

# AUTOLOCALIZED STATES IN ORDERED AND DISORDERED MEDIA

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The Workshop "Autolocalized States in Ordered and Disordered Media" took place 5-8 August 1994 in Pushchino. More than 50 participants were involved in this workshop. We emphasize that various conferences devoted to physics of autolocalized states have been held every year in Pushchino since 1989. The reports of these conferences were published in proceedings (see [1-3]).

This workshop is devoted to actual problems of theoretical and computation modeling of autolocalized states in disordered systems and clusters. The most part of reports are related to polaron and bipolaron study. This is first due to the fact that the polaron is the simplest example of a nonlinear quasiparticle, but it has a large number of applications in condensed matter physics, in particular, the polaron study is related to fundamental problems of quantum field theory, and connected with the existence of solitonlike solutions of nonlinear equations of quantum mechanics.

On the other hand, the concept of auto localized states has been widely used in other disciplines, such as physics of polymers and glasses, physics of doped semiconductors and so on. The similarity of terms seems to imply a unity of the methods to study the autolocalization phenomena. We hope that the reports presented will confirm this opinion.

We also hope that the results of the workshop will stimulate the further study of auto localization phenomena. We thank Russian Foundation for Basic Research for financial support of the workshop.

## REFERENCES

1. Excited Polarons States in Condensed Media. Ed. V.D. Lakhno. Manchester: Manchester Univ., 1991.
2. Prospects of Developing the Theory of Polaritons. Ed. V.D. Lakhno. Pushchino PNTs RAN. 1993 [in Russian].
3. Polarons and Applications. Ed. V.D.Lakhno. Chishester: Wiley, 1994.