

October 25, 2017

## Collaboration Agreement

Prof. Jiang Li's group from Shanghai Institute of Ceramics, Chinese Academy of Sciences (SICCAS) are doing research on rare earth dope garnet and sesquioxide optical ceramics for laser and scintillator applications. Dr. Roman Yavetskiy's group from Institute for Single Crystals, NAS of Ukraine (ISC NASU) are studying on fabrication and characterization of cubic oxide nanopowders and optical ceramics for photonic applications. Taking into account the similar research field and the complementary methods of obtaining and investigations between both sides, it is envisaged that collaboration research will begin under the following guidelines:

### 1. SCOPE OF INTERESTS

Materials to be studied will include optical ceramics, variously doped, to be used in the laser, phosphor and scintillator applications. Their fabrication and optical properties are of special attention. Microstructure, spectral characteristics and optical defects will be studied as well by the available experimental methods.

### 2. SHARE OF RESPONSIBILITIES

It is envisaged that powder synthesis and optical ceramics preparation will be undertaken in Shanghai, where also some characterization experiments such microstructure, thermal properties, mechanical properties, optical transmittance and optical scattering loss can be performed if appropriate. The fabrication of oxide optical ceramics, the investigations of spectral characteristics, laser performance and scintillating properties will be performed in Kharkiv with possibly still other experiments, if appropriate.

### 3. FORMS OF INTERACTION

Provision and sharing of samples and achieved results of experiments, joint dissemination of results. Exchange visits to discuss experiment strategy, achieved results and plans for future work. Short or longer term visits of PhD students or postdoctors may also be arranged.

### 4. RESOURCES

The research work will be supported by regular domestic financial sources of any kind at each side. For exchange visits in particular, subsistence expenses will be covered by the appropriate sources within the availability limit of the respective hosts.

Signed by participating research coordinators

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