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Development of methods for designing and optimizing the structural and technological parameters of the element base of radiophotonics, power and ultrahigh-frequency electronics based on gallium nitride and wide-band semiconductors

Key research objectives:

- Select promising design solutions for instrument structures of radio photonics, power and ultrahigh frequency (microwave) electronics based on gallium nitride and wide-band semiconductors;
- Configure the methods and models describing the technological operations of manufacturing the studied instrument structures;
- Develop and model the workflow of manufacturing the instrument structures under study;
- Model the electrical and frequency characteristics of the instrument structures under study, the thermal properties of which are determined by ab initio modeling;
- Optimize the workflow of manufacturing and operational characteristics of the instrument structures under study.

Relevance of the research:

Development of methods for computer modeling of instrument structures of radio photonics, power and microwave electronics based on gallium nitride.

Type of collaboration

research cooperation

Key words

radiophotonics, semiconductors, power, ultra-frequency

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