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International seminar on elementary excitation processes in crystals


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International Seminar on Elementary Excitation Processes in Crystals

From 12th to 14th September 1967 the International Seminar on Elementary Excitation Processes in Crystals sponsored by Czechoslovak Mathematical and Physical Society took place in Štříň near Prague. The Seminar was organised by the Department of General Physics of the Faculty of Mathematics and Physics of Charles University in Prague. The Seminar was attended by 30 participants, one third of them coming from the foreign institutes and high schools (Bulgaria, France, GDR, GFR, Hungary, Poland).

There were three invited papers presented by prof. H. Haken (Institut of Theoretical and Applied Physics, Stuttgart): Exact treatment of coherent and incoherent triplet exciton migration; A. Mysyrowicz (Institut of Physics, University of Strasbourg): High intensity excitation in ionic compounds; S. Czarnecki (Institut of Physics, Polish Academy of Sciences, Warsaw): Review of experiments with multiple photon transitions in organic crystals.

The discussions following the lectures confirmed the actuality of the chosen theme. It was demonstrated that the experimental study of the high density excitation processes and other processes connected with them is the very important and perspective branch of physics although it needs very complicated and expensive experimental equipment and technique. The discussion following the lecture of prof. Haken proved that it would be very desirable from the experimental point of view to carry out the theoretical analysis of the interaction of excitons with phonons and a rough estimation of the average free path length for both limit instances of the coherent and incoherent types of motion of excitons applied to several specified types of material. A number of the participants taking part in discussion pointed out that for the time being there was no criterion according to which it would be possible to decide whether coherent or incoherent excitons are involved in the case of concrete material.

Although some participants who promised to come could not take part on the seminar, the whole seminar in the final discussion was considered successful and very useful not only owing to its scientific contents but also due to the possibility of personal acquaintances and establishment of closer contacts among the scientific workers in various countries.

The contents of the invited papers are presented on the following pages.

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