

Synchrotron and Free electron laser Radiation: generation and application (SFR-2020)

from Monday, 13 July 2020 (14:00) to Friday, 17 July 2020 (22:00)
 Zoom (Zoom 860 5034 1820)

13 Jul 2020		14 Jul 2020	
14:00	SR and FEL sources and centers - Prof. Nicolay Vinokurov Dr Oleg Shevchenko (until 16:10) (Zoom 860 5034 1820)	14:00	THz radiation application -Prof. Boris Knyazev Dr Vitaly Kubarev (until 16:30) (Zoom 860 5034 1820)
14:00	Welcome speech from SSRC Director - Gennady Kulipanov (Director of SSTRC) (Zoom 860 5034 1820)	14:00	Recent experiments in Terahertz Photonics, Plasmonics, and Spectroscopy at the Novosibirsk Free Electron Laser Facility - Prof. Boris Knyazev (Zoom 860 5034 1820)
14:10	Synchrotron radiation application in the BINP - Konstantin Zolotarev (Budker Institute of Nuclear Physics) (Zoom 860 5034 1820)	14:30	Multichannel THz telecommunication based on mode division multiplexing (MDM) approach - Prof. Vladimir Pavelyev (Zoom 860 5034 1820)
14:40	High Energy Photon Source (HEPS) and its current status - Prof. Ye Tao (HEPS) (Zoom 860 5034 1820)	15:00	Terahertz Photonics of Dense medium: from gas to liquid - Prof. Alexander Shkurinov (Faculty of Physics & International Laser Center, Lomonosov Moscow State University) (Zoom 860 5034 1820)
15:10	THz Gyrotrons: novelty, achievements and applications - Mikhail Glyavin (IAP RAS) (Zoom 860 5034 1820)	15:30	THz nonlinear electronic response in GaAs/InGaAs semiconductor nanowires - Harald Schneider (Helmholtz-Zentrum Dresden-Rossendorf) (Zoom 860 5034 1820)
15:40	Scientific opportunities at the first 4th generation high energy synchrotron radiation source - Harald Reichert (European Synchrotron Radiation Facility) (Zoom 860 5034 1820)	16:00	Construction of a biosensor sensitive to terahertz radiation based on the glutamine synthase gene promoter - Sergey Peitek (Institute of Cytology and Genetics SB RAS (Novosibirsk, Russia)) (Zoom 860 5034 1820)
16:10	--- Coffee break ---		
16:30	SR and FEL sources and centers -Prof. Nicolay Vinokurov Dr Oleg Shevchenko (until 18:30) (Zoom 860 5034 1820)	16:30	--- Coffee break ---
16:30	The Novosibirsk free electron laser facility - Dr Oleg Shevchenko (BINP) (Zoom 860 5034 1820)	16:40	THz radiation application -Prof. Boris Knyazev Dr Vitaly Kubarev (until 19:20) (Zoom 860 5034 1820)
17:00	Short-period undulators with electrostatic field - Prof. NIKOLAY VINOVKUROV (Budker Institute of Nuclear Physics) (Zoom 860 5034 1820)	16:40	A Terahertz localized laser discharge as a source of bright VUV light - Dr Alexander Vodopyanov (Institute of Applied Physics RAS) (Zoom 860 5034 1820)
17:30	Radiation stability and hyperfine mode structure of the terahertz NovoFEL - Dr Vitaly Kubarev (BINP) (Zoom 860 5034 1820)	17:00	EPR spectroscopy station at the Novosibirsk Free Electron Laser: application of high-power THz radiation in the field of molecular magnetism - Dr Sergey Veber (International Tomography Center SB RAS) (Zoom 860 5034 1820)
17:50	Electron outcoupling experiments at the NovoFEL facility - Dr Yaroslav Getmanov (Budker INP) (Zoom 860 5034 1820)	17:20	MODELING OF TERAHERTZ SURFACE PLASMON FOURIER SPECTROMETER - Dr Vasily Gerasimov (Budker Institute of Nuclear Physics of the Siberian Branch of RAS, Novosibirsk) (Zoom 860 5034 1820)
18:10	Superconducting 3 Tesla 54-pole indirect cooling wigglers with a period of 48 mm for Kurchatov Synchrotron Radiation Source - Vitaliy Shkaruba (BINP) (Zoom 860 5034 1820)	17:40	THz sensing based on subwavelength grating in attenuated total reflection configuration - Mr Oleg Kameshkov (BINP SB RAS) Dr Vasily Gerasimov (Budker Institute of nuclear physics SB RAS) (Zoom 860 5034 1820)
18:30	Technological solutions for SR centers/beamlines - Konstantin Zolotarev (Budker Institute of Nuclear Physics) (until 19:30) (Zoom 860 5034 1820)	18:00	Magnetic Field Effect on the Free Induction Decay of Hydroxyl Radical (OH) in the Terahertz Region - Evgeniy Chesnokov (Institute of Chemical Kinetics) (Zoom 860 5034 1820)
18:30	Optically coupled X-Ray imaging system, from microscopy to macroscopy - Xavier Rochet (Optique Peter) (Zoom 860 5034 1820)	18:20	Silicon and Diamond Diffractive Lenses with Continuous Profile for Focusing High-Power Terahertz Radiation - Maxim Komlenok (Prokhorov General Physics Institute of the Russian Academy of Sciences) (Zoom 860 5034 1820)
18:50	X-ray diffractometers and spectrometers Bruker AXS for materials research - Mr Alexandre Shevchukov (Melytec LLC) (Zoom 860 5034 1820)	18:40	Enhancing resolution of terahertz surface plasmon resonance microscopy by ghost imaging using FEL radiation - Ildus Khasanov (Scientific and Technological Center of Unique Instrumentation of the Russian Academy of Sciences) (Zoom 860 5034 1820)
19:10	Customized Testing Systems for Beamlines - Alexandr Dolgikh (Zoom 860 5034 1820)	19:00	On the efficiency of backward collinear acousto-optic interaction between terahertz radiation and acoustic beam in hexane - Dr Pavel Nikitin (Scientific and Technological Center of Unique Instrumentation of RAS) (Zoom 860 5034 1820)
20:00	Poster Session (until 21:00) ()		
			14:00 Time-resolved X-ray diffraction -Mr Marat Sharafutdinov Boris Tolochko (until 16:20) (Zoom 890 9721 5207)
			14:00 Two stage shock wave processes in construction materials - Evgueni Smirnov (Russian Federal Nuclear Center - VNIITF) (Zoom 890 9721 5207)
			14:30 Status of detonation experimental VEPP-3/VEPP-4 - Edward Pruell (Zoom 890 9721 5207)
			15:00 The use of polychromatic synchrotron radiation to study fast processes in solids. Advantages and challenges. - Prof. Boris Tolochko (Institute of solid state chemistry and mechanochemistry) (Zoom 890 9721 5207)
			15:20 Status of the studies of thermal stresses and deformations in materials caused by pulsed heat loads in BINP - Dr Aleksey Arakcheev (Zoom 890 9721 5207)
			15:40 Complex Dynamic Study of ejection of the of Particles from Shock-Loaded Tin by SR methods, a PDV laser complex, and optical and piezoelectric sensors. - Konstantin Ten (LIH SB RAS) (Zoom 890 9721 5207)
			16:00 Detectors for fast time-resolved studies at SSTRC, status and future - Lev Shekhtman (Zoom 890 9721 5207)
			16:30 X-ray structural analysis - Boris Tolochko Mr Marat Sharafutdinov (until 20:30) (Zoom 890 9721 5207)
			16:40 High Energy Imaging and Diffraction at Diamond Light Source Beamline I12: 11 Years of Experience and Lessons Learned - Dr Thomas Connolley (Diamond Light Source) (Zoom 890 9721 5207)
			17:10 XRD Diagnostics of Functional Materials at SSTRC - Dr Alexander Shmakov (Boreskov Institute of Catalysis SD RAS) (Zoom 890 9721 5207)
			17:30 Investigation of the local phase composition and morphology of laser welded joints based on titanium and aluminum alloys by hard synchrotron radiation diffraction methods. - Mr Alexey Ancharov (Institute of Solid State Chemistry and Mechanochemistry SB RAS) (Zoom 890 9721 5207)
			17:50 High-P,T diffraction studies of dehydration of magnesium silicates related to the deep Earth's water cycle - Dr Anna Likhacheva (Sobolev Institute of Geology and Mineralogy SibD RAS) (Zoom 890 9721 5207)
			18:10 Structural analysis of catalysts using the atomic pair distribution function - Dr Vera Pakharukova (Boreskov Institute of Catalysis) (Zoom 890 9721 5207)
			18:30 Small-Angle scattering applications to the analysis of aptamer structure and conformational changes - Roman Moryachkov (Kirensky Institute of Physics) (Zoom 890 9721 5207)
			18:50 Study of Au-Co ultrafine grained alloy by synchrotron radiation diffractometry - Timofey Tolmachev (M.N. Mikheev Institute of Metal Physics of the Ural Branch of the Russian Academy of Sciences (IMP UB RAS)) (Zoom 890 9721 5207)
			19:10 In situ synchrotron x-ray diffraction study of face-centered cubic platinum hydride and phase diagram of PtH - Ms Anna Semerikova (Novosibirsk State University) (Zoom 890 9721 5207)
			19:30 PDF analysis of alumina containing systems - Dr Kristina Shefer (Boreskov Institute of Catalysis SB RAS) (Zoom 890 9721 5207)
			19:50 In situ XRD study of the reduction of mixed Mn-Co oxide - Olga Bulavchenko (Boreskov Institute of Catalysis) (Zoom 890 9721 5207)
			20:10 Nitrogen doped diamond single crystals for x-ray optics applications - Mr Sergey Shevyrtalov (Immanuel Kant Baltic Federal University, Kaliningrad, Russia) (Zoom 890 9721 5207)

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14:00	SR technological application and X-ray apparatus -Dr Konstantin Kuper Dr Anton Nikolenko (until 16:00) (Zoom 890 9721 5207)	14:00	X-ray spectroscopy -Dr Vladimir Kriventsov Rishat Valeev (Physical-Technical Institute of UB RAS) (until 16:00) (Zoom 860 5034 1820)	14:00	SKIF project - Konstantin Zolotarev (Budker Institute of Nuclear Physics) (until 16:20) (Zoom 860 5034 1820)
14:00	Generation and use of coherent X-ray beams at future SKIF storage ring - Dr Sergey Rashchenko (Novosibirsk State University) (Zoom 890 9721 5207)	14:00	Research of nanoscale systems of complex composition by XAFS method at the EXAFS spectroscopy station of SSTRC - Dr Vladimir Kriventsov (Zoom 860 5034 1820)	14:00	Introduction to the SKIF project - Prof. Valerii Bukhtiyarov (BIC SB RAS) (Zoom 860 5034 1820)
14:20	The design of «Structural Diagnostics» beamline for SRF «SKIF» - Boris Zakharov (Boreskov Institute of Catalysis SB RAS, Novosibirsk State University) (Zoom 890 9721 5207)	14:20	Dependence of the spectral and luminescent properties of polymethyl methacrylate on its molecular weight - G.A. Lyubas (ISSCM SB RAS) (Zoom 860 5034 1820)	14:20	Storage ring for Novosibirsk low emittance light source SKIF - Eugeny Levichev (BINP) (Zoom 860 5034 1820)
14:40	Conceptual design of the "Fast Processes" beamline at the SRF SKIF 4th generation synchrotron - Ivan Rubtsov (Lavrentyev Institute of Hydrodynamics of the Siberian Branch of the Russian Academy of Sciences) (Zoom 890 9721 5207)	14:40	The conduction band of the lanthanide doped chromium disulfides CuCr0.99Ln0.01S2 (Ln=La, Ce, Gd): XANES investigations - Evgeniy Korotaev (Nikolaev Institute of Inorganic Chemistry of the Siberian Branch of the Russian Academy of Sciences) (Zoom 860 5034 1820)	14:40	SKIF injector complex - Andrey Zhuravlev (Nikolaevich) (Zoom 860 5034 1820)
15:00	In situ XRD analysis with the time-resolution (0.4 ms) of stainless steel in during selective laser melting. - Dr Konstantin Kuper (Zoom 890 9721 5207)	15:00	Linear dichroism of NEXAFS spectra and molecular orientation in polypyrrole and polyaniline films electrodeposited on HOPG and vitreous carbon - Alexander Syugaev (Udmurt Federal Research Center, Ural Branch of Russian Academy of Sciences 132 Kirov Street, 426000 Izhevsk, Russia) (Zoom 860 5034 1820)	15:00	Superconducting insertion devices constructed by Budker INP - Dr Nikolay Nikolay Mezentsev (Chief researcher) (Zoom 860 5034 1820)
15:20	"Electronic Structure" beamline 1-6 at SKIF synchrotron facility. - Dr Andrey Bukhtiyarov (Boreskov Institute of Catalysis) (Zoom 890 9721 5207)	15:20	Application of synchrotron radiation to study the surface atomic structure of 2D materials - Mr Igor Arkhandeev (M.N. Mikheev Institute of Metal Physics UB RAS, Ekaterinburg, Russia) (Zoom 860 5034 1820)	15:20	First phase SKIF beamlines design - Dr Iakov Rakshun (Zoom 860 5034 1820)
15:40	Beam-shaping refractive optics for coherent X-ray sources - Mr Dmitry Zverev (Immanuel Kant Baltic Federal University) (Zoom 890 9721 5207)	15:40	Комбинированный подход к моделированию электронной структуры материалов, содержащих тяжелые переходные металлы, лантаноиды и актиноиды. Применение к галогенидам иттербия, ферсмиту и ксенониту с примесными атомами урана и тория - Dr Anatoly V. Titov (NRC "Kurchatov institute" -PNPI) (Zoom 860 5034 1820)	15:40	Second phase SKIF beamlines design - Dr Yan Zubavichus (Zoom 860 5034 1820)
16:00	--- Coffee break ---				
16:20	SR technological application and X-ray apparatus -Dr Anton Nikolenko Dr Konstantin Kuper (until 18:00) (Zoom 890 9721 5207)	16:20	X-ray spectroscopy -Dr Vladimir Kriventsov Rishat Valeev (Physical-Technical Institute of UB RAS) (until 18:10) (Zoom 860 5034 1820)	16:00	SKIF civil engineering - Dr Igor Churkin (Budker INP SB RAS) (Zoom 860 5034 1820)
16:20	Trends on Montel X-ray Optics and Pinholes for Synchrotron Beamlines - Jörg Wiesmann (Incoatec GmbH) (Zoom 890 9721 5207)	16:20	Angle-resolved photoemission spectroscopy (I05-ARPES) beamline at Diamond: getting insight into electronic structure of solids - Timur Kim (Diamond Light Source) (Zoom 860 5034 1820)	16:20	--- Coffee break ---
16:40	Metrological approach for diagnostics of x-ray refractive lenses - Anton Narikovich (IKBFU) (Zoom 890 9721 5207)	16:50	Ni nanocoatings on porous alumina: structural properties vs matrices porosity - Dr Rishat Valeev (Physical-Technical Institute of UdmFRC UB RAS) (Zoom 860 5034 1820)	17:00	SKIF project (until 18:00) (Zoom 860 5034 1820)
17:00	The Application of Advanced X-Ray Diffraction Image Processing Methods for Study Linear Defects in Silicon Single Crystals - Dr Irina Dyachkova (FSRC "Crystallography and Photonics" RAS) Dr Denis Zolotov (Shubnikov Institute of Crystallography FSRC "Crystallography and Photonics" RAS) (Zoom 890 9721 5207)	17:10	LUMINESCENT SPECTROSCOPY OF Pr3+ IONS IN SOME PHOSPHATES, BORATES AND SILICATES USING X-RAY SYNCHROTRON RADIATION FROM VEPP-3 STORAGE RING - Sviatoslav Kiselev (Ural Federal University) (Zoom 860 5034 1820)	17:00	General discussion - Eugeny Levichev (BINP) (Zoom 860 5034 1820)
17:20	Evaluation of CCD detector absolute responsivity with the aid of synchrotron radiation - Dr Eugene Vishnyakov (P.N.Lebedev Physical Institute of RAS) (Zoom 890 9721 5207)	17:30	Experimental and theoretical X-ray spectroscopic study of electronic structure of sulfur-contained transition metal complexes - Anastasiya Fedorenko (NIIC SB RAS) (Zoom 860 5034 1820)		
17:40	The modification of optical properties of the surfaces by the glancing angle deposition of TiO2 - Aleksey Lemzyakov (Budker INP SB RAS) (Zoom 890 9721 5207)	17:50	X-RAY PHOTOELECTRON SPECTROSCOPY AND NEAR EDGE X-RAY ABSORPTION FINE STRUCTURE SPECTROSCOPY STUDY OF SYNCHROTRON RADIATION EFFECTS ON FLUORINATED GRAPHITE INTERCALATED N2O4 - Galina Semushkina (Nikolaev Institute of Inorganic Chemistry) (Zoom 860 5034 1820)		
18:00	Technological solutions for SR centers/beamlines - Konstantin Zolotarev (Budker Institute of Nuclear Physics) Dr Anton Nikolenko (until 18:40) (Zoom 890 9721 5207)	18:10	X-ray fluorescent analysis - Konstantin Zolotarev (Budker Institute of Nuclear Physics) Fedor Darin (Budker Institute of Nuclear Physics of Siberian Branch Russian Academy of Sciences (BINP SB RAS)) (until 19:30) (Zoom 860 5034 1820)		
18:00	EIGER2 DETECTOR SYSTEMS: TOOLS FOR ADVANCED X-RAY STUDIES - Dr Stefan Brandstetter (DECTRIS Ltd.) (Zoom 890 9721 5207)	18:10	Search for and analysis of composition and structure of submicron-size particles in geological samples - Fedor Darin (Budker Institute of Nuclear Physics SB RAS) (Zoom 860 5034 1820)		
18:20	Beamline instrumentation at SKIF by JJ X-Ray - Mr Paw Kristiansen (JJ X-ray) (Zoom 890 9721 5207)	18:30	Features of using of the hard X-rays (60 – 120 keV) of synchrotron radiation for determination the trace concentrations of rare-earth and heavy elements by the SRXFA method - Mr Aleksandr Legkodymov (Zoom 860 5034 1820)		
18:40	What does the macromolecular crystallography users community expect from the modern synchrotron source? - Sergey Arkhipov (Novosibirsk State University) (Zoom 890 9721 5207)	18:50	Determination the pattern of spreading and accumulation of essential and trace elements at the benthic samples by using scanning micro-XRF-SR - Natalya Baturina (Novosibirsk State University) (Zoom 860 5034 1820)		
				17 Jul 2020	
				14:00	--- Poster session review, final discussion and Conference closing (Zoom 860 5034 1820) ---