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On the base of analysis of tendencies related to junction of nano technology in microelectronics to really nano electronics we considered possible ways for following miniaturization of micro systems. It can be limited by unreasonableness decreasing sizes for micro system interface: "Man-Machine" or difficulties connected with technology of alignment of micro system components. More possible way in near future is using of nano scale sensitive elements in integrated sensors and micro systems.

Rabadanov M. Kh., Shaldin Yu. V., Bush A. A., Pietraszko A. *Pb₅(Ge_{1-x}Si_x)₃O₁₁ (x = 0.0, 0.30, 0.42) Ferroelectrics: a Feature of atomic Structure* 6

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Akopyan V. A., Panich A. E., Soloviev A. N., Lesnykh E. S., Shvetsov S. N. *The Some Physics and Mechanics Problems of Piezoelectric Actuators and Branch of Their Application* . . . 35

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In the present study the composite membranes consisting of macroporous silicon matrix saturated with the polymer gel-electrolyte based on polyvinyl alcohol etherified by phenolsulfonic acid were obtained. These structures were tested in an air-hydrogen fuel cell at the ambient conditions. Cathodic and anodic processes in electrochemical cells with symmetric and non-symmetric gas electrodes were studied. It was shown that the operation of such an air-hydrogen fuel cell is limited by the cathodic process. On the basis of the obtained data the way for the fuel cell efficiency increasing were determined.

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