

C H R O N I C L E

37th Winter School on Wave and Quantum Acoustics
Wisła, Poland, February 25 – 29, 2008

I have a great pleasure to give the “*Archives of Acoustics*” Readers possibility acquaint with topics presented at 37th Winter School on Wave and Quantum Acoustics. This School, organized by Upper Silesian Division of the Polish Acoustical Society and Institute of Physics at Silesian University of Technology, is planned at the end of February 2008 in beautiful scenery of Wisła, the center of rest in Silesian Beskidy Mountains.

As always, the School has been a place where achievements of various sections of acoustics are being exchanged. Specially interested topics are: molecular acoustics, quantum acoustics, acousto-optics, magnetoacoustics, acoustoelectronics, photoacoustics, acoustics of solids etc. Moreover, some similar and related topics, for example optoelectronics and thermal wave methods, will be presented too.

Traditionally the School will be divided on three different, but complementary, parts – Winter Workshops (WW). Chronologically it will be: *4th WW on Acoustoelectronics and Optoelectronics* (chairman prof. Tadeusz Pustelny), *4th WW on Molecular Acoustics, Relaxation and Calorimetric Methods* (chairwoman dr Marzena Dzida) and *13th WW on Photoacoustics and Thermal Waves Methods* (chairman prof. Jerzy Bodzenta). This dividing was very well accepted by Participants.

After acceptance by reviewers the School lectures will be published in one of two journals – in *European Physical Journal – Special Topics* (which is published by EDP Sciences and covered in the ISI database as continuation of *Journal de Physique IV*) or in *Journal of Molecular and Quantum Acoustics* (annual journal published by Upper Silesian Division of the Polish Acoustical Society).

Once again we have taken pains to organize this conference taking into account the fact that it is an important event for acousticians, opticians and other Polish and foreign scientists. We hope that this reach conference program will gain acceptance and respect among its potential participants. We count on your numerous response and active participation.

In behalf of Organizers
Roman Bukowski
coordinator of the School

4th Winter Workshop on Acoustoelectronics and Optoelectronics

1. Joanna A. BARTKOWSKA, Jan ILCZUK: *Internal friction and the relaxation time spectrum of ferroelectric ceramic PZT type*
2. Dariusz BOCHENEK, Zygmunt SUROWIAK: *An influence of the synthesis conditions on the PFN ceramic properties*
3. Dariusz BOCHENEK, Radosław ZACHARIASZ, Julian DUDEK: *Ferroelectromagnetic smart structures $(1-x)\text{Pb}(\text{Fe}_{0.5}\text{Nb}_{0.5})\text{O}_3-x\text{BiFeO}_3$*
4. Dariusz BOCHENEK, Radosław ZACHARIASZ: *Ferro-electro-magnetic ceramics of the $\text{Pb}(\text{Fe}_{0.5}\text{Nb}_{0.5})\text{O}_3$ regarding possibilities use in the electrical transducers*
5. Dariusz BOCHENEK: *The PTC-R effect in the $\text{Pb}(\text{Fe}_{1/2}\text{Nb}_{1/2})\text{O}_3$ ceramic admixed with lithium*
6. Tomasz BOCZAR, Sebastian BORUCKI, Andrzej CICHONÓ, Marcin LORENC: *The Influence of the Oil Layer Thickness on Suppression of Higher Frequencies of the Acoustic Emission Signals Generated by Partial Discharges*
7. Tomasz BOCZAR, Sebastian BORUCKI, Andrzej CICHONÓ, Marcin LORENC: *The Analysis of Mechanical Vibrations and Acoustic Pressure Level of a Transformer Model*
8. Robert BOGDANOWICZ: *Investigation of $\text{H}_2:\text{CH}_4$ plasma composition by means of spatially resolved optical spectroscopy*
9. M. GAWLIKOWSKI, T. PUSTELNY, P. STRUK: *Modelling method of human great blood circulation*
10. K. GUT, T. PUSTELNY, P. STRUK: *Optoelectronic waveguide structures based on ZnO layers*
11. Cuma TYSZKIEWICZ, Adam SZPAKOWSKI: *Interactions between gases and SnO₂ sensors*
12. Adam SZPAKOWSKI, Cuma TYSZKIEWICZ, Tadeusz PUSTELNY: *Multivariate analysis in gas sensing applications*
13. Krzysztof JASEK, Mateusz PASTERNAK: *Modification of quartz substrate SAW sensors*
14. Natalia V. POLIKARPOVA: *Influence of Strong Acoustic Anisotropy on Reflection of Bulk Acoustic Waves in Crystals*
15. Justyna CZUBER, Lucjan KOZIELSKI, Dionizy CZEKAJ: *Microstructure and mechanical properties of $(1-y)\text{BST}-y\text{MgO}$ thin films*
16. Andrzej DUKATA and Jerzy KAPELEWSKI: *On electromagnetic-acoustic analogies in energetic relations for waves interacting with material surfaces*
17. Tadeusz GUDRA, Krzysztof J. OPIELIŃSKI: *A non-contacting examination of materials using airborne ultrasonic transducer*
18. Wiesław JAKUBIK, Marian URBAŃCZYK, Erwin MACIAK: *SAW bilayer structures in multi-channel configuration as methane sensor*
19. Małgorzata JĘDRZEJEWSKA-SZCZERSKA: *Improved method of signal processing used in low-coherent measurement systems*
20. Adam KAWALEC: *An analysis of mutual capacitance of SAW periodic strips having different metallization ratio*
21. Lucjan KOZIELSKI, Monika ADAMCZYK, Ryszard NOWAK: *Nanomechanical properties of Ca-doped $(\text{Pb}_{0.75}\text{Ba}_{0.25})(\text{Zr}_{0.70}\text{Ti}_{0.30})\text{O}_3$ ceramics*
22. Marek S. KOZIEŃ, Jerzy WICIAK: *Choosing of Optimal Voltage Amplitude of Four Pairs Square Piezoelectric Elements for Minimization of Acoustic Radiation of Vibrating Plate*

23. Bogdan LILA, Jerzy KAPELEWSKI: *A Focused Beam Forming With A Monolithic 2D Phased Array*
24. Krzysztof J. OPIELIŃSKI: *Ultrasonic parameters of hen's egg*
25. Tomasz ORKISZ, Dionizy CZEKAJ: *Fabrication of ceramic – polymer composites*
26. Katarzyna OSIŃSKA, Dionizy CZEKAJ: *Fabrication of ceramic – polymer composites*
27. Mateusz PASTERNAK: *New approach to Rayleigh wave gas sensors modeling*
28. Jolanta RYMARCZYK, Grzegorz DERCZ, Jan ILCZUK: *Processing, microstructure and dielectric permittivity properties of Bi₅Ti₃FeO₁₅ ceramics*
29. Anna SNAKOWSKA, Jerzy JURKIEWICZ: *Efficiency of energy radiation from an unflanged cylindrical waveguides in case of multimodal excitation*
30. Marcin R. STRĄKOWSKI, Jerzy PLUCIŃSKI, Bogdan B. KOSMOWSKI: *Cross-sectional imaging of materials structure using PS-OCT*
31. Marek SZMECHTA, Dariusz ZMARZŁY, Tomasz BOCZAR, Marcin LORENC: *The influence of ultrasound signal parameters on sonoluminescence light intensity*
32. Marek SZMECHTA, Dariusz ZMARZŁY, Tomasz BOCZAR, Marcin LORENC: *Acoustic spectra of ultrasound induced cavitation in insulating oils*
33. Zbigniew TRAWIŃSKI, Tadeusz POWAŁOWSKI, Janusz WÓJCIK, Piotr GUTKIEWICZ: *Ultrasonic non-invasive method for relative changes measurements of IMT in common carotid artery wall*
34. Paweł WAWRZAŁA, Dariusz BOCHENEK: *Electromechanical properties of (PbBa)(ZrTi)O₃ ceramic system obtained by sol-gel method*
35. Beata WODECKA-DUŚ, Dionizy CZEKAJ: *Influence of La³⁺ doping on electric properties of barium titanate ceramics*
36. Marek ŻYCZKOWSKI: *Intruder identification using fiber optic systems*

4th Winter Workshop on Molecular Acoustics, Relaxation and Calorimetric Methods

1. Ahmed BOULMOK, Ali MODARESSI, Marek ROGALSKI, Wojciech MARCZAK: *Adsorption of ionic liquids on the surface of halloysite*
2. Andrzej BURAKOWSKI, Jacek GLIŃSKI: *Hydration of the zwitterionic forms of amino acids*
3. Bożena CZECH, Wojciech MARCZAK: *Solvation of 2-methylpyridine and 2,6-dimethylpyridine in dilute solutions in water and methanol*
4. Rozalia CZOIK, Andreas HEINTZ, Ewa JOHN, Wojciech MARCZAK: *Complexes of silver with histidine and imidazole investigated by the calorimetric and potentiometric methods*
5. Marzena DZIDA: *Heat capacity and internal pressure of cyclopentanol at pressures up to 100 MPa determined by the acoustic method*
6. Stefan ERNST: *Irreversible Thermodynamics and Biology*
7. Monika GEPPERT-RYBCZYŃSKA, Tadeusz HOFMAN: *In quest of the best theoretical description of excess molar functions of binary mixtures of alcohols*
8. Jacek GLIŃSKI, Andrzej BURAKOWSKI: *Solvation of alcohols in n+heptane and n+propanol from the Acoustic Pasznski Method*
9. Tadeusz HOFMAN: *Applications of some models to represent and to predict thermodynamic data*

10. Arkadiusz JÓZEF CZAK: *Detection of structural transformations in biocompatible ferrofluids by ultrasound*
11. Talgat S. KHASANSHIN, Vladimir S. SAMUILOV, Alexander P. SHCHAMIALIOU, Oleg G. PODDUBSKIJ: *The acoustic investigation of n-alkanes at temperatures from 298.15 to 433.15 K and pressures from 0.1 to 100 MPa*
12. Talgat S. KHASANSHIN, Vladimir S. SAMUILOV, Alexander P. SHCHAMIALIOU, Oleg G. PODDUBSKIJ: *Determination of density of liquid n-alkanes by using the results of acoustic measurements*
13. Bogumił J. LINDE: *Ultrasonic relaxation in the mixtures of two liquids*
14. Piotr MIECZNIK: *Ultrasonic investigations of inclusion complexation of α -cyclodextrin by iodide ions in pseudo-binary aqueous system*
15. Barbara PUSTELNY, Tadeusz PUSTELNY: *Acoustoelectric methods of carrier mobilities determination in semiconductors*
16. Anna SIKORSKA, Anna KISZEL, Joanna MAKOWSKA, Nikodem PONIKWICKI, Bogumił LINDE: *Acoustic and calorimetric studies of aqueous solutions of dioxane*
17. V. N. VERVEYKO, M. V. VERVEYKO, G. A. MELNIKOV, Yu. F. MELIKHOV: *Research experimental methods of liquids acoustic, elastic and kinetic properties*
18. Ewa ZIELEWICZ: *Sonolysis and sonoacydyfication in ultrasounds*
19. Edward ZOREBSKI, Martyna PIOTROWSKA, Marzena DZIDA: *Speed of ultrasound and internal pressure of propanediol and butanediol isomers under elevated pressures*
20. Jerzy ŻUK, Halina KRZYŻANOWSKA, Mirosław KULIK, M. CLOUTER, W. RZODKIEWICZ: *On the use of surface Brillouin scattering and ellipsometry for elastic characterization of ion implanted materials*

13th Winter Workshop on Photoacoustics and Thermal Waves Methods

1. Mikołaj ALEKSIEJUK, G. S. MITYURICH, A. N. EMEL'YANOVICH, A. N. SERDYUKOV: *Thermooptical generation of a sound by Bessel light beams in gyrotropic media*
2. Mariusz BARCZAK, Andrzej DĄBROWSKI, Stanisław PIKUS, Agnieszka DĘBCZAK, Janusz RYCZKOWSKI: *FT-IR/PAS studies of SBA-15 organosilicas*
3. Jerzy BODZENTA, Anna KAŻMIERCZAK-BAŁATA, Tadeusz ŁUKASIEWICZ, Bogusław HOFMAN: *Thermal wave measurements with mirage detection for investigation of the thermal diffusivity of $GdCa_4O(BO_3)_3$ single crystals*
4. Jerzy BODZENTA, Anna KAŻMIERCZAK-BAŁATA: *Peltier's modules as heat flux sensors in thermal wave measurement*
5. Isabel DELGADILLO-HOLTFORT, Juergen GIBKES, Josef PELZL, Mihai CHIRTOC, E. NEUBAUER: *Characterization metal coated diamond crystallites by combined photoacoustic effect and photothermal radiometry*
6. Agnieszka DĘBCZAK, Janusz RYCZKOWSKI: *Spectroscopic studies of chelates interaction with inorganic oxides*
7. W. GAC, A. DĘBCZAK, W. ZAWADZKI, A. DERYŁO-MARCZEWSKA, G. ŻUKOCIŃSKI: *Studies of silica mesoporous materials modified with manganese and noble metals*
8. Juergen GIBKES, Bruno K. BEIN, Josef PELZL, Andreas WIEK, Jan FRENZEL, G. EGGELER, Mihai CHIRTOC: *Processing induced change of thermal transport properties of NiTi-shape memory alloy*

9. Juergen GIBKES, Bruno K. BEIN, Josef PELZL, Andreas WIEK, Th. GLOKOWSKI, M. POHL, I. DELGADILLO-HOLTFORT, Mihai CHIRTOC: *Photothermal investigation of cavitation wear protecting NiTi-coatings*
10. Zbigniew HUBICKI, Emil ZIEBA, Grzegorz WÓJCIK, Sylwia PASIECZNA-PATKOWSKA: *FT-IR/PAS and SEM EDX studies on aluminosilicates modified by Cs(I), Th(IV) and U(VI)*
11. Dorota KOŁODYŃSKA, Zbigniew HUBICKI, Sylwia PASIECZNA-PATKOWSKA: *FT-IR/PAS studies of Cu-EDTA complexes sorption on chelating ion exchangers*
12. Dorota KORTE KOBYLŃSKA, Roman BUKOWSKI, Jerzy BODZENTA, Stanisław KOCHOWSKI: *Analysis of photodeflection signal behaviour for two types of detectors used in photothermal experiments*
13. Sylwia PASIECZNA-PATKOWSKA, A. DĄBROWSKI, E. ROBENS, Janusz RYCZKOWSKI: *FT-IR/PAS studies of Lunar regolith samples*
14. Piotr RUSEK, Zbigniew HUBICKI, Grzegorz WÓJCIK, Agnieszka DEBCZAK: *Application of the FT-IR/PAS and DRS methods for studying heavy metals ions sorption on the nonorganic sorbents*
15. Sergey V. SHALUPAEV, Vitalij P. MOROZOV: *The Way of Hardening the High Pressure Apparatus Matrices*
16. Sergey V. SHALUPAEV, A. A. SEREDA, A. S. POBIYAHA: *Laser thermosplitting of ceramic-metal sandwich-like structures with acoustical surveillance of microcrack propagation*
17. Tomasz STARECKI: *Optimization of the duty factor of semiconductor light sources used in photoacoustics*
18. Tomasz STARECKI: *Influence of external acoustic noise on the operation of an open photoacoustic Helmholtz cell*
19. Tomasz STARECKI: *Windowless open photoacoustic Helmholtz cell*
20. Grzegorz WÓJCIK, Zbigniew HUBICKI, Janusz RYCZKOWSKI: *Investigation of chromium (III and VI) ions sorption on SIR by using photoacoustic and DRS methods*
21. Grzegorz WROŃSKI, Zbigniew HUBICKI, Agnieszka DEBCZAK: *Application FT-IR/PAS method in comparison of sorption of Ga(III) and In(III) on Lewatite OC-1026 and Amberlite XAD-7 impregnated D2EHPA*
22. Jacek ZAKRZEWSKI, Mieczysław MALIŃSKI, Karol STRZAŁKOWSKI, Franciszek FIRSZT, Stanisław ŁĘGOWSKI, Hanna MEĆZYŃSKA: *Piezoelectric spectroscopic studies of Zn_{1-x}YBexMgySe mixed crystals*