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Urlichich Yu.	M.,	Danilin	N.	S.	Possible	ways	of	mir	iiati	uriz	atio	n
of satellite												

Possible ways of future products miniaturization of satellite have been presented.

A new approaches to create the nanostructures based on dsDNA molecules are briefly considered. The possible areas for practical application of nanostructures based on the dsDNA liquid-crystalline dispersion particles are outlined.

Current research of structure, methods for synthesizing and basic physical and chemical properties of nanotubulene materials (nanotubes) is reviewed. The basic fields of application of carbon nanotubes are described. The greatest attention is given to consideration of opportunity tubulene application in electronics. The binding of nanotube structure and its conductivity is analyzed. Theoretical calculations of mechanisms of several tubulene growth models, electronenergied properties of semy-endless nanotubulene materials and energy characteristics of filling processes of carbon nanotubes by atomic hydrogen are resulted. The opportunity proton conductivity of nanotube is considered.

This article contains review of normative documents in field of System on Chip (SoC) and Intellectual Property (IP). These documents had been included in Federal special purpose program "National technological base" and concerns some arguable points and problems of standardization of this field.

The necessity of the analog precision interface development for the modern radio-electronic equipment based on the analog and analog-digital LSI/VLSI is shown. The analysis of analog LSI/VLSI design problems such as time and cost expenses reduction, choice of technology, circuit and layout synthesis and optimization, simulation is done. In order to provide effective design of the microelectronic analog interface it is expedient to employ the system approach and specialized arrays as a powerful design tool.

The models and experimental data of the dynamical characteristics of photosensitive bipolar silicon N-shaped devices, based on two silicon transistors with the same substrate, are discussed in this paper. The action of infrared radiation to the times of switching is investigated. The switching time of N-device with shunting of the base-emitter junction equals to 10-20 ns. The switching time of N-device with the base current modulation equals to 15-35 ns.

Polomoshnov S. A., Chaplygin Yu. A., Amelichev V. V., Godovitsyn I. V., Ivanova O. M., Krutovertsev S. A. Transducer of Explosive Gas Sensor Based on Dielectric Diaphragm. 39

MST-based explosive gas sensor is developed and fabricated. Gas sensitive layer on the base of SnO_2 was formed on thin (1 um) dielectric diaphragm by thick film technology. Sensor characterisations for $\rm H_2, \, CH_4, \, C_4H_{10}$ is earned out, high sensitivity of the sensor is demonstrated.

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