

Competition for grants in the priority area of RSF activities “Basic and Exploratory Scientific Research, Conducted by International Research Teams” (in cooperation with the National Natural Science Foundation of China - NSFC)

No	RSF Project Number	Project title	Russian organization	Russian PI	Chinese PI	Chinese organization
1	<u>24-43-00003</u>	Novel reagents for analytical derivatization: investigation of their advantages and limitations for chromatography-based separation methods coupled with mass spectrometry detection	Kuban State University	Temerdashev A.Z.	Feng Y.-Q.	Wuhan University
2	<u>24-43-00006</u>	Design, Synthesis and Properties of Hybrid Cu(I) Halide X-ray Scintillation Materials	Federal State Autonomous Educational Institution of Higher Education "Siberian Federal University"	Molokeev M.S.	Xia Z.	South China University of Technologies
3	<u>24-43-00011</u>	Study on Earth-abundant Transition Metal-Catalyzed Asymmetric Hydrogenations Based on Multiple Attractive Dispersion Interactions	N.D. Zelinsky Institute of Organic Chemistry RAS	Gridnev I.D.	Znang W. B.	Shanghai Jiao Tong University
4	<u>24-43-00022</u>	Solution processable high performance organic photovoltaic materials and devices	N.D. Zelinsky Institute of Organic Chemistry RAS	Rakitin O.	Chen Y.	Nankai University
5	<u>24-43-00041</u>	Shedding new light on the mechanism of vision through the photoinduced nonadiabatic dynamics of photoreceptor proteins	Federal State Budgetary Educational Institution of Higher Education Lomonosov Moscow State University	Bochenkova A.V.	Lan, Z.	South China Normal University
6	<u>24-43-00044</u>	Studies of Supercritical Combustion Kinetics of hydrogen and ammonia fuels	Voevodsky Institute of Chemical Kinetics and Combustion Siberian Branch of the Russian Academy of Sciences	Krasnoperov L.N.	Hao Zhao	Peking University
7	<u>24-43-00045</u>	MOF-based heterojunction photocatalysts for solar fuel generation: design and in-depth mechanism study	International Tomography Center, Siberian Branch of the Russian Academy of Sciences	Fedin M.	Zhang L.	China University of Geosciences

8	<u>24-43-00049</u>	Next generation biomedical glue engineered via modular assembly strategy for urgent care	Federal State Budgetary Educational Institution of Higher Education Lomonosov Moscow State University	Kozhunova E.	Ma Ch.	Tsinghua University
9	<u>24-43-00069</u>	New catalysts and materials for capture and purification of CO ₂ and its conversion into valuable products	Federal State Budgetary Educational Institution of Higher Education Lomonosov Moscow State University	Beletskaya I.P.	Yang Y.	Nanjing Tech University
10	<u>24-43-00081</u>	Fundamental study on directional fractionation and conversion of lignocellulose into chemicals	Federal State Budgetary Educational Institution of Higher Education "M.I.Platov South-Russian State Polytechnic University (NPI)"	Chernyshev V.M.	Wei Qi	Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences
11	<u>24-43-00084</u>	Photodynamic therapy of chronic purulent wounds using dye-based polymeric photosensitizing systems	N.N.Semenov Federal Research Center for Chemical Physics, Russian Academy of Sciences	Solovieva A.B.	Qingfeng Li	Shanghai Jiao Tong University
12	<u>24-43-00096</u>	The Development of Bifunctional mF-Catalysts for Ring-Opening Polymerizations	A.N. Nesmeyanov Institute of Organoelement Compounds of Russian Academy of Sciences	Chusov D.	Saihu L.	College of Chemistry and Chemical Engineering, Xiamen University
13	<u>24-43-00111</u>	Development of selective methods for the functionalization of organic compounds with the formation of carbon-carbon and carbon-heteroatom bonds, including those involving technological small molecules	N.D. Zelinsky Institute of Organic Chemistry RAS	Terentev A.	He L.	Nankai University
14	<u>24-43-00142</u>	The electrochemical co-reduction of carbon dioxide and nitrogenous species for urea synthesis: in-depth study of reaction mechanisms	Frumkin Institute of Physical Chemistry and Electrochemistry Russian Academy of Sciences	Rudnev A.V.	Li J.-F.	Xiamen University
15	<u>24-43-00153</u>	Transformation products and their toxic variation of nitrogen containing emerging contaminants during catalytic ozonation with interface-confined effects of carbon materials (TranX-NECs)	Federal State Autonomous Educational Institution of Higher Education "Northern (Arctic) Federal University	Lebedev A.T.	Zhang Y.	Nanjing Tech University

16	<u>24-43-00154</u>	Development of ultra-fine grained biodegradable Zn-Li based alloys with improved mechanical and functional properties for mandible fracture implants	Ufa University of Science and Technology	Kulyasova O.	Xia D.	Peking University
17	<u>24-43-00156</u>	Synthesis and study of the microstructure regulation, frequency and cyclic stability and related mechanism for giant magnetocaloric materials	Daghestan Federal Research Centre of the Russian Academy of Sciences	Gamzatov A.	Wang J.	Insititute of Physics, Chinese Academy of Sciences
18	<u>24-43-00162</u>	Prediction, design and synthesis of new borate nonlinear optical crystals	Autonomous Non-Profit Organization for Higher Education "Skolkovo Institute of Science and Technology"	Oganov A.	Pan S.	Xinjiang Technical Institute of Physics and Chemistry, Chinese Academy of Sciences.
19	<u>24-43-00171</u>	Novel magnetoelectric nanomaterials for wireless electrical stimulation in neuroregenerative medicine	National Research Tomsk Polytechnic University	Chernozem R.V.	Fan H.	Sichuan University
20	<u>24-43-00178</u>	Efficient Semitransparent Polymer Solar Cells based on new Ultralow Bandgap Nonfullerene Acceptors	A.N. Nesmeyanov Institute of Organoelement Compounds of Russian Academy of Sciences	Khokhlov A.	Liu Jun	Changchun Institute of Applied Chemistry of Chinese Academy of Sciences
21	<u>24-43-00182</u>	Study on microstructure regulation of novel ternary Bi-O-S nano-catalysts and their mechanism of efficient and selective photothermal catalysis for CO ₂ hydrogenation	Federal Research Center Boreskov Institute of Catalysis	Selishchev D.S.	Zhang G.	Wuhan University of Technology
22	<u>24-43-00196</u>	Ultrasensitive immunological testing for food safety based on novel immunoreactants against pesticides integrated with signal enhancement approaches	Federal State Institution "Federal Research Centre "Fundamentals of Biotechnology" of the Russian Academy of Sciences"	Eremin S.A.	Xu C.	Jiangnan University
23	<u>24-43-00215</u>	Understanding the kinetics of photoelectrocatalytic reactions based on in-situ diagnostics by synchrotron radiation and artificial intelligence methods	Southern Federal University	Soldatov A.V.	Wei Shiqiang	University of Science and Technology of China

24	<u>24-44-00004</u>	Multifaceted adaptation of <i>Mycobacterium tuberculosis</i> to new-generation antibiotics at population and individual levels and impact on transmission	St. Petersburg Pasteur Institute	Mokrousov I.	Shen A.D.	Children's Hospital Affiliated to Zhengzhou University (Zhengzhou, China)
25	<u>24-44-00006</u>	Comparative metagenomics study on carbon-cycling microbiome in permafrost regions in Yamal and the Qinghai-Tibet Plateau	Federal State Budgetary Educational Institution of Higher Education "Saint-Petersburg State University"	Abakumov E.	Dr. Sizhong Yang	Северо-западный институт экологии и ресурсов (NIEER), Китайская академия наук (CAS)
26	<u>24-44-00009</u>	Development of novel coelenterazine analogues and coelenterazine-dependent bioluminescent reporters for in vitro and in vivo bioanalytical applications	Institute of Biophysics of Siberian Branch of Russian Academy of Sciences	Vysotski E.	Li M.	Shandong University
27	<u>24-44-00023</u>	The molecular mechanism of how histone H3K36 methylation regulates chromatin structure and genome activity	Institute of Gene Biology RAS	Ulianov S.V.	Dong F.	Life Sciences Institute, Zhejiang University
28	<u>24-44-00027</u>	Study on the correlation and evolutionary mechanism of angiosperm floras between the Qinghai-Tibetan Plateau and the Arctic	Institution of Russian Academy of Sciences, The Central Siberian Botanical Garden, the Siberian Branch of the RF Academy of Sciences	Erst A.S.	Wang W.	Institute of Botany, Chinese Academy of Sciences
29	<u>24-44-00048</u>	Trematode Extracellular Vesicles (EVs) mediate metabolic reprogramming of host liver cells involved in liver fibrosis	Institute of Cytology and Genetics, Siberian Branch of Russian Academy of Sciences	Pakharukova M.	Cheng Guofeng	Shanghai Tenth People's Hospital, Tongji University School of Medicine
30	<u>24-44-00079</u>	Comparative analysis on ecological, genetic, and cross-species infection features of important viruses harbored in bats and bat-parasitizing ticks across Eurasia	Federal State Budgetary Institution "National Research Centre for Epidemiology and Microbiology named after the honorary academician N.F. Gamaleya" of the Ministry of Health of the Russian Federation	Alkhovsky S.	Zhengli Shi	Wuhan Institute of Virology, Chinese Academy of Sciences

31	<u>24-44-00082</u>	Development of optical methods for studying glycation and hemodynamics of biological tissues in diabetes mellitus	Saratov State University of N. G. Chernyshevsky	Tuchin V.V.	Li D.	Huazhong University of Science and Technology, Wuhan, China
32	<u>24-44-00093</u>	Diversity and feeding strategies of predatory protists and their application to the control of harmful algal blooms	I.D. Papanin Institute for Biology of Inland Waters Russian Academy of Sciences	Tikhonenkov D.	Gong Y.	Институт гидробиологии Китайской академии наук
33	<u>24-44-00094</u>	Local adaption of Arctic gyrfalcons	Institute of Plant and Animal Ecology RAS (Ural Div.)	Sokolov A.A.	Xiangjiang Zhan	Institute of Zoology, Chinese Academy of Sciences
34	<u>24-44-00096</u>	Mechanisms of community assembly of amoeboid protist in anthropogenic ecosystems of urban parks in megacities of Russia and China	Federal State Budgetary Educational Institution of Higher Education "Saint-Petersburg State University"	Smirnov A.V.	Yang J.	Institute of Urban Environment, Chinese Academy of Sciences
35	<u>24-44-00099</u>	Development of a database for cell type formation trajectories in evolution and development	Institute for Information Transmission Problems of the Russian Academy of Sciences (Kharkevich Institute)	Lyubetsky V.A.	Yang Jian-Rong	Sun Yat-sen University
36	<u>24-44-00107</u>	Functional interplay between Argonautes and DNA phosphorothioation restriction-modification systems in antiviral defence in prokaryotes	Institute of Gene Biology RAS	Kulbachinskiy A.	Chen C.	The First Affiliated Hospital, Shenzhen University
37	<u>24-45-00010</u>	Photo-sleep therapy of traumatic brain injury in humans and mice	Saratov State University of N. G. Chernyshevsky	Semyachkina-Glushkovskaya O.	Tingting YU	Хуачжунский университет науки и технологий (WNLO)
38	<u>24-45-00012</u>	Spray nebulization of drugs and their targeted delivery to the respiratory tract	National Research Tomsk Polytechnic University	Sazhin S.S.	Cao B.	Tsinghua University
39	<u>24-45-00020</u>	Polycationic photosensitizers are an effective anticancer agent that destroys cancer stem cells and neovascularization and inhibits cancer invasion into adjacent tissues	Federal State Autonomous Educational Institution of Higher Education I.M. Sechenov First Moscow State Medical University of the Ministry of Healthcare of the Russian Federation (Sechenovskiy University)	Reshetov I.V.	Chen Zhi-Long	Huadong Hospital, Fudan University

40	<u>24-45-00021</u>	Construction of multi-scale ordered structure in hybrid nanogels to realize light-controllable target drug delivery for melanoma treatment	Moscow Institute of Physics and Technology	Novikov S.	Xiangwei Zhao	Southeast University
41	<u>24-45-00031</u>	The Role and Mechanism of Inhibition of PCSK9 to Enhance Particle Therapy by Reshaping Tumor Immune Microenvironment in STK11-Mutant Lung Adenocarcinoma	Peoples' Friendship University of Russia named after Patrice Lumumba	Gordon K.B.	Bao Xuhui	Institute of Therapeutic Cancer Vaccines, Fudan University Pudong Medical Center, Shanghai, China
42	<u>24-45-00032</u>	Mechanisms and therapeutic targeting of the pro-atherosclerotic and pro-thrombotic actions of C-reactive protein	Federal State Budgetary Institution «National Medical Research Centre of Cardiology named after academician E.I. Chazov» of the Ministry of Health of the Russian Federation	Melnikov I.	Ji S.R.	Lanzhou University
43	<u>24-45-00050</u>	Antifungal effect of probiotics' small RNA and its molecular mechanism of trans-kingdom transfer to fungi and the pathogenic fungi death	State Educational Institution of Higher Professional Education "Northwestern State Medical University named after II Mechnikov" Ministry of Health of the Russian Federation	Vasilyeva N.	Zhang Feng-Min	Harbin Medical University
44	<u>24-45-00052</u>	Molecular and cellular mechanisms of host a-synuclein pathology-induced accelerated aging in grafts of dopaminergic neurons in Parkinson's disease	Research Center of Neurology	Illarioshkin S.N.	Li, Wen	China Medical University
45	<u>24-45-00060</u>	Theoretical Modeling, Simulation and Capacity Building of Sino-Russian Medical Surge Response System in the Perspective of Complex Networks	Federal State Autonomous Educational Institution of Higher Education I.M. Sechenov First Moscow State Medical University of the Ministry of Healthcare of the Russian Federation (Sechenovskiy University)	Avdeev S.N.	Wu Qunhong	Harbin Medical University

46	<u>24-45-00067</u>	Novel genetic determinants in Chinese and Russian patients with autism spectrum disorders	Saint-Petersburg State Pediatric Medical University	Suspitsin E.	Kun Xia	Central South University
47	<u>24-45-00071</u>	The role of deubiquitinating enzymes in myocardial ischemia reperfusion injury and discovery of leading compounds	Bashkortostan State Medical University	Samorodov A.V.	Yi Wang	Hangzhou Normal University
48	<u>24-45-00073</u>	Investigation of the role of selenium metabolism dysregulation in pathogenesis of arthropathies as a basis for development of personalized system for risk assessment and prognosis of cartilage damage severity	Federal State Autonomous Educational Institution of Higher Education I.M. Sechenov First Moscow State Medical University of the Ministry of Healthcare of the Russian Federation (Sechenovskiy University)	Skalny A.	Zhang Feng	Xi'an Jiaotong University (西安交通大学)
49	<u>24-46-00005</u>	China-Russia joint research of fungal diversity for discovery of novel insecticidal and herbicidal substances	All-Russian Institute of Plant Protection	Berestetskiy A.	Hu Q.	College of Plant Protection, South China Agricultural University
50	<u>24-46-00024</u>	Mechanisms of resistance to neonicotinoids in the tobacco whitefly <i>Bemisia tabaci</i> and natural enemies population	All-Russian Institute of Plant Protection	Belyakova N.	Yang X.	Institute of Vegetables and Flowers, Chinese Academy of Agricultural Sciences
51	<u>24-46-00026</u>	Development of rapid immunochemical test systems for fluoroquinolones with varied selectivity based on the structural studies of haptens and antibodies	Federal State Institution "Federal Research Centre "Fundamentals of Biotechnology" of the Russian Academy of Sciences"	Hendrickson O.	Xing Shen	South China Agricultural University SCAU