiple QW heterostructures grown by MOCVD**
R. Akchurin, A. Y. Andreev, O. I. Govorkov, A. A. Marmalyuk, A. V. Petrovsky, I. D. Zalevsky

14:45 - 15:00
oral **Selective epitaxial growth of Ge/Si quantum dots on patterned Si(001) substrate by ultra high vacuum chemical vapor deposition**
L. H. Nguyen, V. LeThanh, D. Debarre, V. Yam, M. Halbwax, D. Bouchier

15:00 - 15:15
oral **Formation of Ge nanoislands on pure and oxidized Si surface by MBE**
A. Nikiforov, V. V. Ulyanov, A. G. Milekhin, O. P. Pchelyakov, S. A. Teys, S. Schulze, D.R. T. Zahn

Coffee break –

Poster session –

Thursday, September 18th

Morning session – *Main Building, room 213*

9:00 - 9:45
invited oral **Self-assembled semiconductor nanostructures**
Oliver G. Schmidt

9:45 - 10:30
invited oral **Strain effects in heteroepitaxy of nitrides**
Sven Einfeldt

Coffee break –

Morning session - continued – *Main Building, room 213*

11:00 - 11:45
invited oral **Relaxation of misfit-induced strains - from handicaps to benefits**
Horst P. Strunk

11:45 - 12:30
invited oral **Modification of magnetic properties of ultrathin cobalt layers by an over-layer structure**
Marek Kisielewski, Zbigniew Kurant, Andrzej Maziewski, Maria Tekielak, Andrzej Wawro, Andrius Maneikis, Lech T. Baczewski

Lunch break –

Afternoon session – *Main Building, room 213*

14:30 - 14:45
oral **Spatial Profile of Neutral Free Radical Beam Produced by the Method of Photo-Deionization of Negative Ion Beams**
Keiji Hayashi, Hiroshi Konno, Takuo Kanayama, Takashi Oseki

14:45 - 15:00
oral **Self-assembled Ge/Si(001) islands extending the accessible wavelength region beyond 2 μm**
Mathieu Stoffel, U. Denker, G. S. Kar, O. G. Schmidt, H. Sigg

15:00 - 15:15
oral **3C-SiC:Ge alloys grown on Si (111) substrates by solid source MBE**
P. Weih, V. Cimalla, Th. Stauden, R. Kosiba, L. Spiess, H. Romanus, M. Gubisch, W. Bock, Th. Freitag, P. Fricke, Oliver Ambacher, J. Pezoldt

15:15 - 15:30
oral **Kinetics of heteroepitaxial growth of Ge on Si(001) at low temperature by UHV-CVD**
M. Halbwax, V. Yam, D. Debarre, Lam.H. Nguyen, Y. Zheng, D. Bouchier

Coffee break –

Friday, September 19th

Morning session – *Main Building, room 213*

9:00 - 9:45
invited oral **In situ monitoring and control optical techniques during MBE growth of III-V nanostructures**
Fernando Briones

9:45 - 10:30
invited oral **Real-Time in situ x-ray diffraction studies on ZnSe epilayers grown on (001)GaAs**
Armin S. Bader

Coffee break –

Morning session - continued – *Main Building, room 213*

11:00 - 11:45
invited oral **TEM evaluation of stress and strain in III-V structures**
Andre Rocher, Martiane Cabie, Anne Ponchet

11:45 - 12:30
invited oral **MOVPE growth and in situ characterization of GaN layers**
Hilde Hardtdegen

Closing address - J. Kossut – *Main Building, room 213*

Symposium D

COLOSSAL MAGNETORESISTANCE - NEW MATERIALS AND NEW IDEAS

Monday, September 15th

Opening address – *Main Building, room 144*

Afternoon session – *Main Building, room 144*

14:00 - 14:45
invited oral

Strain effects in manganite thin films

Jan Aarts, Z Q. Yang, Y Qin, M Y. Wu, H W. Zandbergen

14:45 - 15:30
invited oral

Acoustical and related effects in manganite compounds.

Konstantin Dyakonov, Alexander Goltsev, Ludmila Kulakova, Eduard Yakhkind, Vladimir P. Dyakonov, Stanislaw J. Lewandowski, Henryk Szymczak, Yakov M. Mukovskii

Coffee break – *Main Building, Main Hall (Duża aula)*

Afternoon session - continued – *Main Building, room 144*

15:50 - 16:20
oral

Phase separation and microwave response of epitaxial and polycrystalline manganite films

Steponas Asmontas, Adulfas Abrutis, Jonas Gradauskas, Andzej Lucun, Antanas Oginskis, Valentina Plausinaitiene, Algirdas Suziedelis, Bonifacas Vengalis

16:20 - 16:50
oral

Mesoscopic ordering effects in single-crystalline thin films of lanthanum manganites

Zinaida A. Samoilenko, Vladimir D. Okunev, I. Pushenko, A. Abal'oshev, M. Baran, Piotr Gierlowski, S. J. Lewandowski, Henryk Szymczak, R. Szymczak

16:50 - 17:20
oral

Raman study of anharmonic and charge ordering effects on 'Pr_{0.5}Ca_{0.5}MnO₃' thin films.

Katerina Tatsi, Evie Papadopoulou, Dimitris Lampakis, Efthimios Liarokapis, Wilfrid Prellier, B. Mercey

Poster session – *Main Building, Main Hall (Duża aula)*

19:00 -
poster D-1

Eu_{0.55}Sr_{0.45}MnO₃ and Sm_{0.55}Sr_{0.45}MnO₃ manganites. Comparison of properties

Anna I. Abramovich

19:00 -
poster D-2

Structural and magnetic study of self-doped La_{1-x-y}Ca_xVac_yMnO₃

Vitor S. Amaral, F. Figueiras, J. P. Araújo, P. B. Tavares, J. B. Sousa, J. M. Vieira

19:00 -
poster D-5

Probing local symmetry changes in LaMnO_{3.12} rhombohedric-orthorhombic phase transition

A.M.L. Lopes, J. P. Araujo, E. Rita, J. G. Correia, V. S. Amaral, Y. Li, J. M. Vieira, R. Suryanarayanan, ISOLDE Collaboration

- 19:00 - poster D-6 **Two-dimensional exchange interaction in perovskite-like manganites.**
Maria Mikhaylova, Natalia Bobrysheva, Do Kyung Kim, Muhammet S. Toprak, Therese Eriksson, Yvonne B. Andersson, Mamoun Muhammed
- 19:00 - poster D-8 **Mesoscopic inhomogeneity, ^{55}Mn NMR, CMR and magneto-transport properties of $\text{La}_{0.6}\text{Sr}_{0.2}\text{Mn}_{1.2-x}\text{Fe}_x\text{O}_3$ manganites**
Valentin P. Pashchenko, Aleksandr A. Shemiakov, Aleksey V. Pashchenko, Vasilij K. Prokopenko, Viacheslav N. Derkachenko, Vladimir P. Dyakonov, Henryk Szymczak
- 19:00 - poster D-9 **The LaMnO_3 elastic properties in different structural phases**
Serguei E. Popov, Anatoliy E. Nikiforov
- 19:00 - poster D-10 **Ellipsometric studies of NdMnO_3 single crystals**
Henryk Szymczak, Gintautas J. Babonas, Alfonsas Reza, Marek Baran, Jan Fink-Finowicki, Sergei V. Shiryayev, Ritta Szymczak
- 19:00 - poster D-11 **Magnetic properties of $\text{La}_{0.9}\text{Ca}_{0.1}\text{CoO}_3$ single crystals**
Ritta Szymczak, Marek Baran, Jan Fink-Finowicki, Henryk Szymczak
- 19:00 - poster D-12 **Magnetic and structural phase transitions in the $\text{La}_{0.88}\text{MnO}_x$ system**
Igor Troyanchuk, Vladimir A. Khomchenko, Henryk Szymczak, Klaus Barner
- 19:00 - poster D-13 **Electroresistance of La-Ca-MnO thin films**
Saulius Balevicius, Fiodoras Anisimovas, Piotr Cimperman, Oleg Kiprijanovic, Jonas Parseliunas, Voitech Stankevici, NERIJA ZURAUSKIENE, Larry L. Altgilbers
- 19:00 - poster D-14 **NMR study of $(\text{Sr,Ba,Lu})_2\text{Fe}_{1+x}\text{Mo}_{1-x}\text{O}_6$ double perovskites**
Dariusz A. Zajac, Czesław Kapusta, Peter C. Riedi, Marcin Sikora, Colin J. Oates, Damian Rybicki, Jose M. De Teresa, Clara Marquina, Ricardo M. Ibarra
- 19:00 - poster D-15 **$A^{55}\text{Mn}$ NMR study of $\text{La}_{0.33}\text{Nd}_{0.33}\text{Ca}_{0.34}\text{MnO}_3$ with ^{16}O and ^{18}O**
D. Rybicki, Cz. Kapusta, P. C. Riedi, C. J. Oates, M. Sikora, D. Zajac, J. M. De Teresa, C. Marquina, M. R. Ibarra
- 19:00 - poster D-17 **Transport and magnetic properties of $\text{La}_{2/3}\text{Pb}_{1/3}\text{MnO}_3$ thin films**
Mark Baran, Marek Berkowski, Jan Fink-Finowicki, Stanislaw J. Lewandowski, Henryk Szymczak, Bozena Krzymanska, Sergei N. Khartsev, Yurii V. Medvedev, Ritta Szymczak
- 19:00 - poster D-18 **Anisotropy of magnetic properties of the layered Co-based perovskite single crystals ' $\text{RBaCo}_2\text{O}_{5+x}$ ' (R = Dy, Tb, Eu)**
Valentina I. Gatafskaya, Sergej Shiryayev, Georgij Bychkov, Sergej Barilo, Leonard Kurochkin, Marek Baran, Ritta Szymczak, Henryk Szymczak
- 19:00 - poster D-19 **Magnetism and superconductivity in $\text{Nd}_{0.81}\text{Sr}_{0.19}\text{MnO}_3/\text{YBa}_2\text{Cu}_3\text{O}_7$ multilayers**
Ivan Komissarov, Piotr Przysupski, Maciej Sawicki
- 19:00 - poster D-21 **Changes of reflection factor parameters of multilayered bigyrotropic structures**
Denis G. Makarov, Vadim V. Danilov, Valery F. Kovalenko
- 19:00 - poster D-22 **Atomic order and the interaction of electron and magnetic subsystems in epitaxial $\text{LaSr}(\text{Ca})\text{MnO}$ films**
Vladimir D. Okunev, Z. A. Samoilenko, T. A. Dyachenko, A. Abal'oshev, M. Baran, P. Gierłowski, S. J. Lewandowski, Andrzej Szewczyk, Henryk Szymczak, R. Szymczak

- 19:00 - poster D-23 **Self-Energy Effects in Manganite Tunneling**
Vladimir M. SVISTUNOV, Yurii F. Revenko, Mikhail A. Belogolovskii, Alexander Y. Gerasimenko, Yurii G. Pashkevich, Henryk Szymczak, Piotr Przyszlupski, Ivan Komissarov
- 19:00 - poster D-24 **Irreversible Modification of Structure and Low Field Magnetoresistance of $\text{La}_{0.65}\text{Ca}_{0.35}\text{MnO}_3$ Films on Ferroelectric Substrates**
Yurii V. Medvedev, Nikolai I. Mezin, Yurii M. Nikolaenko, Andriy E. Pigur, Natalya V. Shishkova, Vladymyr M. Ischuk, Iryna N. Chukanova
- 19:00 - poster D-25 **Pressure and magnetic field effects on transport properties of ceramic and film samples $(\text{La}_{0.7}\text{Ca}_{0.3})_{1-x}\text{Mn}_{1+x}\text{O}_3$**
Vladimir I. Mikhaylov, Vladimir P. Dyakonov, Valery A. Shtaba, Eduard E. Zubov, Alexey V. Pashchenko, Andrzej Szewczyk, Kazimir Piotrowski, Henryk Szymczak
- 19:00 - poster D-26 **Magnetic nonextensivity on CMR manganites**
Mario S. Reis, Vitor S. Amaral, J. P. Araújo, I. S. Oliveira
- 19:00 - poster D-27 **Regularities of elastically anisotropy deformed mechanism of T-H-P influence on the phase transition and properties change in magnetic semiconductors**
Piter I. Polyakov, Stanislav S. Kucherenko
- 19:00 - poster D-28 **Regularities of elastically anisotropy deformed mechanism of T-H-P influence on the phase transition and properties change in magnetic dielectrics**
Piter I. Polyakov, Stanislav S. Kucherenko
- 19:00 - poster D-29 **Non-equilibrium Kondo effect in a single-channel quantum dot asymmetrically coupled to two reservoirs**
R. Swirkowicz, J. Barnas, M. Wilczynski
- 19:00 - poster D-30 **2D freezing of magnetic nanoparticles in a perpendicular field**
Jean-Claude Levy, Abdelwahab Ghazali
- 19:00 - poster D-31 **Magnetoresistance Observation In Ferromagnet-Electroactive Polymer-Metal Junction**
Alexei N. Lachinov, Natalia V. Vorobjeva, Alexandr R. Doroshenko
- 19:00 - poster D-32 **Magnetoresistance of Ge-Si whiskers in the vicinity to metal - insulator transition**
Anatoly A. Druzhinin, Igor P. Ostrovskii, Natalya S. Liakh
- 19:00 - poster D-33 **(Cd,Hg)Te Defect Structure and its Magnetoresistive Properties, Modified by Pulse Laser Irradiation**
Bohdan Kotlyarchuk, Apollinariy O. Zaginey, Yuriy E. Syvenkyy, Maciej Oszwaldowski
- 19:00 - poster D-34 **Magnetoresistance of semimagnetic semiconductors**
Bahram M. Askerov, Tariyel H. Ismailov, Sofiya R. Figarova, Mehdi M. Mahmudov
- 19:00 - poster D-35 **Magnetic properties of low-doped $\text{Nd}_{1-x}\text{Ca}_x\text{MnO}_3$ manganites**
Vladimir A. Khomchenko, Igor Troyanchuk, Henryk Szymczak, Ritta Szymczak

Tuesday, September 16th

Morning session – Main Building, room 144

11:00 - 11:45
invited oral **Spectacular Effect of Doping upon Magnetism and Conductivity in Manganites**
Bernard RAVEAU

11:45 - 12:30
invited oral **Design Rules for Manganites with Novel Magnetic and Electronic Properties**
Bogdan Dabrowski

Lunch break –

Afternoon session – *Main Building, room 144*

14:00 - 14:45
invited oral **Orbital correlations and magnetic phase transitions in lightly doped manganites and cobaltites**
Igor Troyanchuk, V.A. Khomchenko, Henryk Szymczak, K. Barner

14:45 - 15:30
invited oral **Probing the phase separation in the doped manganites by the magnetic resonance methods**
Nikita V. Volkov, Guerman A. Petrakovskii, Klara A. Sablina

Coffee break – *Main Building, Main Hall (Duża aula)*

Afternoon session - continued – *Main Building, room 144*

15:50 - 16:35
invited oral **Long lenght scale interaction between magnetism and superconductivity in La_{0.3}Ca_{0.7} MnO₃/ YBa₂Cu₃O₇ superlattices**
Santamaria Jacobo, V Pena, Z. Sefrioui, D. Arias, C. Leon, M. Varela, S. J. Pennycook, J. L. Martinez

16:35 - 17:05
oral **Magnetoelastic properties of (La_{0.8}Ba_{0.2})_{0.93}MnO₃ single crystal.**
Yuriy Bukhantsev, Bohdan Kundys, S. Vasiliev, Yakov M. Mukovskii, A. Nabialek, R. Szymczak, Henryk Szymczak

17:05 - 17:35
oral **NMR study of (Sr,Ba,La)₂Fe_{1+x}Mo_{1-x}O₆ double perovskites**
Dariusz A. Zajac, Czesław Kapusta, Peter C. Riedi, Marcin Sikora, Colin J. Oates, Damian Rybicki, Jose M. De Teresa, Clara Marquina, Ricardo M. Ibarra

Thursday, September 18th

Morning session – *Main Building, room 144*

9:00 - 9:45
invited oral **Magnetoresistance and magnetic properties of the double perovskites**
Rudolf Gross, J.B. Philipp, P. Majewski, L. Alff, A. Erb, T. Graf, J. Simon, D.D. Sarma

9:45 - 10:30
invited oral **Growth of manganite single crystals and their properties**
Yakov M. Mukovskii

Coffee break – *Main Building, Main Hall (Duża aula)*

Morning session - continued – *Main Building, room 144*

11:00 - 11:45
invited oral **The Effect of Rich Cr Doping of Perovskite Manganites on the Mn-site. A neutron diffraction study**
Eleni Gamari-Seale

11:45 - 12:30
invited oral **Magnetic reversal and relaxation in La-Ca-Mn-O based exchange-biased multilayers**
Ioannis Panagiotopoulos, Nikolaos Moutis, Christos Christides

Lunch break –

Afternoon session – Main Building, room 144

14:00 - 14:45
invited oral **NMR in ferromagnetic manganites**
Pavel Novak, Michail M. Savosta

14:45 - 15:30
invited oral **Spontaneous Ferromagnetic Domains in CMR Manganites**
Grzegorz Jung

Coffee break – Main Building, Main Hall (Duża aula)

15:30 - 16:00
oral **An NMR study of $\text{Pr}_{0.5}\text{Ca}_{0.5}\text{Mn}_{0.97}\text{Ga}_{0.03}\text{O}_3$**
Colin J. Oates, Czesław Kapusta, Peter C. Riedi, Marcin Sikora, Dariusz A. Zajac, Damian Rybicki, Christine Martin, C. Yaicle, Antoine Maignan

Afternoon session - continued – Main Building, room 144

16:00 - 16:30
oral **Giant volume magnetostriction in manganites and its connection with colossal magnetoresistance**
Liudmila I. Koroleva, Roman V. Demin, Alexey V. Michurin, Anna I. Abramovich

Friday, September 19th

Morning session – Main Building, room 144

9:00 - 9:45
invited oral **Tailoring magnetic anisotropy in doped LaMnO_3 thin films**
Hanns-Ulrich Habermeier, Zhihong Wang, Georg Cristiani

9:45 - 10:30
invited oral **Giant magnetoresistivity in single crystals of rare earth layered cobaltites**
Sergei N. Barilo, Sergei V. Shiryayev, Georgii L. Bychkov, Denis V. Sheptyakov, Zhixian Zhou, Scott Alexander, Jack E. Crow, Andrew Podlesnyak, Peter Al-lenspach, Albert Furrer

Coffee break – Main Building, Main Hall (Duża aula)

Morning session - continued – Main Building, room 144

11:00 - 11:45
invited oral **Oxides for spintronics**
Manuel Bibes, Vincent Garcia, Martin Bowen, Pierre Seneor, Manuel Munoz, Agnes Barthélémy, Karim Bouzehouane, Stéphane Fusil, Vincent Cros, Julian Carrey, Michael Besse, Annie Vaures, Jean-Pierre Contour, Albert Fert

11:45 - 12:30
invited oral **Specific heat studies of magnetic and structural phase transitions in $\text{La}_{1-x}\text{Sr}_x\text{MnO}_3$ compositions**
Andrzej Szewczyk

Lunch break –

Afternoon session – Main Building, room 144

14:00 - 14:30
oral **Local Probe Studies of high-Tc Superconductors and CMR Oxides Using Radioactives Isotopes**
V. S. Amaral, J. P. Araujo, A.M.L. Lopes, E. Rita, J. G. Correia, U. Wahl, P. B. Tavares, ISOLDE Collaboration

14:30 - 15:00
oral **Charge-ordering and magnetoelastic coupling effects on the magnetocaloric properties of manganites**
Vitor S. Amaral, Mario S. Reis, A. M. Gomes, J. P. Araújo, P. B. Tavares, J. S. Amaral, I. S. Oliveira

Symposium E

SYMPOSIUM - MATERIALS FOR MEDICAL APPLICATIONS

Monday, September 15th

Opening address – *Main Building, room 206*

Afternoon session - - Joost D. de Bruijn, Malgorzata Lewandowska-Szumiel- *Main Building, room 206*

- | | |
|-------------------------------|--|
| 14:00 - 14:30
invited oral | Biomimetic hydrogels for tissue reconstruction
<u>Luigi Ambrosio</u> , Paolo A. Netti |
| 14:35 - 15:05
invited oral | Physical & Mechanical Properties of Tissue Engineering Scaffolds & Constructs
<u>Alma U. Daniels</u> , Dieter Wirz, Martin Stolz, Matteo Moretti, Ivan Martin, Ueli Aebi |
| 15:10 - 15:25
oral | Tissue engineering for reconstructive orthopedic surgery - challenges and perspectives
<u>Grzegorz T. Benke</u> , Andrzej Górecki |

Coffee break – *Main Building, Main Hall (Duża aula)*

Afternoon session - continued - - Luigi Ambrosio, Mikhail I. Shtilman- *Main Building, room 206*

- | | |
|-------------------------------|--|
| 15:50 - 16:20
invited oral | Biodegradable polyester nano- and microspheres by dispersion polymerization and macromolecular self-assembly
<u>Stanislaw Slomkowski</u> , Stanislaw Sosnowski, Mariusz Gadzinowski, Izabela Radomska-Galant |
| 16:25 - 16:40
oral | Poly(styrene/alpha-tert-butoxy-omega-vinylbenzylpolyglycidol) microspheres for immunodiagnostics. Principle of a novel latex test based on combined electrophoretic mobility and particle aggregation measurements
<u>Teresa M. Basinska</u> , Stanislaw Slomkowski, Izabela Radomska-Galant |
| 16:45 - 17:00
oral | In-vitro test and mathematical modelling on the controlled-release behavior of indomethacin from PLA-PEO nanospheres
<u>Yun-Suk Jo</u> , Min-Cheol Kim, Do-Kyung Kim, Charn-Jung Kim, Young-Keun Jeong, Kyung-Ja Kim, Mamoun Muhammed |
| 17:05 - 17:20
oral | Novel Biodegradable and Biocompatible Polymers for Anti-cancer Drug Delivery Systems
<u>Zbigniew Jedliński</u> |

Poster session – *Main Building, Main Hall (Duża aula)*

- 19:00 - poster E-1 **Hard Tissue Compatibility of Titanium Phosphide Layers Obtained by Diffusion in Ti-HA Interface**
Cheol Sang Kim, Ki Eun Hwang, Sung Joo Heo
- 19:00 - poster E-2 **In vitro reaction of human fibroblasts with gold - and L-aspartic acid - functionalized superparamagnetic iron oxide nanoparticles.**
Maria Mikhaylova, Yun-Suk Jo, Do Kyung Kim, Catherine Berry, Adam Curtis, Mamoun Muhammed
- 19:00 - poster E-3 **Model of Regeneration Processes Prognosis at Application of Natural Bioimplants**
Lyudmila I. Donchenko
- 19:00 - poster E-4 **An in vitro study of polymer based composites**
Bożena D. Konieczna, Marta Blazewicz, Barbara Czajkowska
- 19:00 - poster E-5 **Influence of Bioimplants on Immune Response**
Natalya V. Shishkova, Lyudmila I. Donchenko, Sergey A. Tkachenko
- 19:00 - poster E-6 **The influence of heat treatment temperature on bioactivity of TiO₂ sol-gel coatings**
Bożena Pietrzyk, Leszek Klimek
- 19:00 - poster E-7 **Corrosion resistance investigations of prosthetic dental alloys coated by TiN**
Dorota Ryłska, Jerzy Sokołowski, Leszek Klimek
- 19:00 - poster E-8 **Nanocrystalline diamond (NCD) - a new and promising material for medical applications**
Bogdan Walkowiak, Wiesława Okroj, Iwona Przybyszewska, Marta Pirek, Witold Szymański, Paweł Koseda, Witold Jakubowski
- 19:00 - poster E-9 **Nanocrystalline Diamond Coatings - antyallergic barrier onto medical implants**
Katarzyna Bąkowicz, Beata Kręcis, Marta Kieć-Świerczyńska, Piotr Niedzielski
- 19:00 - poster E-10 **Effects of Chemical Composition of Titanium Material Surface on SAMs Formation by Functional Groups of Alkanethiol and Alkanesilanes**
Cheol Sang Kim, Kyung Shin, Bock Choon Pak
- 19:00 - poster E-11 **CPC Precipitation Behavior of Titanium Phosphide Surfaces Obtained from Heat Treated Ti6Al4V buried in Hydroxyapatite Paste**
Cheol Sang Kim, Kyung Yi Shin, Ki Eun Hwang, Min Young Jung
- 19:00 - poster E-12 **Calcium phosphate structure controlled by organic matrix (multilayer film)**
B. Jachimska, C. Gergely, J.C. Voegel, F.J.G. Cuisinier
- 19:00 - poster E-13 **Extra cellular matrix used in-vitro model system for hydroxyapatite formation**
Emilia V. Pecheva, Liliana Pramatarova, Manfred F. Maitz, Mihn T. Pham, Alexey Kondyurin
- 19:00 - poster E-14 **Growth of hydroxyapatite layers on modified by ion beam patterned solid surfaces for studying the biomineralization**
Emilia V. Pecheva, Liliana Pramatarova, Manfred F. Maitz, Mihn T. Pham, Alexey Kondyurin
- 19:00 - poster E-15 **Immobilization of analgetic AV-101 into calcium alginate gels**
Rinat M. Iskakov, Valentina K. Yu, Dmitry Y. Boldyrev, Y Y. Fomicheva, Erkeshe O. Batyrbekov, Kaldybai J. Praliev, Bulat A. Zhubanov, D K. Berlin

- 19:00 - poster E-16 **Modification of Acetylsalicylic Acid by Oligomers of 3-Hydroxybutyric Acid**
Maria Juzwa
- 19:00 - poster E-17 **Uniform aminosiloxane films for immobilization of biomolecules: a sol-gel approach**
Kristjan Saal, Tanel Tätte, Indrek Tulp, Ilmar Kink, Rünno Lohmus, Uno Mäeorg, Ago Rinken, Ants Lohmus
- 19:00 - poster E-18 **Polymeric complexes of sorbic acid.**
Olga V. Suprun, Mikhail M. Lotter, Mikhail I. Shtilman, Aristidis M. Tsatsakis
- 19:00 - poster E-19 **Porous epoxycontaining hydrogels.**
Alexandr A. Artyukhov, Vasiliy S. Kozlov, Mikhail V. Khazanchuk, Ilya A. Fadushin, Aristidis M. Tsatsakis, Mikhail I. Shtilman
- 19:00 - poster E-20 **Water-soluble metal complexes based on derivatives of poly-N-vinylpyrrolidone**
Maria V. Klyagina, Denis A. Lovyagin, Dmitriy A. Lovyagin
- 19:00 - poster E-21 **Oxidation and degradation of polyethylene in hip implants**
Janusz S. Otfinowski, Joanna Kowal, Barbara Czajkowska, Anna Więcek
- 19:00 - poster E-22 **Life time of polimeric composite implants on the basis creep and fatigue tests**
Jan Chłopek, Grzegorz Kmita, Patrycja Rosół
- 19:00 - poster E-23 **Surface Characterizatiom of the Radiation Processed Polymer Materials for Medical Uses**
Vasile Cornelia, Mihaela C. Pascu, Bogdan S. Munteanu, Loredana E. Nita, Anca Cojocariu
- 19:00 - poster E-24 **Type of radicals formed in select siloxanurethane polymers under irradiation method of sterilization.**
Izabella Legocka, Monika Celuch, Jarosław Sadło, Janusz Kozakiewicz
- 19:00 - poster E-25 **Elaboration and characterization of biodegradable scaffolds from poly(L-lactide-co-glycolide) copolymer synthesized with low-toxic zirconium acetate.**
Elzbieta Pamula, Marta Blazewicz, Barbara Czajkowska, Piotr Dobrzynski, Maciej Bero, Janusz Kasperczyk
- 19:00 - poster E-26 **Comparison of properties of porous alumina as a potential cell carrier formed by foaming and polymeric sponge methods**
Zbigniew Jaegermann, Joanna Karaś, Sławomir Michałowski
- 19:00 - poster E-27 **Structural-strength aspects of glass/metallic composite based on Co-Cr-Mo implantation alloy**
Zbigniew Oksiuta, Krzysztof Kurzydłowski, Jan R. Dąbrowski
- 19:00 - poster E-28 **Glass-ionomeric materials for otologic surgery**
Joanna Karaś, Tadeusz Floriańczyk, Lidia Ciołek, Zbigniew Jaegermann
- 19:00 - poster E-29 **Microstructure of the ceramic - polymer composites for dental applications**
Joanna Siejka, Małgorzata Lewandowska, Krzysztof Kurzydłowski
- 19:00 - poster E-30 **The influence of quality of dental alloys used for cast prosthetic completions on their corrosion resistance.**
Sokołowski Jerzy, Ryłska Dorota, Klimek Leszek

- 19:00 - poster E-31 **Characterization of nanostructured hydroxyapatite ceramics densified at high-pressure and temperature**
Jianmin Shi, Bogdan F. Palosz, Stanisław Gierlotka, Arndt Klocke, Ulrich Bismayer
- 19:00 - poster E-32 **Bioglasses as fillers of bone defects**
 Lucyna Zamorska, Maria Laczka, Katarzyna Cholewa-Kowalska
- 19:00 - poster E-33 **Analysis of the mechanical properties in polymeric composite materials with short leather fibers**
Józef Wójcik, Miriam Sánchez Pozos, Flavio S. Vázquez Moreno

Tuesday, September 16th

Morning session - - Luigi Ambrosio, Alma U. Daniels- *Main Building, room 206*

- 11:00 - 11:30 invited oral **Hybrid technology as a basis for bone- and cartilage tissue engineering**
Clemens van Blitterswijk
- 11:30 - 12:00 invited oral **Synthetic osteoinductive biphasic calcium phosphates as scaffolds for bone tissue engineering**
Joost D. de Bruijn, Mirella van den Doel, Clemens van Blitterswijk, Klaas de Groot, Huipin Yuan
- 12:05 - 12:15 oral **Differentiation of cells from adipose tissue into osteoblasts in the presence of biomaterials in vitro (preliminary report)**
Radosław Olkowski, Edyta Sienkiewicz-Łatka, Malgorzata Lewandowska-Szumiel, Wojciech Lisik, Maciej Kosieradzki, Zbigniew Wierzbicki
- 12:15 - 12:25 oral **Omentum major as potential source of osteogenic cells for tissue engineering (preliminary report)**
Pawel Kowalczyk, Malgorzata Lewandowska-Szumiel, Wojciech Lisik, Maciej Kosieradzki, Maciej Siński, Zbigniew Wierzbicki, Jacek Przybylski

Lunch break –

Afternoon session - - Joost D. de Bruijn, Stanislaw Slomkowski- *Main Building, room 206*

- 14:00 - 14:25 invited oral **Amphiphilic polymers of N-vinylpyrrolidone. Behavior in water solutions. Liposome modification.**
Mikhail I. Shtilman, Andrei N. Kuskov, Vitaliy V. Nutskov, Aristidis M. Tsatsakis, Vladimir P. Torchilin
- 14:30 - 14:45 oral **Do PMMA Bone Cements Differ in Long-Term Stability?**
Alma U. Daniels, Gladius Lewis, Dieter Wirz, E. W. Morscher
- 14:50 - 15:05 oral **Dynamic mechanical behaviour of plain and gentamicin loaded bone cements**
Roberto De Santis, Francesco Mollica, Dante Ronca, Luigi Ambrosio, Luigi Nicolais
- 15:10 - 15:25 oral **Effect of polysiloxaneurethaneurea elastomer structure on free radical formation in sterilisation by E-beam/gamma irradiation**
Janusz Kozakiewicz, Izabella Legocka, Jarosław Sadło, Magda Brzozowska, Monika Celuch, Jarosław Przybylski

Coffee break – *Main Building, Main Hall (Duża aula)*

Afternoon session - continued - - Clemens van Blitterswijk, Ralf-Peter Franke- *Main Building, room 206*

15:50 - 16:15 invited oral	Alternative methods bring a new input in biocompatibility testing <u>Malgorzata Lewandowska-Szumiel</u> , Krzysztof Sikorski, Andrzej Szummer, Janusz Komender
16:20 - 16:35 oral	Biocompatibility study of nitrided titanium alloy for bone implantation by laser flow cytometry, laser scanning cytometry and confocal microscopy Elzbieta Czarnowska, <u>Agnieszka Sowinska</u> , Bożena Cukrowska, Michał Godlewski, Tadeusz Wierzchoń
16:40 - 16:55 oral	Cytokine secretion during in vitro cellular interaction with titanium alloy and nitrided surface layer produced under glow discharge conditions <u>Bożena M. Cukrowska</u> , Agnieszka Sowinska, Elzbieta Czarnowska, Tadeusz Wierzchoń
17:00 - 17:15 oral	Influence of surface roughness of flat TiAl6V4 discs on cell differentiation in vitro and on tissue integration in vivo <u>Ralf-Peter Franke</u>
17:20 - 17:35 oral	Bioactivity of Carbon Particles Stanisław Mitura, <u>Katarzyna Bąkowicz</u>
17:40 - 17:55 oral	Microacoustical NDE of pyrocarbon materials for cardiovascular prosthetic application <u>Yulia S. Petronyuk</u> , Vladimir N. Zygan

Wednesday, September 17th

Morning session – *Main Building, room 206*

Lunch break –

Afternoon session - - Alma U. Daniels, Malgorzata Lewandowska-Szumiel- *Main Building, room 206*

14:00 - 14:25 invited oral	Biocompatibility of metallic implants for reconstructive surgery; choice of material, design, processing, clinical application <u>Ralf-Peter Franke</u>
14:30 - 14:45 oral	Study on the biocompatibility of c.p. titanium surgical clips <u>CATALIN POPA</u> , DINDELEGAN GEORGE, CANDEA VIOREL
14:50 - 15:05 oral	Thin layers of TiN fabricated on metallic titanium and polyurethane by pulsed laser deposition <u>Bogusław Major</u> , Reinhold Ebner, Tadeusz Wierzchoń, Waldemar Mroz, Wolfgang Waldhauser, Roman Major, Michał Wozniak
15:10 - 15:25 oral	TiNi-based shape memory alloys for medical application <u>V. G. Pushin</u> , Ruslan Valiev

Coffee break – *Main Building, Main Hall (Duża aula)*

Afternoon session - continued - - **Ralf-Peter Franke, Maria Laczka**- *Main Building, room 206*

15:50 - 16:20 invited oral	New generation of bioactive, ceramic materials <u>Maria Laczka</u>
16:25 - 16:40 oral	Morphological and structural study of silica based implants in bone P N. De Aza, <u>Zofia B. Luklinska</u>

16:45 - 17:00
oral

Non-elastic behaviours of high-porosity ceramics and ceramic-polymer composites

Yuriy M. Podrezov, S O. Firstov, M Szafran, Krzysztof Kurzydłowski

17:05 - 17:20
oral

New hydroxyapatite based nanomaterials for potential use in medical fields

Roxana M. Piticescu, Gabrielle C. Chitanu, Madalina L. Popescu, Witold Lojkowski, Agnieszka Opalińska, Tomasz Strachowski

17:25 - 17:40
oral

Porous hydroxyapatite, tricalcium phosphate and polylactide as reconstructive material in treatment of maxillar's hemangioma-case report

Lukasz Wysienki, Andrzej Kukwa, Anna Slosarczyk, Krzysztof Włodarski

Poster session – *Main Building, Main Hall (Duża aula)*

Symposium F

NANOMATERIALS FOR OPTOELECTRONICS AND FUNCTIONAL NANOMATERIAIALS

Monday, September 15th

Opening address – *Main Building, Small Hall (Mała aula)*

Afternoon session – *Main Building, Small Hall (Mała aula)*

- | | |
|-------------------------------|---|
| 14:00 - 14:30
invited oral | 2D and 3D-photonic crystals fabricated in silver-doped glasses
<u>Yuri S. Kaganovskii</u> |
| 14:30 - 15:00
invited oral | Photonic Crystals
<u>Daniel C. Meisel</u> , Markus Deubel, Martin Hermatschweiler, Kurt Busch, Wolfpeter Koch, Georg von Freymann, Alvaro Blanco, Christian Enkrich, Martin Wegener |
| 15:00 - 15:30
invited oral | Nanomagnetism: Surfaces, Interfaces and Finite Size
<u>Branko Stahl</u> |

Coffee break – *Main Building, Main Hall (Duża aula)*

Afternoon session - continued – *Main Building, Small Hall (Mała aula)*

- | | |
|-------------------------------|---|
| 15:50 - 16:20
invited oral | Nano-scale surface interactions Studied by TEM-SPM
<u>Rynno Lohmus</u> , Donats Erts, Ants Lohmus, Hakan Olin, Ilmar Kink, Justin D. Holmes |
| 16:20 - 16:50
invited oral | Semiconducting nanowires: properties and architectures
<u>Donats Erts</u> , Boris Polyakov, Edgars Saks, Hakan Olin, Justin D. Holmes |
| 16:50 - 17:20
invited oral | Science of Functionalized Nanoparticles
<u>Horst Hahn</u> |

Poster session – *Main Building, Main Hall (Duża aula)*

- | | |
|-----------------------|--|
| 19:00 -
poster F-1 | Luminescence properties of a multi-component glass co-implanted with Si and Er
Francesco Enrichi, Giovanni Mattei, Cinzia Sada, <u>Elisabetta Borsella</u> , Domenico Pacifici, Giorgia Franzo, Francesco Priolo, Fabio Iacona, Michel Prassas |
| 19:00 -
poster F-2 | Structure and electric properties of nanocrystalline CdS-CdSe films sputtered on substrates with silver sublayer
<u>Alexander K. Fedotov</u> , Anis Saad, Alexander V. Mazanik, Oleg Stukalov, Alexander V. Petrov, Ditmar Fink, Tadeush Figielski |

- 19:00 - poster F-3 **Nanocrystals of CdTe and CdMnTe: Growth, Optical and Magneto-optical Properties**
Andriy Savchuk, Oleg Panchuk, Petro Feichuk, Maksym Kovalenko, Igor Stolyarchuk, Volodymyr Fediv
- 19:00 - poster F-4 **Formation and optical properties of CuInSe₂ and CuInTe₂ nanocrystals in silicate glass**
Valerij S. GURIN, Ivan V. Bodnar, Alexandra P. Molochko, Nina P. Solovei
- 19:00 - poster F-5 **Formation of Luminescent Rare Earth Fluoride Nanoparticles in Silicate Matrices**
 Heike Kaetker, Ulrich H. Kynast, Marina M. Lezhnina
- 19:00 - poster F-6 **Circular polarization photoluminescence of the defects in SiO₂**
Natalia N. Vandysheva, Evgeny N. Vandyshev, Konstantin S. Zhuravlev, Vladimir S. Aliev
- 19:00 - poster F-7 **Zinc oxide nanopowders obtained by the microwave-hydrothermal route**
Tomasz STRACHOWSKI, Ewa Grzanka, Adam Presz, Edward Reszke, Ludomir SLUSARSKI, Witold Lojkowski
- 19:00 - poster F-8 **Microwave driven hydrothermal synthesis of Pr-doped zirconia nanopowders**
Agnieszka Opalińska, Ewa Grzanka, Adam Presz, Cristina Leonelli, Witold Lojkowski
- 19:00 - poster F-9 **Microwave driven hydrothermal synthesis of iron oxide - the effect of process parameter on the properties of the nanopowders**
Robert Fedyk, Martin Arnault, Witold Lojkowski
- 19:00 - poster F-10 **Powder precursors for nanoceramics: cleaning and compaction**
Grzegorz Kalisz, Anna Swiderska-Sroda, Stanisław Gierlotka, Ewa Grzanka, Bogdan F. Palosz, Svetlana Stelmakh
- 19:00 - poster F-11 **Studies on preparation and characterisation of the carbon nanoforms**
Ryszard J. Kalenczuk, Ewa Borowiak - Paleń
- 19:00 - poster F-12 **Fabrication of Lu-based nanocrystalline phosphors**
Eugeniusz Zych, Joanna Trojan-Piegza
- 19:00 - poster F-13 **The influence of colloidal silica structure on the ceramic moulds properties**
Aleksander Karwiński, Adamczyk Zbigniew, Jachimska Barbara
- 19:00 - poster F-14 **Influence of the physicochemical factors on the nanostructure of colloidal silicate arrangement**
Andrzej B. Baliński
- 19:00 - poster F-15 **Growth and investigation of oxide heterostructures containing half-metallic Fe₃O₄**
Bonifacas Vengalis, Lisauskas Vaclovas, Kristina Sliuziene, Vytautas Petrauskas, Sebastiaan Van Dijken, Mazhar Bari, M Venkatesan, Michael Coey
- 19:00 - poster F-16 **Ceramic composites of the Al₂O₃-ZrO₂ type obtained by the Direct Coagulation Casting Method**
Anita Tomaszewska-Grzęda, Mikolaj Szafran
- 19:00 - poster F-17 **Correlation between high-pressure ZrO₂ electrical properties and crystallite size**
Anna N. Trefilova, Ilia V. Korionov, Alexey N. Babushkin, Witold Lojkowski, Agnieszka Opalińska

- 19:00 - poster F-18 **Phase transitions in multicomponent chalcogenides of silver at high pressure by a method of impedance spectroscopy**
Olga L. Kobeleva, Alexey N. Babushkin, Sergey N. Shkerin, Natalia R. Tatarnovich, Yulia A. Lis'ih
- 19:00 - poster F-19 **Relaxation processes in ZrO₂ at high pressures**
Ilia V. Korionov, Anna N. Trefilova, Alexey N. Babushkin, Witold Lojkowski, Agnieszka Opalińska
- 19:00 - poster F-20 **Transport phenomena in ammonium halides under high pressures**
Galina V. Tikhomirova, Alexey N. Babushkin
- 19:00 - poster F-21 **Effect of the DAC treatment on the nanomaterials of type Si-O**
Natalya B. Efros, Boris M. Efros, Natalya V. Shishkova, Andrzej Misiuk
- 19:00 - poster F-22 **Electrical properties in C₃N₄ under high pressure**
A. N. Babushkin, O. L. Kobeleva, V. N. Khabashesku, E. N. Yakovlev, V. V. Milyavskiy
- 19:00 - poster F-23 **Automated setup for ultrahigh pressure treatment of materials**
Vladimir V. Shchennikov, Andrey Y. Derevskov, Svetlana V. Popova, Sergey V. Ovsyannikov, Vladimir I. Osotov
- 19:00 - poster F-24 **The Sock-wave Model of the Effect of Superdeep Penetration of Powder Particles into Metallic Materials**
Alexey E. Kheifets, Vitaliy I. Zel'dovich, Nataliya Y. Frolova, Irina V. Khomskaya
- 19:00 - poster F-25 **Propagation and Interaction of Dodecahedral Converging Shock Waves in Steel Balls**
Alexey E. Kheifets, Vitaliy I. Zel'dovich, Irina V. Khomskaya, Nataliya Y. Frolova, Boris V. Litvinov, Nikolay P. Purygin, Vladimir I. Buzanov
- 19:00 - poster F-26 **Hugoniot of C₆₀ fullerite and sound velocity in shock-compressed fullerite**
Vladimir V. Milyavskiy, Andrey Z. Zhuk, Aleksander V. Utkin, Eugene B. Zaretsky
- 19:00 - poster F-27 **Molecular adsorption on GaAs studied by HREELS**
Ana Maria Botelho do Rego, Ana Maria Ferraria, Manuel Rei Vilar, Jamila Elbeghdadi, Ron Naaman
- 19:00 - poster F-28 **Growth of InAs quantum dots on a low lattice-mismatched AlGaSb layer prepared on GaAs (001) substrates**
Naokatsu Yamamoto, Kouichi Akahane, Shinichiro Gozu, Naoki Ohtani
- 19:00 - poster F-29 **Thermoelectric power of Czochralski silicon containing electrically active oxygen nanoclusters**
Andrzej Misiuk, Vladimir V. Shchennikov, S. V. Popova, S. N. Shamin, A. V. Galakhov, V. P. Galakhov, Sergey V. Ovsyannikov
- 19:00 - poster F-30 **Decoherence and Relaxation of the Exciton in Quantum Dots**
Andrzej Janutka, Yuriy Krasnyj, Paweł Machnikowski, Andrzej Radosz, Lucjan Jacek
- 19:00 - poster F-31 **Thermally enhanced lateral carrier transfer characteristics in InAs/GaAs quantum dot heterosystem**
Hui-Tang Shen, Jen-Cheng Wang, Yung-Hsiang Lin, Chao-Ching Cheng, Ray-Ming Lin, Tzer-En Nee, Nien-Tze Yeh
- 19:00 - poster F-32 **New type of paramagnetic silver clusters in sodalite: Ag₈ⁿ⁺**
Jaroslav Sadlo, Jacek Michalik, Hirohisa Yamada, Yuichi Michiue

- 19:00 -
poster F-33 **Studies of multiwall carbon nanotubes using Raman spectroscopy and AFM**
M. Zdrojek, W. Gebicki, C. Jastrzebski, T. Melin, A. Huczko
- 19:00 -
poster F-34 **Arc plasma synthesis of carbon encapsulates containing Fe-Nd-B nanocrystallites**
Michał Bystrzejewski, Andrzej Huczko, Hubert Lange, Jan Kozubowski, Michał Woźniak, Marcin Leonowicz, Waldemar Kaszuwara
- 19:00 -
poster F-35 **Microstructural characterisation of RF sputtered ZnO thin films on SiC**
Adrian Trinchi, Wojtek Wlodarski, Sandro Santucci, Maurizio Passacantando, Carlo Cantalini, Giorgio Sberveglieri
- 19:00 -
poster F-36 **Structural and catalytic properties thin films CuO_x-CeO_{2-x} deposited by means of laser ablation**
Agnieszka Kopia, Magdalena Chmielowska, Christine Leroux, Sebastian Saizek, Jan Kusiński, Jean Raymond Gavarri
- 19:00 -
poster F-37 **Investigation of the silica sol-gel thin films containing Mn, Pd and Pt.**
Alexey E. Muravyev, Sofia S. Mikhailova
- 19:00 -
poster F-38 **Peculiarities of formation and growth of thin polymer plasma-deposited films**
Alevtina M. Lyakhovitch, Anna M. Dorfman, Maxim A. Shirobokov
- 19:00 -
poster F-39 **Silicon nitride on a thin amorphous silicon as a mask for chemical and thermal treatments**
Valentina A. Yakovtseva, Vitaly P. Bondarenko, Marko Balucani, Aldo Ferrari
- 19:00 -
poster F-40 **Properties of nanostructured carbonaceous films containing Ni nanocrystals**
Elzbieta Czerwosz, Piotr Dłuzewski, Tarun Sharda, Halina Wronka, Mirosław Kozłowski
- 19:00 -
poster F-41 **Ion implanted nanolayers in AlN for direct bonding with copper**
Jerzy Piekoszewski, Wiesława Olesińska, Jacek Jagielski, Dariusz Kaliński, Marcin Chmielewski, Zbigniew Werner, Marek Barlak
- 19:00 -
poster F-42 **Nanostructured layers in high temperature-pressure treated silicon implanted with helium**
Barbara Surma, Andrzej Misiuk, Vito Raineri, Artur Wnuk, M. Prujarczyk, Andrzej Bukowski
- 19:00 -
poster F-43 **Modeling of photoresistors based on semiconductor multilayer variable-GAP structures**
Bogdan S. Sokolovskii
- 19:00 -
poster F-44 **Ab initio calculations of copper nanostructures on oxide substrates**
Oleg Sychev, Yuri F. Zhukovskii, Eugene A. Kotomin, Gunnar Borstel
- 19:00 -
poster F-45 **Sputter-deposited tungsten carbide**
Pavo Dubcek, Nikola Radic, Sigrid Bernstorff, Kreso Salamon, Ognjen Milat
- 19:00 -
poster F-46 **Fabrication of 3D Hierarchical Structures**
Muhammet S. Toprak, Maria Mikhaylova, Yun-Suk Jo, Do Kyung Kim, Mamoun Muhammed
- 19:00 -
poster F-47 **Fabrication of GaSb microlenses by photo and e-beam lithography and dry etching**
Ewa Papis, Anna Piotrowska, Eliana Kaminska, Tadeusz T. Piotrowski, Krystyna Golaszewska, Jacek Ratajczak, Jerzy Katcki, Jerzy Wrobel

- 19:00 - poster F-48 **Nanolevel Structuring - Design of Novel Functional Highly-Organized Solids and Materials**
Vladimir Smirnov, Olga Osmolowskaia
- 19:00 - poster F-49 **Size effects in dynamics of dipolar planar nanosystems**
Henryk Puzzkarski, Jean-Claude S. Levy, Maciej Krawczyk
- 19:00 - poster F-50 **Temperature dependence of microwave resonance absorption studies of α -iron and iron carbide nanoparticle agglomerates in a diamagnetic matrix**
Grzegorz Gąsiorek, Nikos Guskos, Janusz Typek, Tomasz Bodziony, Urszula Narkiewicz, Walerian Arabczyk, W Konicki, A E. Anagnostakis
- 19:00 - poster F-51 **The effect of milling mode on the hydriding properties of nanocrystalline Mg_2Ni intermetallic**
JERZY BYSTRZYCKI, TOMASZ CZUJKO, Robert Varin, JAROSŁAW MIZERA
- 19:00 - poster F-52 **Polymeric nanocomposites of complex ferrite**
Dokyung Kim, Muhammet S. Toprak, Maria Mikhaylova, Yun-Suk Jo, Thomas Tsakalakos, Mamoun Muhammed
- 19:00 - poster F-53 **New Composite: Cyanine Dye/Polymer For Stable Holographic Recording**
Yaroslav I. Vertsimakha, Anatoly B. Verbitsky, Alexander A. Ishchenko, Sergey L. Studzinskii, Oksana P. Budnyk, Ruslan A. Lymarenko, Alla V. Savchuk
- 19:00 - poster F-54 **Studies of Polymer-dye Structures and Polymer-dye / V2O5 xerogel Heterostructures Photosensitive in Wide Spectral Region**
Yaroslav I. Vertsimakha, Anatoly B. Verbitsky, Alexander S. Kutsenko, Alexander A. Ishchenko, Natalia A. Berezina, Vladimir G. Syromyatnikov
- 19:00 - poster F-55 **Nanocrystalline iron-carbon fillers for polymers**
Urszula Narkiewicz, Walerian Arabczyk, Tomasz Bodziony, Jan Subocz, Jerzy Majszczyk
- 19:00 - poster F-56 **Growth of CdS - PbS nanostructured double films on silicon substrate by SILAR techniques**
Judita Puiso, Seppo Lindroos, Sigita Tamulevicius, Markku Leskela, Ginutis Balcaitis, Asta Guobiene
- 19:00 - poster F-57 **Preparation and electrical properties of modified polyimide films with fullerene contents**
Arlen I. Valozhyn, Jan Subocz, Pavel Berczynsky
- 19:00 - poster F-58 **The immiscible polymer blends thin layer formation by sorption from organic solutions**
Igoris Prosycevas, Sigita Tamulevicius, Asta Guobiene, Judita Puiso
- 19:00 - poster F-59 **Catalytic properties of metal cluster-containing polymers**
Anatolii D. Pomogailo, Svetlana I. Pomogailo, Gulzhian I. Dzhardimalieva
- 19:00 - poster F-60 **Multiple scattering use for varying the luminescence spectra of the luminophors**
Vasil P. Yashchuk, Eugen O. Tikhonov, Olga A. Prygodjuk, V I. Bezrodny, Yuri D. Filatov
- 19:00 - poster F-61 **A novel thermosensitive composite fabricated with Au nanoparticles, polylactide, and poly(N-isopropylacrylamide)**
Yun-Suk Jo, Do-Kyung Kim, Muhammet S. Toprak, Maria Mikhaylova, Mamoun Muhammed

19:00 - **Properties of TiO₂ films prepared by spray pyrolysis method**
 poster F-62 Ilona Oja, Arvo Mere, Malle Krunks, Claus-Henning Solterbeck, Mohammed Es-Souni

Tuesday, September 16th

Morning session – Main Building, Small Hall (Mała aula)

11:00 - 11:30 **Semiconductor nanostructures for infrared applications**
 invited oral NERIJA ZURAUSKIENE, Steponas Asmontas, Adolfas Dargys, Jurgis Kundrotas, Griet Janssen, Etienne Goovaerts, Saulius Marcinkevicius, Paul M. Koenraad, Joachim H. Wolter, Rosa Leon

11:30 - 11:45 **Intersublevel Relaxation Dependence of Carrier Hopping in self-organized InAs Quantum Dot Heterostructures**
 oral Hui-Tang Shen, Ya-Fen Wu, Yung-Hsiang Lin, Chao-Ching Cheng, Ray-Ming Lin, Tzer-En Nee, Nien-Tze Yeh

11:45 - 12:00 **Microstructure and Electrical Properties of Doped ZnO Varistor Nanomaterials**
 oral Xueya Kang, Tu MinJing, Zhang Ming

12:00 - 12:30 **Luminescence mechanisms: from single crystals to nanocrystals**
 invited oral Larisa Grigorjeva, Donats Millers

Lunch break –

Afternoon session – Main Building, Small Hall (Mała aula)

14:00 - 14:30 **Si nanocrystals and erbium co-doped glasses for optical amplifiers**
 invited oral Elisabetta Borsella

14:30 - 14:45 **Synthesis and optical properties of nanocrystalline yttrium aluminium garnet doped with RE-ions**
 oral Wieslaw Strek, Dariusz Hreniak, Piotr Mazur, Witold Lojkowski, Stanisław Gierlotka

14:45 - 15:00 **Luminescence behaviour BaTiO₃ nanocrystallites doped with RE-ions prepared by the sol-gel method**
 oral Dariusz Hreniak, Wieslaw Strek, Robert Pązik, Georges Boulon

15:00 - 15:15 **Grains of porous silicon embedded in SiO₂: Studies of optical gain and electroluminescence**
 oral Katerina Luterova, Jan Valenta, Josef Bursik, Vojtech Kresalek, Bernd Honerlage, Ivan Pelant, Katerina Dohnalova

15:15 - 15:30 **Luminescence of ZrO₂ and ZnO nanocrystals**
 oral Donats Millers, Larisa Grigorjeva, Witold Lojkowski, Agnieszka Opalińska, Tomasz Strachowski

Coffee break – Main Building, Main Hall (Duża aula)

Afternoon session - continued – Main Building, Small Hall (Mała aula)

15:50 - 16:05 **SiC nanocrystals embedded in polymer matrix : a new electro-optical nanocomposite**
 oral Johann Bouclé, Abdelhadi Kassiba, Nathalie Herlin-Boime, Ivan V. Kityk

16:05 - 16:20 **Luminescent nano-sized ZnS and ZnO particles**
 oral Michael Bredol, Holger Althues

16:20 - 16:50 invited oral	Recent developments in the synthesis of iron-based nanostructures by laser pyrolysis: integrating structural analysis with experimental method <u>Rodica Alexandrescu</u> , Ion Morjan, Florian Dumitrache, Ion Voicu, Iulia Soare, Ion Sandu
16:50 - 17:05 oral	Practical Synthesis of Disubstituted 2,7- Fluorenes, Conjugated Nanomaterials for Electronic and Optoelectronic <u>Joanna Cabaj</u> , Jadwiga, Maria Sołoducho
17:05 - 17:20 oral	Structure of alumina and zirconia nanoparticles synthesized by the Karlsruhe Microwave Plasma Process <u>Sabine Schlabach</u> , Vinga Szabó, Dieter Vollath, Adelina Braun, Rolf Clasen

Thursday, September 18th

Morning session – *Main Building, Small Hall (Mala aula)*

9:00 - 9:30 invited oral	Zirconia pressure sensors: from nanopowders to device <u>Robert R. Piticescu</u> , Marko Hrovath, Darko Belavic, Ana Ionascu, Barbara Malic, Adrian M. Motoc
9:30 - 9:45 oral	Morphology control of PbS nanocrystals by a novel hydrothermal process Yujue Ji, <u>Deren Yang</u> , Hui Zhang, Xiangyang Ma, Jin Xu, Duanlin Que
9:45 - 10:00 oral	Synthesis of one-dimensional chalcogenides by a novel hydrothermal process Hui Zhang, <u>Deren Yang</u> , Yujue Ji, Xiangyang Ma, Jin Xu, Duanlin Que
10:00 - 10:15 oral	Processing of Ceramic Nanopowders and Nanocomposites <u>Henryk Tomaszewski</u>

Coffee break – *Main Building, Main Hall (Duza aula)*

10:30 - 10:45 oral	Nanocalorimetry: thermal process studied in Nan-technological scale R. Karmouch, J-F. Mercure, F. Schiettekatte, S. Roorda
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Morning session - continued – *Main Building, Small Hall (Mala aula)*

11:00 - 11:15 oral	Synthesis of a zero-birefringence polymer doped with an inorganic birefringent crystal <u>Hisanori Ohkita</u> , Akihiro Tagaya, Yasuhiro Koike
11:15 - 11:30 oral	Strongly scattering media as active elements of small-size tunable sources of stimulated emission Eugene O. Tikhonov, <u>Vasil P. Yashchuk</u> , Olga A. Prygodjuk, Volodymyr I. Bezrodny
11:30 - 12:00 invited oral	Metallopolymer nanocomposites: preparation and properties <u>Gulzhian I. Dzhardimalieva</u> , Nina D. Golubeva, Aleksei M. Bochkov, Aleksander S. Rozenberg, Anatolii D. Pomogailo
12:00 - 12:15 oral	Interfacial effects in molecular polymer-polymer composites <u>Anatolii D. Pomogailo</u>
12:15 - 12:30 oral	Thermodynamic properties of nano- and micro- structured perovskite-type compounds <u>Speranta Tanasescu</u> , Cornelia Marinescu, Florentina Maxim

Lunch break –

Symposium G

BULK AND GRADED NANOMETALS

Monday, September 15th

Opening address – *Main Building, room 208*

Afternoon session – *Main Building, room 208*

- | | |
|-------------------------------|---|
| 14:00 - 14:30
invited oral | Unconventional Deformation Mechanism in Nanometals?
<u>Helena Van Swygenhoven</u> |
| 14:30 - 14:45
oral | Size Effects during Nanoindentation: Molecular Dynamics Simulations in Nanocrystalline Gold
<u>Abdellatif Hasnaoui</u> , Peter M. Derlet, Helena Van Swygenhoven |
| 14:45 - 15:00
oral | Excellent Mechanical Properties of Nickel Processed by High Pressure Techniques
<u>Nikolay A. Krasilnikov</u> , Zbigniew Pakieła, Krzysztof Kurzydłowski, Witold Łojkowski, Ruslan Valiev |
| 15:00 - 15:15
oral | Deformation strengthening anisotropy of FCC-solid solution of substitution and penetration at variation of stress-strain state indexes and stacking fault energy
<u>Natalya B. Efros</u> , Dmytro Kuzmenko, Dmytro Kolesnikov, Boris M. Efros |
| 15:15 - 15:30
oral | Batch hydroextrusion influence on structure and strengthening of nanostructured nickel
<u>Natalya B. Efros</u> , Vladimir A. Ivchenko, Boris M. Efros |

Coffee break – *Main Building, Main Hall (Duża aula)*

Afternoon session - continued – *Main Building, room 208*

- | | |
|-------------------------------|---|
| 15:50 - 16:20
invited oral | Structural refinement and coarsening in deformed metals
<u>Niels Hansen</u> , Xiaoxu Huang, Xing Qingfeng |
| 16:20 - 16:50
invited oral | Factors affecting the accuracy and precision of quantitative description of materials microstructure
<u>Jan Cwajna</u> |
| 16:50 - 17:05
oral | Orientation Correlations in Metal Substructures from the Micrometre to Nanometre Range
<u>Dorote Juul Jensen</u> , Jake Bowen |
| 17:05 - 17:20
oral | Crystal refinement by cold rolling in NiTi shape memory alloys
Guru Prasad Dinda, Harald Roesner, Gerhard Wilde |
| 17:20 - 17:35
oral | Quantitative analysis of grain boundaries in HPT iron.
<u>Yulia Ivanisenko</u> , Ruslan Valiev, Hans-Jörg Fecht |

Poster session – *Main Building, Main Hall (Duża aula)*

- 19:00 - poster G-1 **Nanostructured Ni₃Al intermetallic alloy processed by severe rolling at liquid nitrogen temperature and annealing**
PAWEŁ JÓZWIK, ZBIGNIEW BOJAR, JERZY BYSTRZYCKI, WOJCIECH PRZETAKIEWICZ
- 19:00 - poster G-2 **Morphology and properties of oxide films formed on the nanocrystalline 316L austenite steel**
Anna Druzycka-Wiencek, Michał Wozniak, Krzysztof J. Kurzydłowski
- 19:00 - poster G-3 **Metal plasticity during structure formation by twist extrusion**
Yan Y. Beygelzimer, Boris M. Efros, Dmitry V. Orlov
- 19:00 - poster G-4 **Hydrostatic extrusion and nanostructure formation in an aluminium alloy**
Małgorzata Lewandowska, Halina Garbacz, Waclaw Pachla, Krzysztof Kurzydłowski
- 19:00 - poster G-5 **The Superplasticity of Hard Magnetic Alloy Fe-23wt.%Co-30%Cr with Submicrocrystalline Structure**
Alexander V. Korznikov, Zbigniew Pakieła, Galia F. Korznikova, Krzysztof Kurzydłowski
- 19:00 - poster G-6 **X-ray Analysis of Cu Subjected to SPD**
Igor V. Alexandrov, Ascar R. Kilmametov, Rafael M. Mazitov
- 19:00 - poster G-7 **Microstructure and mechanical properties of binary Al-Li alloys processed by ECAP**
Jarosław Mizera, Małgorzata Lewandowska, Aleksandr Korznikov, Krzysztof Kurzydłowski
- 19:00 - poster G-8 **Ductility of Nanocrystalline Materials Processed by Severe Plastic Deformation**
Zbigniew Pakieła, Michał Miskiewicz, Krystian Paradowski, Anna Druzycka, Krzysztof Kurzydłowski
- 19:00 - poster G-9 **Modelling of the Influence of the Grain Size Distribution on the Grain Growth in Nanocrystals**
Tomasz Wejrzanowski, Krzysztof Kurzydłowski
- 19:00 - poster G-10 **Strain localization in nanocrystalline iron after Severe Plastic Deformation**
Małgorzata Sus-Ryszkowska, Grzegorz Dymny, Zbigniew Pakieła, Michał Miskiewicz, Krzysztof Kurzydłowski
- 19:00 - poster G-11 **Mechanical properties nanostructured iron obtained by different methods of Severe Plastic Deformation**
Małgorzata Sus-Ryszkowska, Zbigniew Pakieła, Ruslan Valiev, J. W. Wyrzykowski, Krzysztof Kurzydłowski
- 19:00 - poster G-12 **The influence of heat treatment on electrical resistivity of high-purity and boron-doped nanocrystalline Ni₃Al**
Saida R. Idrisova, Alexandr V. Korznikov
- 19:00 - poster G-13 **X-Ray investigations of the natural and artificial White Etching Layer**
Marcin Woźdź, Stanisław Gierlotka, Yulia Ivanisenko, Witold Lojkowski
- 19:00 - poster G-14 **Durability of wheel surface layer in railway wheelsets**
Laura Perchuc
- 19:00 - poster G-15 **Crystallization kinetics of Al_{95-x}Y_xMmNi₅(Co,Fe)_y series (x = 4, 5; y = 2, 3)**
Javier S. Blazquez, Hristo Dimitrov, Jerzy Latuch, Tadeusz Kulik

- 19:00 - poster G-16 **Bulk nanostructured Al-Mn-Ni-(Fe,Co) alloys produced by high-pressure hot compaction of amorphous powders**
Hristo Dimitrov, Jerzy Latuch, Tadeusz Kulik, Petr Kubecka, Peter Svec
- 19:00 - poster G-17 **A physical criterion for the grain subdivision during severe plastic deformation**
Nariman A. Enikeev, Tatiana S. Orlova, Igor V. Alexandrov, Alexei E. Romanov
- 19:00 - poster G-18 **Development of in-situ technology for producing nanostructural materials by intensive shear deformation under high pressure.**
Bilousov Mykola
- 19:00 - poster G-20 **Mechanical properties of aluminium wires produced by plastic consolidation of fine grained powders.**
Henryk Dybiec, Paweł Kozak
- 19:00 - poster G-21 **Synthesis of nanoprecipitates of vanadium carbides in the alloys with ferrite matrix**
Edward Frasz, Jan Głownia, Edward Guzik
- 19:00 - poster G-22 **Hardness and XRD Investigation of Ti/Nb and TiN/NbN Superlattices Prepared by Magnetron Sputtering**
Paweł Kałdonek, Andrzej Wolkenberg, Zygmunt Nitkiewicz, Adam Tokarz, Hanna Wrzesińska
- 19:00 - poster G-23 **Structure and chemical composition of nanocrystalline stainless steel powders obtained by ball milling and duplex stainless steels obtained by their sintering**
Agnieszka Szymanska, Krzysztof Sikorski, Jan Kazior*
- 19:00 - poster G-24 **Microstructure of Ni-P thin layers obtained by a chemical method**
Katarzyna Konopka, Witold Zieliński, Dariusz Oleszak, Anna Wyszynska, Maria Trzaska, Krzysztof Kurzydłowski
- 19:00 - poster G-25 **Novel ceramic matrix composites with metal phase particles in the range from nano to micro - size**
Katarzyna Konopka
- 19:00 - poster G-26 **The influence of nickel layer with nanosize grains on aluminium-ceramic interface structure**
Anita Olszówka-Myalska
- 19:00 - poster G-27 **Al₂O₃-Fe functionally graded materials fabricated under magnetic field**
Artur Oziebło, Katarzyna Konopka, Ewa Bobryk, Krzysztof Kurzydłowski, Mikołaj Szafran
- 19:00 - poster G-28 **The influence of temperature and pressure on possibility of obtaining Al₂O₃/Ni-P nanocomposite through hot pressing process.**
Jakub Michalski, Katarzyna Konopka, Stanisław Gierlotka, Krzysztof Kurzydłowski
- 19:00 - poster G-30 **Investigation of the microstructure of SiC-Zn nanocomposites by microscopic methods: SEM, AFM and TEM**
Anna Swiderska-Sroda, Jan Kozubowski, Agnieszka Maranda-Niedbala, Ewa Grzanka, Bogdan F. Palosz, Adam Presz, Stanisław Gierlotka, Svetlana Stelmakh, Grzegorz Kalisz, Christian Lathe
- 19:00 - poster G-31 **Synthesis of metal-ceramic nanocomposites by high-pressure infiltration**
Stanisław Gierlotka, Bogdan F. Palosz, Anna Swiderska-Sroda, Ewa Grzanka, Grzegorz Kalisz, Svetlana Stelmakh

- 19:00 - poster G-32 **Micromechanical properties of nanometer-thick layers of implanted alumina.**
Jacek Jagielski, Anna Piatkowska, Zdzislaw Librant, Pascal Aubert, Caroline Legrand-Buscema, Jerzy Piekoszewski, Zbigniew Werner
- 19:00 - poster G-33 **Composition and mechanical properties of graded Ti-Cr-N coatings, deposited by CAVD**
Vladimir V. Uglov, Viktor M. Anishchik, Sergey V. Zlotski, Sergey N. Dub, Viktor A. Ukhov
- 19:00 - poster G-34 **Amorphous bulk alloys from Al-Mm-Ni system**
Maciej Kowalczyk, Tadeusz Kulik, Jerzy Latuch
- 19:00 - poster G-35 **Phase transformations in steels subjected to ball milling**
Dariusz Oleszak
- 19:00 - poster G-36 **The phase transformation Co-Al alloys by ball milling and mechanical alloying**
Kirill V. Tretjakov, Valeri K. Portnoy, Viktoria I. Fadeeva, Jerzy Latuch
- 19:00 - poster G-37 **The electrocrystallization of nanonickel**
Benigna Szeptycka, Anna Anna Gajewska-Midziątek, Daniela Derewnicka
- 19:00 - poster G-38 **Wettability and reactivity between molten aluminum and selected oxides**
Natalia SOBCZAK
- 19:00 - poster G-40 **Analysis of Nanometals' Morphology by Scanning Probe Microscopy**
Alexei N. Lachinov, Victor M. Kornilov, Rafael M. Mazitov, Igor V. Alexandrov, Ruslan Valiev
- 19:00 - poster G-41 **Multi-layer composite based on amorphous materials and quasicrystals, deposited by laser ablation**
Waldemar Mroz, Mirosław Jelinek, Lukasz Major, Jerzy Morgiel, Artur Prokopiuk, Michał Wozniak, Koichi Kasuya
- 19:00 - poster G-42 **Production of nano-wires on semiconductor surfaces by ion bombardment**
Johan B. Malherbe, Herbert W. Kunert
- 19:00 - poster G-43 **Kinetic behaviour of free and localized on dislocations nano-scale liquid Pb inclusions in aluminum**
Sergei Prokofjev, Victor M. Zhilin, Erik Johnson, Mogens T. Levinsen, Ulrich Dahmen

Tuesday, September 16th

Morning session – *Main Building, room 208*

- 11:00 - 11:30 invited oral **Developing a Superplastic Forming Capability in Nanometals**
Cheng Xu, Minoru Furukawa, Zenji Horita, Terence G. Langdon
- 11:30 - 12:00 oral **Grain Boundary Microstructural Control in Nanocrystalline Nickel by Magnetic Annealing**
Tadao Watanabe, Tsunekawa Sadahiro, Palumbo Gino
- 12:00 - 12:15 oral **Grain growth in nanocrystals: effect of triple junction mobility**
Vladimir Y. Novikov
- 12:15 - 12:30 oral **Bulk nanostructured TiNi shape-memory alloys: unusual structures and unique properties**
V. G. Pushin, Ruslan Valiev

Lunch break –

Afternoon session – Main Building, room 208

- | | |
|-------------------------------|---|
| 14:00 - 14:30
invited oral | Recent progress in developing nanostructured SPD materials with unique properties
<u>Ruslan Z. Valiev</u> |
| 14:30 - 14:45
oral | Effect of Non-conventional Large Deformations on Microstructure and Properties of Metals
Krzysztof Kurzydłowski, <u>Maria Richert</u> , Jan Richert, Józef Zasadziński, Małgorzata Sus-Ryszkowska |
| 14:45 - 15:00
oral | "Perspective of nanomaterials production by cyclic extrusion compression method of exerting unconventional, large plastic deformations."
<u>Maria Richert</u> , Sonia Hawrylkiewicz, Jan Richert, Józef Zasadziński |
| 15:00 - 15:15
oral | Experimental studies and modeling of SPD materials
<u>Igor V. Alexandrov</u> |
| 15:15 - 15:30
oral | The peculiarities of macrostructural evolution of Fe-Mn alloys after severe plastic deformation under pressure
<u>Sergei V. Gladkovsky</u> , Boris M. Efros, V. P. Pilyugin |

Coffee break – Main Building, Main Hall (Duża aula)

Afternoon session - continued – Main Building, room 208

- | | |
|-------------------------------|--|
| 15:50 - 16:20
invited oral | Processing metals by severe plastic deformation
<u>Andrzej Rosochowski</u> |
| 16:20 - 16:35
oral | Computer simulation of SPD processes
<u>Alexander V. Spuskanyuk</u> |
| 16:35 - 16:50
oral | New possibilities of achieving ultra - fine grained microstructure in metals and alloys employing MaxStrain technology
<u>Roman M. Kuziak</u> , Władysław Zalecki, Maciej Pietrzyk, Stanisław Węglarczyk |
| 16:50 - 17:05
oral | Twist extrusion: theory and technique
<u>Dmitry Orlov</u> , Yan Y. Beygelzimer, Sergey Synkov, Alexey Reshetov |
| 17:05 - 17:20
oral | SPD by twist extrusion and spread extrusion
<u>Yan Beygelzimer</u> |

Thursday, September 18th

Morning session – Main Building, room 208

- | | |
|---------------------|--|
| 9:00 - 9:15
oral | Nanostructured high-strength aluminum alloys containing nano-size quasicrystalline particles
<u>Yu. V. Milman</u> |
| 9:15 - 9:30
oral | Nanocrystallization and mechanical properties of the amorphous Ni-Zr-Ti -Al-Cu -Si ribbons.
<u>Tomasz Czeppe</u> , E. Vasileva, J. Dutkiewicz |
| 9:30 - 9:45
oral | Microacoustical study of elastic properties and microstructure of new generation of bulk metallic glasses
<u>Vadim M. Levin</u> , Yulia S. Petronyuk, Nikolai P. Kobelev |

- 9:45 - 10:00
oral **Microstructure selection in severely deformed Al-base alloys**
Gerhard Wilde, Guru Prasad Dinda, Rainer Hebert, John H. Perepezko
- 10:00 - 10:15
oral **Nanocrystallisation in light-weight amorphous alloys**
Shantanu V. Madge, Nancy Boucharat, A. Lindsay Greer, Gerhard Wilde
- 10:15 - 10:30
oral **Thermally Controlled Nanocrystallization in Amorphous Al Alloys**
Joe Hamann, William S. Tong, Harald Rösner, John H. Perepezko, Gerhard Wilde

Coffee break – *Main Building, Main Hall (Duża aula)*

Morning session - continued – *Main Building, room 208*

- 11:00 - 11:30
invited oral **Bulk Fe-Al-C nanoalloys made by mechanically alloying with subsequent spark plasma sintering and their mechanical properties**
Yoritoshi Minamino, Yuichiro Koizumi, Nobuhiro Tsuji, Takanori Tanaka, Naoko Hirohata, Kiyoshi Mizuuchi, Yoshihira Ohkanda
- 11:30 - 11:45
oral **Formation and Processing of Nanocrystalline Materials by Electrical Discharge Mechanical Milling**
Andrzej Calka, D. Wexler
- 11:45 - 12:00
oral **Nanocrystalline TiAl-V intermetallics hot pressed from mechanically alloyed powders**
Jan M. Dutkiewicz, Wojciech Maziarz

Lunch break –

Afternoon session – *Main Building, room 208*

- 14:00 - 14:30
invited oral **Size-Dependent Phenomena of Interdiffusion in Nanomaterials**
Ludmila Paritskaya, Yuri Kaganovskii 2), Valerij Bogdanov
- 14:30 - 14:45
oral **Interdiffusion in Au-Ni Micro- and Nanolayers**
Marek Danielewski, Robert Filipek, Anna Rakowska, Krzysztof Sikorski
- 14:45 - 15:00
oral **Nanocrystalline Thermoelectric Alloys: Processing, Chemistry and Characterization**
Muhammet S. Toprak, Yu Zhang, Mamoun Muhammed
- 15:00 - 15:15
oral **Nanomaterials produced by ablation and pulsed laser deposition**
Bogusław Major
- 15:15 - 15:30
oral **Physics of growth of thin films deposited by laser ablation**
Waldemar Mróz

Coffee break – *Main Building, Main Hall (Duża aula)*

Afternoon session - continued – *Main Building, room 208*

High Pressure School 2003 (5th)

Vth HIGH PRESSURE SCHOOL on High Pressure Methods in Biotechnology and Materials Science

Saturday, September 13th

Morning session –

- | | |
|-------------------------------|--|
| 9:10 - 10:10
invited oral | High Pressure Bioscience: From Molecules to Cells
<u>Karel Heremans</u> |
| 10:10 - 10:55
invited oral | Pressure Effects on Conformational Equilibria of Proteins and Rotational Isomers in Aqueous Solutions
<u>Yoshihiro Taniguchi</u> |
| 10:55 - 11:25
oral | Comparative study of solvation pressure and hydrostatic pressure in biological and molecular systems
<u>Hannes Hubel</u> , Nancy W. van Uden, David J. Dunstan |

Break –

Morning session - continued –

- | | |
|-------------------------------|---|
| 11:45 - 12:30
invited oral | Recent advances in high-pressure synthesis of macrocyclic organic compounds
<u>Janusz Jurczak</u> |
| 13:30 - 14:15
invited oral | Toward understanding compressibility of hydrogen-bonded solids
<u>Andrzej Katrusiak</u> |

Sunday, September 14th

Morning session –

- | | |
|-------------------------------|---|
| 10:00 - 10:45
invited oral | Patterns in the Phase and Structural Behavior of Lyotropic Lipid Mesophases, Model Biomembranes and Proteins at High Pressure
<u>Roland H. Winter</u> |
| 10:45 - 11:30
invited oral | High pressure, a new tool to investigate protein structural changes
<u>Claude Balny</u> |

Break –

Afternoon session –

- | | |
|-------------------------------|---|
| 11:50 - 12:35
invited oral | Pressure and protein aggregation.
<u>Laszlo Smeller</u> |
|-------------------------------|---|

12:35 - 13:05
oral

Why does high pressure prevent protein aggregation ? An FTIR/DSC/PPC case study on insulin.
Wojtek Dzwolak

14:05 - 14:50
invited oral

High Pressure for Food Processing
Volker Heinz

14:50 - 15:20
oral

Pressure Modulating Effect on ATP-ase Activity
Natalya V. Shishkova, Lyudmila I. Donchenko, Vladimir I. Barbashov, Maria D. Vdovychenko, Anatolii V. Stepura

Monday, September 15th

Perspectives of nanotechnology

Special session: Perspectives of nanotechnology (joint session of symposia E, F and G)

Wednesday, September 17th

Morning session –

11:00 - 11:45 **Challenges for Polish Research in European Industry**
invited oral Marcel Van de Voorde

11:45 - 12:30 **Nanotechnology in Medicine**
invited oral Leonard Fass

Lunch break –

Afternoon session –

14:00 - 14:30 **High Performance Nanoscale Materials and Bulk Metallic Glass**
invited oral Hans-Jörg Fecht

14:30 - 15:00 **Participation of Accession Candidate Countries to the FP6 - Priority 3**
invited oral Antoaneta Folea

15:00 - 15:30 **Nanotechnology start-ups in Europe**
invited oral Ottília Saxl

Coffee break –

15:50 - 16:20 **Synthesis of inorganic nanoparticles and their application on ceramic substrates**
invited oral Giovanni Baldi

Afternoon session - continued –

16:20 - 16:50 **Nanomaterials for lighting**
invited oral Martin Zachau, Armin Konrad

16:50 - 17:20 **Structural funds in Poland and Polish Research Potential in Nanotechnology**
invited oral Andrzej Siemaszko

Poster session –

Pre-School of Symposium B

Special session: pre-school of Symposium B

Sunday, September 14th

Morning session conducting by Rajmund Bacewicz – Main Building, room 208

9:30 - 10:15 **Synchrotron Radiation - Sources and Properties**
invited oral Krystyna Lawniczak-Jablonska

10:15 - 11:00 **The Diffraction Phenomenon In Radiation**
invited oral Ake Kvick

Coffee break –

Morning session - continued- conducted by Bronislaw Orlowski – Main Building, room 208

11:30 - 12:15 **An introduction to X-ray Absorption Fine Structure Spectroscopy**
invited oral Sakura Pascarelli

12:15 - 13:00 **VUV photoemission using synchrotron light: a tool for characterising surfaces and interfaces occurring in OLEDs**
invited oral Jacques Ghijsen, Robert L. Johnson, Andreas Elschner, Norbert Koch

Lunch –

Afternoon session conducted by Wojciech Szuszkiewicz – Main Building, room 208

14:30 - 15:15 **Neutron scattering in magnetic materials**
invited oral Radosław Przeniosło, Izabela Sosnowska

15:15 - 16:00 **X-ray imaging**
invited oral Jürgen Härtwig

16:00 - 16:45 **Structural and chemical characterization of crystals by TEM**
invited oral Wolfgang Neumann

NanoCentre Pre-School

Special session: NanoCentre Pre-School

Sunday, September 14th

lectures – *Faculty of Material Science, room 315*

10:00 - 10:45 **Bulk and Graded Materials**
invited oral Krzysztof Kurzydłowski

10:45 - 11:30 **Materials for Medical Applications**
invited oral Malgorzata Lewandowska-Szumiel

Coffee break –

Afternoon session – *Faculty of Material Science, room 315*

12:00 - 12:45 **Recent progress in developing bulk nanomaterials using SPD**
invited oral Ruslan Z. Valiev

12:45 - 13:30 **Microanalysis-orientation, disorientation and microtexture determined by transmission electron techniques (TEM)**
invited oral Maria Richert, Sonia Hawrylkiewicz, K. Chruściel, J. Długopolski, A. Baczmański

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(International Workshop on ADVANCED SPECTROSCOPY OF MODERN MATERIALS)

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