

**VI WINTER SCHOOL OF MOLECULAR, QUANTUM ACOUSTICS
AND HYDROACOUSTICS AND ULTRASOUNDS**

Szczyrk, March 1977

VI Winter School of Molecular, Quantum Acoustics and Hydroacoustics and Ultrasounds was held between 8-14 March at Szczyrk. The promotor of the Winter School was the Institute of Physics of Silesian University in Gliwice and the newly organized Section of Molecular and Quantum Acoustics attached to the Upper Silesian Department of the Polish Society of Acoustics (PTA). The Chairman of Organizing Committee was dr Stanisław SZYMA.

The School was attended by over 30 participants from 10 scientific centres. In course of the School six sessions were held at which 27 lectures and reports were delivered giving a general review of the research work in Poland in quantum acoustics, acoustoelectronics, ultrasonic spectroscopy, hydroacoustics and ultrasounds.

List of lectures in their sequence of delivery

1. Session

J ZABAWA, A. KLIMASEK, *Determination of the modulus of elasticity of anisotropic plates with cubic symmetry.*

J BERDOWSKI, *Influence of isotropic effects on acousto-optical and dielectric properties of DADA crystals.*

Z. KUBIK, A. OPILSKI, *The action of an elastic surface wave on free charge carriers in a semi-conductor-layer-piezoelectric system.*

Z. CEROWSKI, J. GROCHOWSKA, *Measurements of the wave propagation velocity by a resonance method in TgS and its dependence on crystallographic directions.*

2 Session

M. M. DOBRZAŃSKI, *The representation of a hypersonic wave as a coherent macroscopic quantum condition.*

L. LIPIŃSKI, *Stochastic model of the stimulated ultrasonic low-temperature relaxation of stress in polycrystals.*

C. LEWA, *Piezoelectric properties of polymers.*

S. ŚLIWIŃSKI, *Effect of selective extinction of strias in the process of bending high-power light with ultrasound.*

P. KWIEK, *Holographic investigations of an ultrasonic field.*

Z. TOCZYSKI, *Measurement of amplitude in ultrasonic waveguides used for the insonification of liquid media.*

3. Session

M. SZUSTAKOWSKI, *Light diffraction by acoustic surface waves.*

A. BYSZEWSKI, *Utilization of the acoustic stroboscopic effect for the visualization and investigation of vibrations in liquids and solids.*

I. MERTA, *Light diffraction by acoustic waves in an isotropic medium, considering terms of order Δu^2 .*

W. PAJEWSKI, *Certain properties of transversal surface waves.*

Z. JAGODZIŃSKI, *Calibration of ultrasonic transducers.*

J. FINAK, A. KRZESIŃSKI, A. RAWICZ, *ZnO-layers for acousto-optics obtained by direct-current cathode dispersion.*

4. Session

B. ZAPIÓR, *Conditions for the correct interpretation of the effect of the action of ultrasound on liquid systems.*

L. WERBLAN, S. SKUBISZAK, *Some problems related to the measurement of the absorption and group velocity of ultrasonic in liquid media.*

S. SZYMA, *Acousto-electric method for the determination of the stability of physical properties of organic suspensions.*

5. Session

E. SOCZKIEWICZ, *The dependence of the surface tension of a liquid on the pressure and the radius of molecules.*

J. ZWIERNIK, *Sound velocity in overheated steam.*

Z. JAGODZIŃSKI, *Compression of pulses in ultrasonic echo-location systems.*

M. ALEKSIEJUK, *Generation and detection of acoustic vibrations at gigahertz frequencies using a Josephson joint.*

6. Session

S. PIEKARSKI, *The acousto-electric effect.*

Z. CEROWSKI, *The influence of a transversal field on surface wave propagation on a semiconductor-piezoelectric boundary.*

Taking advantage of the presence of interested persons on the 3rd day of the School, the Board of Quantum and Molecular Acoustics of PTA convened a general meeting at which 31 persons participated. At the meeting the board of the section was presented comprising: Chairman – A. OPILSKI (Institute of Physics of Silesian Technical University, Gliwice), Assistant Chairman – A. ŚLIWIŃSKI (Institute of Physics of Gdańsk University), Secretary – J. GRZYMEK (Institute of Physics of Silesian Technical University, Gliwice), Members – F. KUCZERA (Institute of Physics of Silesian Technical University, Gliwice) and M. M. DOBRZAŃSKI (Institute of Fundamental Technological Research, Polish Academy of Sciences).

The participants of the meeting were also informed of the Statute of the Section, approved by the Main Board of the PTA in November, 1976. Tasks facing the Section AMK were also discussed and it was suggested that the yearly Winter School of Molecular, Quantum Acoustics and Hydroacoustics and Ultrasounds be used for the coordinate and essential appraisal of scientific research work conducted in the subject of "Quantum acoustics and acoustoelectronics" and also "Ultrasonic spectroscopy", being interministerial problem MR. I. 24.

According to the opinion of participants, VI Winter School was of a good scientific level, and the warm and cordial atmosphere, created by the Organizing Committee, contributed to the establishment of close scientific contacts and exchange of views.

M. M. Dobrzański (Warszawa)

