The Chemical Physics Section of the Atomic Physics Division

As a result of the initiative of Prof. L. Janssen in 1973, a group of European chemists and physicists set up a steering committee to investigate the possibilities of forming a European Chemical Physics group. The outcome of their activities was the proposal to constitute a new section of the Atomic Physics Division of the European Physical Society.

Why a Chemical Physics Section ? Why particularly a Chemical Physics Section when there already exists a Molecular Physics Section ? The first reason I think is implicit in the title since one of the prime objects of the steering committee was to create an organisation where chemists and physicists could come together on an equal footing. It must in fact be admitted that it was not initially the intention of the committee to affiliate the group to the European Physical Society for precisely the reason that this might give an unwished-for emphasis to physics. It was finally realised that the advantages of forming part of a well-established structure such as E.P.S. far outweighed the somewhat " psychological " disadvantages, as far as chemists were concerned, provided that due care was taken in the choice of the title and in the formulation of the statutes. These considerations militated against simply joining the Molecular Physics Section and finally, although there is no precise definition of either molecular or chemical physics, the latter undoubtedly covers a wider field than does the former.

Several specialised groups in chemical physics already exist, for example those devoted to radiofrequency spectroscopy but it is hoped that the Chemical Physics Section will enable us to cut across such subdivisions and hence to study **problems** rather than **techniques.** An important aspect of the Chemical Physics Section will be the bringing together of both theoreticians and experimentalists and here again there is a need for cross-fertilization.

One of the first scientific activities of the Chemical Physics Section is to set up an international meeting in its field. It is hoped that this will be possible in the autumn of 1976 and if all goes according to plan, details of this will be available shortly. One thing is certain : you will hear more from us in the E.P.S. News and it is our hope that we will create enough interest for us to be hearing from you.

E.A.C. Lucken, Geneva

European Physical Society Awards Hewlett - Packard - Europhysics Prize

Three Soviet physicists and a French physicist have been awarded the 1975 Hewlett-Packard-Europhysics Prize for outstanding achievement in solid state physics. The award will be presented during the third European Physical Society's General Conference to be held in Bucharest from September 9 - 12.

The four physicists who will this year share equally the prize of Sw. Frs. 20.000.— donated annually by Hewlett-Packard S.A. are as follows :

Victor S. BAGAEV
Leonid V. KELDYSH
Jaroslaw E. POKROVSKY
Michel VOOS

Bagaev and Keldysh who is a corresponding member of the USSR Academy of Sciences are both 44 years old and lead groups in the Lebedev Physical Institute in Moscow ; Pokrovsky is head of the Laboratory of Electron Processes in Semiconductor Materials of the Institute of Radioengineering and Electronics which belongs to the Lebedev Institute ; Voos, 35 years old, is a research fellow of the Comité national pour la Recherche Scientifique attached since 1967 to the Solid State Physics Group of the Ecole normale supérieure in Paris.

The panel of experts set up by the EPS to consider the first of these annual prizes donated by the computer company, Hewlett-Packard S.A., has made the award for their discovery of the condensation of excitons. Exciton (see Europhysics News Oct. 74) is the name given to an excitation of a crystal, in which an electron with negative charge and a « hole » (missing electron) with positive charge are mutually attracted and orbit around each other creating a formation similar to a hydrogen atom in which an electron orbits around a positive proton. It was theoretically predicted by Keldysh that excitons formed in very large numbers by intense laser beams would in certain materials condense to electron-hole plasma drops like water drops forming out of mist. Such drops have been observed by Bagaev, Pokrovsky, Voos and other scientists through the special optical and electrical properties that are generated in the parent crystal. Among the favourable materials for exciton condensation are silicon, the material, which is most widely used in the semiconductor electronics industry, and germanium. The discovery of exciton condensation in these materials is already having important repercussions in the development of semiconductor materials with exciting new characteristics as well as in our better understanding of solid state physics.

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