Belarusian State University
of Informatics and Radioelectronics
R&D Department
BSUIR, 6, P. Brovki Str., Minsk 220013, Republic of Belarus

Formation of high-k dielectrics with high permittivity by ion-plasma methods for microelectronics as a gate dielectric

Type of collaboration

research cooperation

Key words

ion-plasma, high-k, dielectrics, microelectronics

Key research objectives:

- Develop methods for ion-plasma formation of ultrathin films of dielectrics with high dielectric permittivity based on hafnium oxide and to study their electrophysical properties,
- Determine the possibility of using these films to improve the characteristics of CMOS structures and other microelectronics products.

Development of technologies for reproducible forming of ultrathin amorphous films of dielectrics based on double oxides with high dielectric permittivity and the study of their electrophysical properties is an urgent task. The development of a device based on thin-film structures using dielectrics with high dielectric permittivity can significantly exceed the technical and operational characteristics of the integrated circuits produced and harmoniously fit into the modern semiconductor industry.

Contacts

Head of research
Dmitry Golosov
PhD
golosov@bsuir.by

Technology Transfer
science@bsuir.by