

## **Conference:**

# **Advanced Materials for Optics and Biophotonics III**

### ***Chairs***

**Vladimir N. Kurlov**, Institute of Solid State Physics of RAS (Russia)

**Igor V. Reshetov**, Sechenov University (Russia)

**Petr S. Timashev**, Sechenov University (Russia)

**Irina N. Dolganova**, Institute of Solid State Physics of RAS (Russia)

**Kirill I. Zaytsev**, Prokhorov General Physics Institute of RAS, Bauman Moscow State Technical University (Russia)

### ***Secretary***

**Gleb M. Katyba**,

Institute of Solid State Physics of RAS (Russia)

### ***International Program Committee***

**Maksim Skorobogatiy**, Polytechnique Montréal (Canada)

**Marina A. Schcedrina**, Sechenov University (Russia)

**Dmitry S. Ponomarev**, Institute of Ultra High Frequency Semiconductor Electronics of RAS (Russian)

**Valery E. Karasik**, Bauman Moscow State Technical University (Russia)

**Irina A. Shikunova**, Institute of Solid State Physics of RAS (Russia)

**Gennady A. Komandin**, Prokhorov General Physics Institute of RAS (Russia)

**Igor E. Spector**, Prokhorov General Physics Institute of RAS (Russia)

**Alexei K. Fedorov**, Russian Quantum Center (Russia)

**Vladimir A. Lazarev**, Bauman Moscow State technical University (Russia)

**Anastasia I. Shpichka**, Sechenov University (Russia)

**Mikhail S. Kovalev**, Bauman Moscow State Technical University (Russia)

**The main goal** of the Conference is to review and discuss the recent developments of novel and advanced materials of optics and biophotonics and related applications. The main attention will be paid to novel materials for optics, biophotonics, and regenerative medicine, their optical performance, biocompatibility, and resistance to aggressive environments, such as blood and human body fluids. The conference scope includes materials for medical instruments and biological research, waveguiding and radiation delivery, medical implantation, materials for artificial biotissues and 3D bioprinting, etc. The related problems of their manufacturing and investigation will be discussed.

## ***Topics:***

- Novel technologies for fabrication of advanced materials of optics and biophotonics;
- Sapphire shaped crystals as a prospective material for biology and medicine;
- Modern instruments of medical diagnosis, therapy and surgery relying on the advanced materials;
- Problems of biotissue transplantation;
- Biofriendly materials with advanced optical performance;
- 3D bioprinting and related techniques;
- Novel materials for regenerative medicine;
- Application of cell matrixes (scaffolds);
- Advanced colloidal systems for applications in biology and medicine.