



Synchrotron and Free electron laser Radiation:  
generation and application (SFR-2022)  
Budker INP, Novosibirsk  
June 27 – 30, 2022

## Conference Programme

ZOOM session for all days: <https://us06web.zoom.us/j/81710231154>

# Monday 27 June 2022

**9:00 – 10:00 Регистрация**

**10:00 – 12:10 Conference opening, Session “SR and FEL sources: Plenary 1”**

**Conveners: Nikolay Vinokurov; Konstantin Zolotarev**

10:00 Welcome speech by SSRC Director academician Gennady N. KULIPANOV

10:10 Ускорительный комплекс СКИФ и общий статус проекта. Е.Б. Левичев

10:30 Synchrotron radiation application in the BINP. ZOLOTAREV, Konstantin

10:50 MOLECULAR STRUCTURAL DYNAMICS STUDY USING TIME-RESOLVED DIFFRACTION  
#110 Key Young Oang **-(Remotely by ZOOM)-**

11:10 EXPERIMENTS ON THE SHORT X-RAY PULSE GENERATION AT THE NOVOFEL FACILITY  
#97 Yaroslav Getmanov

11:30 Перспективы развития синхротронных исследований в ДВФО. Ю.Н. Кульчин

11:50 STATUS OF WORK ON CREATION SUPERCONDUCTING INSERTION DEVICES FOR  
SYNCHROTRON RADIATION GENERATION ON SKIF SYNCHROTRON LIGHT FACILITY #100  
Vitaliy Shkaruba

12:10 Review of experiments at the synchrotron radiation in the high-energy X-ray range on VEPP-  
4M storage ring. К.Е. Kuper

**12:30 – 12:40 Group photo (главный вход в ИЯФ)**

**12:40 – 14:00 Lunch, free time**

**14:00 – 18:20 Session “SR and FEL sources and centers: Plenary 2”**

**Conveners: Nikolay Vinokurov; Konstantin Zolotarev**

14:00 Источники синхротронного излучения и рентгеновские лазеры на свободных электронах.  
А. Е. Благоев

14:20 Источник синхротронного излучения четвертого поколения с рентгеновским лазером на  
свободных электронах «СИЛА»: концепция ускорительно-накопительного комплекса. Р. А.  
Сенин

14:40 25 YEARS OF X-RAY REFRACTIVE OPTICS DEVELOPMENT – NEW OPPORTUNITIES FOR  
COHERENCE RELATED APPLICATIONS #143 A. Snigirev

15:00 THE SMALL-ANGLE SCATTERING BEAMLINE AT THE KURCHATOV SYNCHROTRON RAD.  
SOURCE - STATUS AND LATEST RESULTS #22 Georgy Peters **-(Remotely by ZOOM)-**

15:20 Модернизация Курчатовского источника синхротронного излучения. В. Н. Корчуганов

15:40 ФОТОИНЖЕКТОРНЫЙ КОМПЛЕКС ИФ РАН: РАСЧЕТНЫЕ ПАРАМЕТРЫ И ТЕКУЩАЯ  
СТАДИЯ РАЗРАБОТКИ #89 Nikolai Peskov

16:00 4TH GENERATION SYNCHROTRON RADIATION FACILITY SKIF: SCIENTIFIC PROGRAM AND FUNCTIONALITY OF THE FIRST-PHASE BEAMLINES #149 Zubavichus Y.V.

**16:20 – 16:40 Coffee break**

**16:40 – 16:00 SR technological application and X-ray apparatus**

**Conveners: Anton Nikolenko; Konstantin Kuper**

16:40 INVESTIGATION OF "DUSTING" USING SYNCHROTRON RADIATION #7 K. Ten

17:00 ПРИМЕНЕНИЕ LIGA-РАСТРОВ ДЛЯ ФИЛЬТРАЦИИ РАССЕЯННОГО ИЗЛУЧЕНИЯ В ДЕНТАЛЬНОЙ РЕНТГЕНОГРАФИИ #11 Evgeny Iv. Palchikov

17:20 FINE CRYSTAL STRUCTURE, SPECTRAL PROPERTIES AND MICROMORPHOLOGY OF FILMS OF ENERGY-INTENSIVE COMPOUNDS OBTAINED BY CRYSTALLIZATION FROM THE GAS PHASE ON VARIOUS SUBSTRATES #38 Aleksandr Stankevich

17:40 SOFT X-RAY SR STATION «KOSMOS» AT THE VEPP-4 STORAGE RING: STATUS AND XAFS APPLICATIONS. #117 Anton Nikolenko

18:00 COHERENT X-RAY BEAM-EXPANDER FOR ADVANCED LIGHT SOURCES #122 Zverev Dmitrii

18:20 Оборудование и испытательные стенды для исследования свойств материалов на синхротронном излучении (СИ). Александр Долгих, ООО «Мелитэк».

**19:00 – 21:00 Фуршет (столовая ИЯФ)**

# Tuesday 28 June 2022

## 10:00 – 12:00 THz radiation application

**Conveners: Vasily Gerasimov; Vitaly Kubarev**

10:00 COMMISSIONING OF THE FIRST FEL WITH VARIABLE-PERIOD UNDULATOR #86  
Oleg Shevchenko

10:30 NOVEL EXPERIMENTS ON THZ PLASMONICS USING NOVOSIBIRSK FREE  
ELECTRON LASER #32 Vasily Gerasimov

11:00 COMPARISON OF DIFFERENT APPROACHES FOR DEVELOPMENT OF  
TERAHERTZ FOCUSING OPTICS #81 Vladimir Pavelyev

11:20 ТЕРАГЕРЦОВЫЙ ЛАЗЕР НА СВОБОДНЫХ ЭЛЕКТРОНАХ С ЭЛЕКТРОДИНАМИЧЕСКОЙ  
СИСТЕМОЙ, ОСНОВАННОЙ НА ВОЗБУЖДЕНИИ СУПЕРМОД ТАЛЬБОТ-ТИПА #91 Andrei  
Savilov

11:40 THE POSSIBILITY OF CONTROL OF THE PHASE OF OPTICAL FIELD IN MAGNETIC  
FIELD #77 Evgeniy Chesnokov

**12:00 – 14:00 Lunch, free time**

## 14:00 – 16:20 THz radiation application

**Conveners: Vasily Gerasimov; Vitaly Kubarev**

14:00 КИЛОАМПЕРНЫЙ ЭЛЕКТРОННЫЙ ПУЧОК ЛИНЕЙНОГО ИНДУКЦИОННОГО  
УСКОРИТЕЛЯ КАК ДРАЙВЕР ДЛЯ СУБМИЛЛИМЕТРОВОГО ЛСЭ #150 Е.С. Сандалов

14:20 TERAHERTZ GHOST IMAGING WITH SPECKLED LIGHT USING NOVOSIBIRSK FREE  
ELECTRON LASER RADIATION #54 Ildus Khasanov

14:40 PLASMA DISCHARGE IN A NON-UNIFORM GAS FLOW, SUSTAINED BY THE POWERFUL  
RADIATION OF NOVOSIBIRSK FREE ELECTRON LASER, AS A POINT-LIKE SOURCE OF  
VACUUM ULTRAVIOLET RADIATION #76 Alexander Sidorov

15:00 DEVELOPMENT AND CHARACTERIZATION OF IMPULSE THZ HEATING METHOD USING  
EPR OF MAGNETOACTIVE COMPOUNDS #78 Sergey Tumanov

15:20 ТЕРАГЕРЦОВЫЕ ГИРОТРОНЫ С ПРИОСЕВЫМИ ЭЛЕКТРОННЫМИ ПУЧКАМИ НА  
ВЫСОКИХ ЦИКЛОТРОННЫХ ГАРМОНИКАХ ДЛЯ ФИЗИЧЕСКИХ ПРИЛОЖЕНИЙ #103  
Andrei Savilov

15:40 ЭЛЕКТРОДИНАМИЧЕСКАЯ СИСТЕМА МОЩНОГО ТГЦ ЛСЭ НА ОСНОВЕ ЛИНЕЙНОГО  
ИНДУКЦИОННОГО УСКОРИТЕЛЯ «ЛИУ»: МОДЕЛИРОВАНИЕ И «ХОЛОДНЫЕ» ТЕСТЫ #90  
Nikolai Peskov

16:00 THZ REFRACTOMETRY OF METAL SURFACES VIA SURFACE PLASMON  
INTERFEROMETRY ON THE NOVOSIBIRSK FREE ELECTRON LASER #15 V Gerasimov

**16:20 – 16:40 Coffee break**

**16:40 – 18:00 Poster Session**

# Wednesday 29 June 2022

Conveners: Boris Tolochko; Marat Sharafutdinov

## 09:00 – 12:00 X-ray structural analysis

9:00 статус экспериментов ИГИЛ СО РАН с использованием синхротронного излучения ВЭПП-3/ВЭПП-4. Э.Р. Прууэл

9:30 MICROSTRIP SILICON DETECTOR FOR STUDY OF ULTRA-FAST PROCESSES AT THE SYNCHROTRON RADIATION BEAM #39 Lev Shekhtman

10:00 Многоэлементные сенсоры ионизирующего излучения на основе арсенида галлия, компенсированного хромом. Тяжев Антон

10:30 DEVELOPMENT OF A ONE-DIMENSIONAL COUNTING DETECTOR FOR DIFFRACTION EXPERIMENTS AT A SYNCHROTRON RADIATION BEAM #19 Anastasia Glushak

## 10:45 – 11:00 Coffee break

11:00 GENERATION OF NEAR-INFRARED RADIATION HARMONICS BASED ON REGULAR POLYMER MATRICES WITH CONE AND CYLINDRICAL PORE GEOMETRY AND COATINGS APPLIED ON THEM. #66 Victor Asadchikov.

11:30 REACTIVE SPS OF AL<sub>2</sub>O<sub>3</sub>-CE:(Y,GD)AG COMPOSITE CERAMICS: APPROACH OPTIMIZATION BY SR XRD INVESTIGATIONS #20 Alexey Zavjalov

11:45 ИССЛЕДОВАНИЕ УСЛОВИЙ ФОРМИРОВАНИЯ А2-ФАЗЫ В МЕХАНОКОМПОЗИТАХ СИСТЕМЫ TI-AL МЕТОДАМИ СИНХРОТРОННОГО ИЗЛУЧЕНИЯ #139 Alexey Sobachkin

12:00 ON THE FEATURES OF AN IMMISCIBLE AU-CO ALLOY OBTAINED BY MECHANICAL ALLOYING UNDER VARIOUS CONDITIONS USING SR #128 Timofey Tolmachev

12:15 IN-SITU STUDY OF STRUCTURAL CHANGES DURING HEATING OF HA<sub>p</sub> NANOCOMPOSITES MODIFIED BY TiO<sub>y</sub> #4 Danil Eselevich

12:30 ON THE PHASE CONSTITUTION OF AL - BASED METALLIC-INTERMETALLIC LAMINATE (MIL) COMPOSITES #26 Yulia Emurlaeva

12:45 ANALYSIS OF THE EVOLUTION OF DISLOCATION STRUCTURE OF POLYCRYSTALLINE MATERIALS BY USING SYNCHROTRON X-RAY DIFFRACTION #43 Ivan Ivanov

## 13:00 – 14:00 Lunch, free time

## 14:00 – 16:00 X-ray structural analysis

14:00 Эксперименты РФЯЦ ВНИИТФ с использованием синхротронного излучения ВЭПП-3/ВЭПП-4. Е.Б. Смирнов **-(Remotely by ZOOM)-**

14:30 COMPRESSIBILITY, POLYMORPHISM AND STABILITY OF THE HIGH-PRESSURE K-CA CARBONATES AS PART OF THE DEEP CARBON CYCLE #10 Anna Likhacheva

14:45 КОМПЛЕКСНОЕ СТРУКТУРНОЕ IN SITU ИССЛЕДОВАНИЕ ND<sub>1.6</sub>CA<sub>0.4</sub>NI<sub>1</sub>-YCUYO<sub>4</sub>+Δ (Y = 0.0-0.4) С ПРИМЕНЕНИЕМ ПОРОШКОВОЙ РЕНТГЕНОВСКОЙ И НЕЙТРОННОЙ ДИФРАКЦИИ В СРЕДАХ С РАЗЛИЧНЫМ ПАРЦИАЛЬНЫМ ДАВЛЕНИЕМ КИСЛОРОДА. #14 Denis Mishchenko

15:00 STRUCTURAL-PHASE TRANSFORMATIONS AT THE INTERFACE OF METALS UPON FRICTIONAL LOADING: OBSERVATIONS USING SR DIFFRACTION #47 Kemal Emurlaev

15:15 APPLICATION OF HIGH-ENERGY X-RAYS AND ATOMIC PAIR DISTRIBUTION FUNCTION ANALYSIS TO STRUCTURAL DIAGNOSTICS OF CATALYSTS #55 Vera Pakharukova

15:30 STUDY OF EXTREME HYDRODYNAMIC PHENOMENA IN LASER PLASMA BY ULTRA-HIGH RESOLUTION COHERENT X-RAY RADIOGRAPHY #68 Sergey Makarov

15:45 CRYSTAL STRUCTURE ANALYSIS OF NICKEL-BASED CATALYSTS #69 Maxim Mikhnenko

**16:00 – 16:20 Coffee break**

**16:20 – 18:00 X-ray structural analysis**

16:20 STRUCTURAL ANALYSIS OF THROMBIN-BINDING G-QUADRUPLEX APTAMERS BY SAXS METHOD #70 Polina Nikolaeva

16:35 APPLICATION OF SYNCHROTRON RADIATION FOR IN SITU XRD INVESTIGATION OF THERMO-STIMULATED DECAY OF MAGNESIUM HYDRIDES #63 Viktor Kudiiarov

16:50 ОДНОЭЛЕМЕНТНЫЙ ШИРОКОПОЛОСНЫЙ МОНОХРОМАТОР НА ОСНОВЕ ПЛОСКОЙ VLS-РЕШЕТКИ #73 Evgenii Ragozin

17:05 HIGH-TEMPERATURE IN SITU SYNCHROTRON XRD STUDY OF CR/MO-COATED ZR-1NB ALLOY #31 Maxim Syrtanov

17:20 FLAT-FIELD CORRECTION ON X-RAY TOMOGRAPHIC IMAGES USING DEEP CONVOLUTIONAL NEURAL NETWORKS. #24 Artem Grigorev

17:35 NEURAL NETWORK MODELS FOR WORK WITH TOPOGRAPHIC DATA #42 Andrey Yamaev

# Thursday 30 June 2022

## 10:00 – 12:00 X-ray fluorescent analysis and X-ray spectroscopy

**Conveners: Vladimir Kriventsov; Rishat Valeev**

- 10:00 CURRENT STATUS OF EXAFS STATION OF SSTRC. USING XAFS SPECTROSCOPY FOR THE STUDY OF NANOMATERIALS OF COMPLEX COMPOSITION #136 Vladimir Kriventsov, invited
- 10:20 SR X-RAY LUMINESCENCE, XANES AND IN SITU HEATING XRD OF SRTIO<sub>3</sub>-TIO<sub>2</sub> COMPOSITE CERAMICS AS PROMISING THERMOELECTRIC MATERIAL #13 Alexey Zavjalov
- 10:40 COMPLEX STUDY OF LOOSE CAVE SEDIMENTS OF THE CENTRAL ASIAN REGION USING XRF SR #34 Julia Sholokhova **-(Remotely by ZOOM)-**
- 11:00 SPIN-ORBIT INTERACTION IN OSMIUM COMPLEXES #9 Igor Asanov
- 11:20 TIO<sub>2</sub>- AND G-C<sub>3</sub>N<sub>4</sub>-BASED PHOTOCATALYSTS FOR CO<sub>2</sub> REDUCTION: XAS STUDY #88 Andrey Saraev
- 11:40 PHOTOCHEMICAL BEHAVIOR AND EFFECT OF NO<sub>x</sub> ON FLUORINATED GRAPHITE USING A WHITE-BEAM SYNCHROTRON RADIATION #65 Galina Semushkina

**12:00 – 14:00 Lunch, free time**

## 14:00 – 16:00 SR for medicine and biology application

**Conveners: Konstantin Zolotarev**

- 14:00 Использование РФА-СИ в палеорекострукциях и биоиндикации экологического статуса ихтиофауны, Федотов А.П. **-(Remotely by ZOOM)-**
- 14:20 HIGH-RESOLUTION SYNCHROTRON X-RAY PHASE-CONTRAST TOMOGRAPHY STUDIES OF THE POST MORTEM HUMAN PINEAL GLAND #25 Yuri Krivonosov
- 14:40 X-RAY STUDIES OF CONCREMENTS IN THE CHOROID PLEXUS AND PINEAL GLAND OF THE HUMAN BRAIN #23 Denis Zolotov **-(Remotely by ZOOM)-**
- 15:00 SMART TOMO ENGINE NOVEL TOMOGRAPHY RECONSTRUCTION TOOL #28 Mikhail Shutov
- 15:20 SYNCHROTRON BASED X-RAY FLUORESCENCE MICROSCOPY FOR STUDYING SODIUM DEPOSITS IN CARDIAC AND STRIATED MUSCLES #41 Igor Artyukov
- 15:40 A MULTISCALE STUDY OF THE STRUCTURE OF POLYLACTIDES USING SYNCHROTRON X-RAY MICROTOMOGRAPHY AND LABORATORY TECHNIQUES #64 Alexey Buzmakov

**16:00 – 16:20 Coffee break**

## **16:20 – 18:40 X-ray fluorescent analysis and X-ray spectroscopy**

**Conveners: Vladimir Kriventsov; Rishat Valeev**

16:20 "XANES Spectroscopy – a tool for the nano world" Alexander Soldatov, invited  
**-(Remotely by ZOOM)-**

16:40 "Spectromicroscopy of functional materials in the ultra-soft X-ray region of synchrotron radiation". Sergey Turishchev, invited **-(Remotely by ZOOM)-**

17:00 ANALYTICAL MICROSTRATIGRAPHY OF THE BOTTOM SEDIMENTS OF LAKE NIZHNEE MULTINSKOE USING SCANNING MICRO-XRF ON SR BEAMS #85 Andrey Darin

17:20 SPECTROSCOPIC (XAFS AND XPS) INVESTIGATIONS OF NANOCOATINGS DEPOSITED ON THE SURFACE OF POROUS ALUMINA #107 Rishat Valeev

17:40 FEATURES OF XANES Cl K- AND X-RAY EMISSION Cl K $\beta$  SPECTRA OF {OsCl<sub>6</sub>}<sup>2-</sup> COMPOUNDS WITH A STRONG SPIN-ORBIT INTERACTION DEPENDING ON THE STRUCTURE OF CATIONS #141 Anastasiya Fedorenko

18:00 COMPLEX STUDY OF LOCAL ATOMIC STRUCTURE OF PROMISING TI-POWDERS #120 Igor Averkiev

18:20 STRUCTURE STUDY OF IRON-SUBSTITUTED HYDROXYAPATITE BY SPECTROSCOPIC METHODS #140 Denis Isaev

## **18:40 Закрытие конференции**



## Постерная сессия. Вторник, 28 июня, 16:40 – 18:00

Track, Paper title, paper ID, author	№ стенда
<b>Track: X-ray spectroscopy</b>	
RADIOLUMINESCENCE AND OPTICAL PROPERTIES OF NON-RADIOACTIVE SYNTHESIZED POLYMETHYLMETHACRYLATE #1 Submitted by Gleb Lyubas	<b>1</b>
ИССЛЕДОВАНИЕ СПЕКТРОВ ИЗЛУЧЕНИЯ ПЛАЗМЫ, СОЗДАВАЕМОЙ МОЩНЫМИ ПИКОСЕКУНДНЫМИ ЛАЗЕРНЫМИ ИМПУЛЬСАМИ, В ДИАПАЗОНЕ ДЛИН ВОЛН 6-14 Å #33 Submitted by Dmitry Nosulenko	<b>2</b>
АТОМАРНАЯ СТРУКТУРА АКТИВНЫХ ЦЕНТРОВ CU/ZSM-5 КАТАЛИЗАТОРОВ СЕЛЕКТИВНОГО ОКИСЛЕНИЯ МЕТАНА: EXAFS ИССЛЕДОВАНИЕ #44 Submitted by Egor Aydaikov	<b>3</b>
CONDUCTION BAND ELECTRONIC STRUCTURE FEATURES OF MANGANESE SULFIDE SOLID SOLUTIONS DOPED WITH LANTHANIDES #92 Submitted by Mikhail Syrovashin	<b>4</b>
CU/TIO <sub>2</sub> ФОТОКАТАЛИЗАТОРЫ ПОЛУЧЕНИЯ ВОДОРОДА: РФЭС И XANES ИССЛЕДОВАНИЕ #93 Submitted by Andrey Saraev	<b>5</b>
THE ELECTRONIC STRUCTURE AND SEEBECK COEFFICIENT OF VANADIUM-DOPED COPPER-CHROMIUM DISULFIDES #99 Submitted by Evgeniy Korotaev	<b>6</b>
RESONANCE EFFECTS IN PHOTOEMISSION SPECTROSCOPY OF RARE-EARTHS IN INTERMETALLIC COMPOUNDS LA1-XTVXMN2SI2 (X = 0, 0.27) #102 Submitted Ekaterina Ponomareva	<b>7</b>
ANALYSIS OF THE LOCAL ATOMIC STRUCTURE OF TIO <sub>2</sub> BY SPECTROSCOPY OF EXTENDED ELECTRON ENERGY LOSS FINE STRUCTURE #104 Submitted by Olga Bakieva	<b>8</b>
SPECTROSCOPIC INVESTIGATIONS OF IRON OXIDE NANOCOATINGS ON THE SURFACE OF POROUS ALUMINA OBTAINED BY THE AIR OXIDATION OF MAGNETRON DEPOSITED IRON FILMS #108 Submitted by Rishat Valeev	<b>9</b>
ELECTRONIC STRUCTURE WITH SB SUBSTITUTION IN TOPOLOGICAL INSULATORS MNBI <sub>2</sub> -XSBXTE <sub>4</sub> USING SYNCHROTRON RADIATION #134 Submitted by Igor Arkhandeev	<b>10</b>
INVESTIGATION OF THE THIALCALIX[4]ARENES ELECTRONIC STRUCTURE AND FEATURES BY RAS, RES, XPS AND QUANTUM CHEMISTRY METHODS AND THEIR SENSORY RESPONSE IN HYBRID MATERIALS WITH CARBON NANOTUBES #27 Submitted by Svetlana Lavrukina	<b>11</b>
SPECTROSCOPIC AND CORROSION STUDIES OF THE TITANIUM LAYERS OBTAINED BY NON-VACUUM ELECTRON-BEAM ALLOYING FOR CHEMICAL REACTOR MATERIALS APPLICATION #142 Submitted by Denis Isaev	<b>12</b>
<b>Track: SR and FEL sources and centers</b>	
ВХОДНОЙ КОНТРОЛЬ ВОЛЬТАМПЕРНЫХ ХАРАКТЕРИСТИК КОМПОЗИЦИОННЫХ ПРОВОДНИКОВ НА ОСНОВЕ Nb-Ti СПЛАВОВ ПРИ ТЕМПЕРАТУРЕ ЖИДКОГО ГЕЛИЯ #2 Submitted by Alexandr Brodnikov	<b>13</b>
ON APPLICATIONS OF ULTRASHORT PULSES X-RAY PULSES GENERATED BY THE INVERSE COMPTON SCATTERING #8 Submitted by Ruslan Feshchenko	<b>14</b>
THE LUMPED UHV PUMPS ON BASED NON-EVAPORABLE GETTERS #12 Submitted by Alexey Semenov	<b>15</b>
STRETCHED WIRE SAG MINIMIZATION FOR DIRECT CURRENT MAGNETIC MEASUREMENTS METHOD FOR SUPERCONDUCTING INSERTION DEVICES #51 Submitted by Artem Zorin	<b>16</b>
MEASUREMENTS OF UNDULATOR AND LASER RADIATION PARAMETERS OF THE NOVOSIBIRSK FEL FACILITY #58 Submitted by Vladislav Borin	<b>17</b>

LONG-WAVES REGIME OF TERAHERTZ NOVOFEL WITH HYBRID OPTICAL RESONATOR #71 Submitted by Vitaly Kubarev	18
RADIATION FROM A METASURFACE AS AN INSTRUMENT FOR ELECTRON BUNCH DIAGNOSTICS #75 Submitted by Daria Sergeeva	19
NEW SPIN-POLARIZED ELECTRON SOURCE BASED ON ALKALI-ANTIMONIDE PHOTOCATHODE #79 Submitted by Oleg Tereshchenko	20
PULSED WIRE FIELD MEASUREMENTS OF 128-PERIOD SUPERCONDUCTING UNDULATOR #96 Submitted by Fedor Kazantsev	21
SUPERCONDUCTING UNDULATOR WITH A PERIOD OF 15.6 MM AND A MAGNETIC FIELD OF 1.2 T #101 Submitted by Vitaliy Shkaruba	22
PRODUCTION OF HIGH-STRENGTH WEAKLY CONDUCTIVE CERAMICS BASED ON BARIUM ALUMINATE FOR REMOVING STATIC CHARGE FROM THE INNER SURFACES OF VACUUM CHAMBERS OF ACCELERATORS #112 Submitted by Alexandr Zhdanok	23
DISPERSION STRENGTHENING OF COPPER USED FOR THE MANUFACTURE OF LINERS FOR SUPERCONDUCTING INSERTION DEVICES FOR GENERATING SYNCHROTRON RADIATION #116 Submitted by Alexandr Zhdanok	24
SUPERCONDUCTING UNDULATOR CRYOGENIC SYSTEM BASED ON INDIRECT COOLING. #113 Submitted by Sergey Khrushchev	25
HALL PROBE MAGNETIC MEASUREMENTS OF THE SUPERCONDUCTING UNDULATOR. #114 Submitted by Valeriy Tsukanov	26
ИСПОЛЬЗОВАНИЕ ПОЛУЧЕННОГО В ЛИУ КИЛОАМПЕРНОГО РЭП ДЛЯ ГЕНЕРАЦИИ ТГЦ ИЗЛУЧЕНИЯ ПРИ РАЗВИТИИ ДВУХПОТОКОВОЙ НЕУСТОЙЧИВОСТИ В ПУЧКОВО-ПЛАЗМЕННОЙ СИСТЕМЕ #115 Submitted by Denis Samtsov	27
CORRECTION OF THE PHASE ERROR OF A SUPERCONDUCTING UNDULATOR #123 Submitted by Pavel Kanonik	28
MAGNETIZATION MEASUREMENT AND SORTING OF PERMANENT MAGNETS FOR THE NOVOFEL VARIABLE PERIOD UNDULATOR #129 Submitted by Oleg Shevchenko	29
DESIGN AND SIMULATION RESULTS OF HELICAL UNDULATOR WITH VARIABLE PERIOD #130 Submitted by Oleg Shevchenko	30
OBTAINING AND RESEARCHING MATERIALS FOR SUPPRESSING EXTERNAL VIBRATIONS IN THE RESPONSIBLE NODES OF SYNCHROTRON RADIATION ACCELERATORS #132 Submitted by Fedor Gorbunov	31
<b>Track: X-ray structural analysis</b>	
SOME COMPOSITE MATERIALS BASED ON AN ALUMINUM MATRIX FROM SHOT BLASTING WASTE OF VANADIUM ALLOYS #3 Submitted by Danil Eseevich	32
THE SECONDARY SYNCHROTRON RADIATION SOURCE AT VEPP-4 #6 Submitted by Boris Tolochko	33
МИКРОМОРФОМЕТРИЧЕСКИЕ ХАРАКТЕРИСТИКИ КАТАЛИЗАТОРОВ МЕТОДОМ МАЛОУГЛОВОГО РЕНТГЕНОВСКОГО РАССЕЙЯНИЯ НА ЛАБОРАТОРНОМ ПОРОШКОВОМ ДИФРАКТОМЕТРЕ #18 Submitted by Arsen Bakirov	34
PTYCHOGRAPHY FOR IMAGING RELIEF OF INCLINED SURFACES #37 Submitted by Nikolay Popov	35
THERMOTROPIC PHASE TRANSITION IN ADSORPTION LAYER ON N-HEXANE/WATER INTERFACE ANALYZED WITH SYNCHROTRON X-RAY SCATTERING #46 Submitted by Yuriy Volkov	36
COMBINED ANALYSIS OF CHAIN-MELTING PHASE TRANSITION IN PHOSPHOLIPID LIQUID-CRYSTAL MULTILAYERS WITH THE USE OF SYNCHROTRON X-RAY REFLECTOMETRY, DIFFUSE SCATTERING AND GRAZING-INCIDENCE DIFFRACTION #56 Submitted by Yuriy Volkov	37

SAXS-STUDY OF ELECTRON BEAM TREATMENT EFFECT ON HNIW THERMAL TRANSFORMATIONS #59 Submitted by Mikhail Mikhailenko	38
STUDY OF THE EFFECTS OF SURFACE CRACKS AND TEXTURE ON RESIDUAL STRESSES IN TUNGSTEN #84 Submitted by Ilya Balash	39
ДИФРАКЦИОННЫЙ АНАЛИЗ МНОГОСЛОЙНЫХ МНОГОЭЛЕМЕНТНЫХ НАНОСТРУКТУРИРОВАННЫХ МЕТАЛЛИЧЕСКИХ ПЛЕНОК #94 Submitted by Юрий Иванов	40
OPERANDO XRD STUDY OF MNOX-CEO2 CATALYST OF CO OXIDATION #133 Submitted by Zakhar Vinokurov	41
PROJECT OF DIFFRACTION-BASED METHODS FOR MEASURING MECHANICAL STRAINS AND STRESSES IN POLYCRYSTALLINE TUNGSTEN AFFECTED BY PULSED HEAT LOAD AT THE SCATTERING STATION "PLASMA" #137 Submitted by Sergey Kazantsev	42
DRIFTS AS QUANTITATIVE TOOL FOR STRUCTURAL CHARACTERIZATION OF PD NANOPARTICLES #152 Submitted by Bogdan Protsenko	43
INVESTIGATION OF THE FACTORS DETERMINING THE EFFICIENCY OF THE INTERACTION OF ALUMINUM ALLOYS ACTIVATED BY GA-IN-EUTECTIC WITH WATER IN HYDROGEN CARTRIDGES #154 Submitted by Alexander Nizovskii	44
ACTIVITY IN XRD DIAGNOSTICS OF FUNCTIONAL MATERIALS AT SSTRC #147 Submitted by Alexander Shmakov	45
<b>Track: X-ray fluorescent analysis</b>	
RADIOLUMINESCENT OF CORUNDUM/GARNET STRUCTURES #5 Submitted by Alexey Zavjalov	46
SOME PROBLEMS IN A PROPOSED PRELIMINARY PROCEDURE FOR THE CALIBRATION OF SAMPLE'S SIMULATION MODEL UNDER THE REALIZATION OF A QUANTITATIVE MICRO-XRF TECHNIQUE BASED ON THE FUNDAMENTAL PARAMETERS MEANS #52 Submitted by Dmitry Sorokoletov	47
AN ATTEMPT OF DETERMINATION OF CYCLICAL CONSTITUENTS IN THE SPATIAL DISTRIBUTIONS OF AU BY THE SCANNING MICRO-XRF TECHNIQUE WITHIN THE SUB-SURFACE INNER LAYER OF THE PREPARED MOUSE MIND'S SAMPLE #138 Submitted by Dmitry Sorokoletov	48
ANALYSIS OF RESULTS OF TWO EARLY PROPOSED APPROACHES DIRECTED TO SUPPRESS THE INFLUENCE OF SEVERAL SYSTEMATICAL ERROR COMPONENTS IN SOLVING ONE- AND TWO-DIMENSIONAL INVERSE DECONVOLUTION PROBLEMS #53 Submitted by Dmitry Sorokoletov	49
DISTRIBUTION OF CHEMICAL ELEMENTS IN DIFFERENT FRACTIONS OF BOTTOM SEDIMENTS OF THE LAPTEV SEA. #57 Submitted by Ivan Kirichenko	50
PERIODICITY IN THE DISTRIBUTION OF CHEMICAL ELEMENTS IN THE BOTTOM SEDIMENTS OF THE CHUKCHI SEA. #61 Submitted by Ivan Kirichenko	51
FIRST RESULTS OF $\mu$ XRF-SR OF LATE HOLOCENE ERUPTIVE MATERIAL FROM A NUMBER OF KAMCHATKA VOLCANOES #87 Submitted by Andrey Darin	52
DEVELOPMENT OF SPA (SINGLE PARTICLE ANALYSIS) TECHNIQUES USING SCANNING $\mu$ XRF-SR AND CONFOCAL X-RAY MICROSCOPY IN THE STUDY OF NATURAL SAMPLES #119 Submitted by Andrey Darin	53
ANALYTICAL CHARACTERISTICS OF PANORAMIC (SIMULTANEOUS) DETERMINATION OF ESSENTIAL ELEMENTS IN BIOLOGICAL MATRICES BY $\mu$ XRF-SR #124 Submitted by Andrey Darin	54
POTENTIAL TRACE OF THE PAEKTUSAN VOLCANO ERUPTION IN THE DATED LAYER OF THE BOTTOM SEDIMENTS OF LAKE BELE ACCORDING TO THE SCANNING $\mu$ XRF-SR DATA #135 Submitted by Andrey Darin	55

<b>Track: THz radiation application</b>	
CHERENKOV RADIATION BY A CHAIN OF BUNCHES MOVING INSIDE A PARTIALLY DIELECTRIC LOADED WAVEGUIDE #16 Submitted by Levon Grigoryan	<b>56</b>
SIMULATION OF AN ACOUSTO-OPTIC DEFLECTOR OF TERAHERTZ RADIATION WITH A FOUR-SECTIONED ULTRASOUND TRANSDUCER #17 Submitted by Pavel Nikitin	<b>57</b>
RADIATION OF A CHARGE MOVING PARAXIALLY INSIDE A DIELECTRIC CYLINDER #21 Submitted by Vardazar Kotanjyan	<b>58</b>
OPTICAL PROPERTIES OF SPUTTERED THIN ZINC SULFIDE FILMS IN THE MID-INFRARED AND THZ RANGE #29 Submitted by Vasily Gerasimov	<b>59</b>
APPROACHES TO THE STUDY OF THE EVANESCENT FIELD OF SURFACE PLASMON POLARITONS AT THE NOVOSIBIRSK FREE ELECTRON LASER #36 Submitted by Valeriya Kukotenko	<b>60</b>
EXCITATIONS OF SURFACE PLASMON RESONANCE ON INSB BY ATTENUATED TOTAL REFLECTION PRISM WITH TUNABLE AIR-GAP USING THZ RADIATION OF NOVOSIBIRSK FREE ELECTRON LASER #40 Submitted by Ildus Khasanov	<b>61</b>
IDENTIFICATION OF THE BESSEL MODE IN GIVEN THZ BEAM #45 Submitted by Natalya Osintseva	<b>62</b>
SPOOF SURFACE PLASMON RESONANCES ON SUBWAVELENGTH GRATINGS EXCITED WITH THZ RADIATION OF NOVOSIBIRSK FREE ELECTRON LASER #50 Submitted by Oleg Kameshkov	<b>63</b>
POINT-LIKE PLASMA-LIMITED HIGH-TEMPERATURE THZ LASER DISCHARGE #72 Submitted by Vitaly Kubarev	<b>64</b>
THE PERFORMANCE OF THE CONDUCTION COOLED SUPERCONDUCTING SOLENOID FOR THZ SPECTROSCOPY #98 Submitted by Alexey Bragin	<b>65</b>
DEVELOPMENT OF A 540-DEGREE MAGNETIC BUNCHER BASED ON PERMANENT MAGNETS #126 Submitted by Shamil Lachynov	<b>66</b>
Высокоэффективные микроструктурные фильтры и поляризаторы для терагерцовой области спектра Submitted by С.А. Кузнецов	<b>67</b>
<b>Track: SR for medicine and biology application</b>	
COMPARISON CONVERGENCE OF THE RECONSTRUCTION ALGORITHMS FOR MONITORED TOMOGRAPHY ON SYNTHETIC DATASET #30 Submitted by Anastasia Ingacheva	<b>68</b>
РФА СИ В БОТАНИЧЕСКИХ ИССЛЕДОВАНИЯХ: ЭЛЕМЕНТНЫЙ СОСТАВ РАСТЕНИЙ ИЗ ГОРНОГО АЛТАЯ (СЕМ. FABACEAE) #105 Submitted by Elena Khramova	<b>69</b>
РФА СИ ДЛЯ ИССЛЕДОВАНИЯ СИБИРСКИХ КУСТАРНИКОВ В УСЛОВИЯХ АНТРОПОГЕННОГО ЗАГРЯЗНЕНИЯ #106 Submitted by Elena Lyakh	<b>70</b>
<b>Track: SR technological application and X-ray apparatus</b>	
THE PROJECT OF THE BEAMLINE "X-TECHNO" FOR THE SYNCHROTRON RADIATION SOURCE "SKIF" #35 Submitted by Vladimir Nazmov	<b>71</b>
PMMA WITH A MOLECULAR WEIGHT OF TEN MILLION GRAMS PER MOLE FOR X-RAY LITHOGRAPHY #60 Submitted by Vladimir Nazmov	<b>72</b>
LIFETIME OF POLYMERIC REFRACTIVE X-RAY LENSES #67 Submitted by Vladimir Nazmov	<b>73</b>
X-RAY TRANSFOCATORS: TUNABLE X-RAY FOCUSING DEVICES BASED ON COMPOUND REFRACTIVE LENSES #48 Submitted by Anton Narikovich	<b>74</b>
PRECISE DETERMINATION OF THE CRYSTAL ORIENTATION AND TUNING THE BEAMLINE USING THE MEASURED DIFFRACTION LOSSES #62 Submitted by Nataliya Klimova	<b>75</b>

FINE STRUCTURE OF DIFFRACTION LOSSES IN THE SINGLE-CRYSTAL LENSES #153 Submitted by Nataliya Klimova	<b>76</b>
GENERATION OF NEAR-INFRARED RADIATION HARMONICS BASED ON REGULAR POLYMER MATRICES WITH CONE AND CYLINDRICAL PORE GEOMETRY AND COATINGS APPLIED ON THEM #66 Submitted by Irina Dyachkova	<b>77</b>
ESTIMATION OF THE SPATIAL RESOLUTION VALUE FOR CONTACT PHOTOLITHOGRAPHY AND X-RAY LITHOGRAPHY #74 Submitted by Aleksandr Gentselev	<b>78</b>
SELF-SUPPORTING X-RAY MASKS FOR THE MANUFACTURE OF PLANAR ELEMENTS OF TERAHERTZ OPTICS BY DEEP X-RAY LITHOGRAPHY #95 Submitted by Aleksandr Gentselev	<b>79</b>
OPTICAL SCHEMES FOR COHERENT GRAZING INCIDENCE X-RAY IMAGING #80 Submitted by Igor Artyukov	<b>80</b>
ABOUT THE RESULTS OF THE FIRST STAGE OF THE PROJECT «IN SITU METHODS FOR SYNCHROTRON INVESTIGATIONS OF MULTILAYER FUNCTIONAL STRUCTURES WITH UNIQUE PARAMETERS AND PROPERTIES CREATED BY BEAM-PLASMA SURFACE ENGINEERING» #82 Submitted by Vladimir Denisov	<b>81</b>
BEAMLINE FOR STUDYING FAST-FLOWING PROCESSES AT THE SYNCHROTRON RADIATION FACILITY SKIF #83 Submitted by Ivan Rubtsov	<b>82</b>
RESISTANCE TO HIGH-TEMPERATURE OXIDATION OF CRN/ALN COATINGS BY X- RAY PHASE ANALYSIS USING SYNCHROTRON RADIATION #111 Submitted by Andrey Leonov	<b>83</b>
CREATION OF THE SCIENTIFIC RESEARCH CENTER «TOMSK COMPETENCE CENTER IN THE FIELD OF BEAM-PLASMA ENGINEERING AND SYNCHROTRON RESEARCH» #118 Submitted by Anton Teresov	<b>84</b>
TABLETOP LASER-DRIVEN PLASMA MICROFOCUS X-RAY SOURCE FOR IMAGING APPLICATIONS #121 Submitted by Victor Asadchikov	<b>85</b>
FORMATION AND ANALYSIS OF MULTILAYER CERMET FILMS OF HIGH- ENTROPY ALLOYS #125 Submitted by Yuriy Akhmadeev	<b>86</b>
PROPERTIES OF COATINGS OF THE TIB/TIBN SYSTEM DEPOSITED BY THE VACUUM-ARC PLASMA-ASSISTED METHOD #127 Submitted by Mikhail Savchuk	<b>87</b>
MEASUREMENTS AND ESTIMATES OF THE BREMSSTRAHLUNG DOSE RATE AT CONTROL POINTS OF THE FEL ACCELERATOR HALL #131 Submitted Tatiana Salikova	<b>88</b>
COMPARISON OF DEEP UV AND X-RAY LITHOGRAPHY FOR X-RAY REFRACTIVE LENS MANUFACTURING #144 Submitted by Elena Reznikova	<b>89</b>
DESIGN OF UNDULATOR-BASED BEAMLINE FOR APPLICATIONS IN MATERIALS SCIENCE #145 Submitted by Ivan Bataev	<b>90</b>
МОДЕЛИРОВАНИЕ ПУЧКОВ КОГЕРЕНТНОГО И ЧАСТИЧНО КОГЕРЕНТНОГО СИНХРОТРОННОГО ИЗЛУЧЕНИЯ ПРИ ПРОХОЖДЕНИИ ЧЕРЕЗ ОПТИЧЕСКИЕ ЭЛЕМЕНТЫ #146 Submitted by Yuri Khomyakov	<b>91</b>
SYNCHROTRON RADIATION STATION ON THE VEPP-4M FOR PRACTICAL TRAINING #148 Submitted by Boris Goldenberg	<b>92</b>
X-RAY NATURAL CIRCULAR DICHROISM IMAGING OF MULTIFERROIC CRYSTALS #151 Submitted by Mikhail Platunov	<b>93</b>
GENERATION OF FAST RECONSTRUCTION ALGORITHMS FOR COMPUTED TOMOGRAPHY WITH ARBITRARY GEOMETRY SET-UP #49 Petr Kulagin	<b>94</b>

<b>Track: доклады, поданные после второго дэдлайна</b>	
XAFS study of modified zirconium oxide nanomaterials, V.V. Kriventsov	95
Investigation of the state and composition of micro-objects by the XAFS method, V.V. Kriventsov	96
XAFS study of modified metal-carbon nanocomposite catalysts, V.V. Kriventsov	97
XAFS study of bimetallic catalytic nano-systems located on supports of different nature V.V. Kriventsov	98
Investigation of platinum complexes existing in a solution of water by XAFS V.V. Kriventsov	99
EXAFS study of model metal-carbon nanocomposites prepared by pyrolysis V.V. Kriventsov	100
Review of experiments at the synchrotron radiation in the high-energy X-ray range on VEPP-4M storage ring. K.E. Kuper	101
Review of the work carried out at the SRXRF station in the hard X-ray range on the VEPP-4M storage ring Aleksandr Legkodymov	102
Spectromicroscopy of functional materials in the ultra-soft X-ray region of synchrotron radiation S. Yu. Turishchev	103
Анализ микроэлементов в тканях рыб озера Байкал методом РФА СИ Крупович Е.С.	104
REVIEW THE STUDIES ON THE VEPP-3 TIME-RESOLVED DIFFRACTOMETRY STATION Marat Sharafutdinov	105