

## **The CCU “Modern Microscopy”**

### **Information**

The CCU [web page](#) on the “Modern research infrastructure of the Russian Federation” website  
The CCU “Modern Microscopy” of the Federal State Educational Institution of Higher Education “Southern Federal University” was established by the order of the Southern Federal University N128-OD dated 23.12.2008 at the premises of Kogan Neurocybernetics Research Institute of SFedU (office 3, 194/1, Stachki av. Rostov-on-Don).

The CCU “Modern Microscopy” is equipped with the FEI Tecnai G2 Spirit BioTwin transmission electron microscope and a sample preparation complex.

The center gives an opportunity to share access to the scientific equipment and provides services to the departments of the Southern Federal University and other higher educational institutions and organizations in the Southern Federal District, Russian Federation and to the Research and Educational centers abroad on a contractual basis.

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### **Aims and objectives of the Center**

- Development of the scientific, innovative and commercial activity in the electron microscopy by combining and sharing the unique and expensive equipment.
- Conducting modern level research using the existing scientific equipment.
- Provision of measurement uniformity and reliability while conducting research using the CCU equipment.
- Training the specialists and highly qualified personnel using the modern scientific equipment of the CCU.
- CCU development.

### **Areas of scientific activity**

The ultrastructural study of the cellular functioning mechanisms of living organisms under the normal conditions and under the pathogenic environmental factors influence. Life Sciences are the priority areas for scientific, technical and technological development in Russia.

Mineral powder and polymer materials ultrastructural research. The priority area for scientific, technical and technological development in Russia is the industry of Nanosystems.

The scientific, technical and other activities. Development and certification of the preparation methods for the research objects to be studied in a transmission electron microscope. The research objects include: viruses, microorganisms, fungi, plants. Development of methods for quantitative and qualitative analysis of the electron diffraction patterns of the studied materials.