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Chigirev P. M. Graphene Obtaining Methods for Nanoelectronics
This article describes the main physical and chemical properties of graphene. It describes the known method of obtaining for the creation of electronic devices. Also, the article describes the main advantages and disad vantages of these methods. It considers existing industrial production. <b>Keywords:</b> graphene, properties of graphene, methods of obtaining graphene, industrial production of graphene.
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Razumnaya A. G., Kabirov Yu. V., Rudskaya A. G., Kupriyanov M. F., Nazarenko A. V. Structural Changes in
$Y_{1-x}Cd_xMnO_3$ and $Y_{1-x}Cd_xFeO_3$ Solid Solutions
The results of X-ray structure analysis of the compounds of $Y_{1-x}Cd_xMnO_3$ and $Y_{1-x}Cd_xFeO_3$ ( $x=0,10;0,33;0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0$
0,50; 0,67) systems are presented. The compounds of $Y_{1-x}Cd_xMnO_3$ system are characterized by Pnma phase
at room temperature. By the precision researches of the structures of $Y_{1-x}Cd_xMnO_3$ solid solutions compounds
it was established, that compounds with $x = 0.10$ and $x = 0.33$ attribute to the area of morphotropic phase tran-
sition from hexagonal phase to orthorhombic perovskite one.

**Keywords:** X-ray structure analysis, solid solutions, oxygen-octahedral structures, reconstructive phase transitions

This article examines the influence of the size of quantum dots on their fundamental properties. Examples of practical use of this effect and the quantum dots themselves on the example of GaAs laser devices. We studied some kinds of quantum dots and experimental dependences. Was derived energy dependence of the quantum dot on its size. Recently, the use of such devices has become widespread, and the study of this problem is important enough for modern electronics.

Keywords: quantum, laser, quantum dot

Keywords: biosensor, suspended SiNWs, sensor sensitivity, Si-NW FET, CMOS technology

Anchutin S. A., Maksimov V. N., Morozova E. S., Golovan A. S., Shilov V. F. *Inertial Sensors Unit*....50 The article shows results of designing and making of an inertial sensors unit. Principle of operation of the unit and key features, received from tests, are shown.

**Keywords:** bank, pitch, angular velocity, acceleration, micromechanical accelerometer, micromechanical gyroscope

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