

T5_26 ELECTRONIC EDUCATIONAL COMPLEX “PHYSICS OF NANOMATERIALS”

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The information stream on nanotechnologies (NT) and nanomaterials (NM) – articles in journals, materials of numerous conferences and workshops, separate monographs – has considerably grown. In this connection creation of electronic educational resources (EER) on this theme is of high importance. The subject of consideration of this paper is the concept of development of multilevel electronic educational complex “Physics of nanomaterials” (“PhNM”) and its structure. Initially EER “PhNM” has been developed for support of the course “PhNM”. It contains the selected electronic lectures, guides for laboratory works, the Library of electronic materials (LEM) and a block with automated admission to performance of laboratory works. EER is available online in KSPU Intranet. The course “PhNM” is offered to students of physics and math faculty of Karelian State Pedagogical University (KSPU). The course program includes lectures and practical training. During lectures students learn the main classes of NM, experimental techniques, NM properties and areas of NT application. The part of practical training is devoted to discussion of modern NM problems and realized NT. Laboratory practical works are important part of the course. A number of works provides usage of special computer programs. To get an admission to performance of laboratory work students should answer questions of tests which were developed for realization of automatic admission. The course “PhNM” is offered to students since 2003. The extensive collection of materials on the themes of the course has been collected. This collection is a basis of LEM which includes some students’ presentations and abstracts, as well as collection of papers of the Sorosovsky educational journal. EER “PhNM” is in development stage and accordingly is often updated. As studying NT and NM is of high actuality, therefore a work at a multilevel electronic educational complex for the course “PhNM” was begun. The multilevel structure consists in creation of additional specialized versions of EER “PhNM” adapted for students at schools and for retraining of physics teachers.