Synchrotron and Free electron laser Radiation: generation and application «SFR-2018»



June 25-28, 2018

Budker Institute of Nuclear Physics SB RAS, Novosibirsk, Russia

Conference booklet



During a conference

- A badge with your name is your pass to the Institute. Please show it to the security when you come in and come out to the Institute!
- All plenary Sessions take place in the Conference Hall (4th floor of the BINP main building). The Organizing Committee is located in room 331 of the main building, tel. 329-47-45.
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- List of Restaurants and cafeteria in Akademgorodok <u>http://ssrc.inp.nsk.su/CKP/userdoc/cafe.html</u>



Bus schedule during the Conference:

Monday 25/06/2018

- 8:45 from the hotels to the BINP
- 20:00 from the BINP canteen to the hotels

Tuesday 26/06/2018

- 08:30 from the hotels to the BINP
- 18:45 from the BINP to the hotel Park Wood

Wednesday 27/06/2018

- 08:30 from the hotels to the BINP
- 16:50 from the BINP to the Theatre
 - ... from the Theatre to hotels after show

Thursday 28/06/2018

- 08:30 from the hotels to the BINP
- 21:00 from the Restaurant to the hotels

Российским участникам:

• Мы предлагаем Вам разместить **Ваш стендовый доклад на стенде** в понедельник и снять его в четверг. Обязательное присутствие рядом со стендом – во время стендовой сессии в среду, с 15:40 до 17:00. Номер Вашего стенда соответствует номеру в программе на стр. 12, первый столбик. Не забудьте снять Ваш постер! Оставленные на стендах постеры будут утилизированы.

• Оригиналы отчетных документов (счет-фактура, Акт) за официально сданный Вами оргвзнос Вы сможете получить в Оргкомитете в четверг, 28 июня. Если оргвзнос за Вас платила организация, то Вам необходимо в Вашей организации собрать подписи и поставить печати на Акте и в договоре, и вернуть один Акт и один Договор по адресу:

Кузину М.В., ИЯФ СО РАН, Лаврентьева, 11, Новосибирск 630090.

Monday, June 25

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time		ID	Author, title
8:30	9:30		Registration
9:30	9:40		Conference opening
			Radiation sources and Centers: Part I
			Chairman Prof. Gennady N. KULIPANOV
9:40	10:20	157	Dr. Konstantin ZOLOTAREV, New light source
			for Novosibirsk Scientific Center, machine review
10:20	11:00	27	Prof. Kwang-Je KIM, Prospects of an X-ray FEL
			Oscillator driven by a SCRF linac or on a by-pass
			of a MBA Storage Ring.
11:00	11:30		Coffee
			Radiation sources and Centers: Part II
			Chairman Prof. Nikolay A. VINOKUROV
11:30	12:00	57	Dr. Oleg SHEVCHENKO, Novosibirsk Free
			Electron Laser Facility.
12:00	12:30	13	Dr. J. Michael KLOPF, Status of the FELBE
			THz/IR FEL Facility: Overview of the Machine
			Performance and User Activities.
12:30	13:00	-	Prof. Boris KNYAZEV, Status of the users activity
			at the NovoFEL.
13:00	13:10		Group photo (BINP main entrance)
13:10	14:00		Lunch
			Radiation sources and Centers: Part III
			Chairman Prof. Evgeniy B. LEVICHEV
14:00	14:30	156	Mr. Pavel PIMINOV, VEPP-4 storage ring as
			hard X-ray source for users.
14:30	15:00	2	Prof. Bocheng JIANG, SSRF beam line phase II
			project.
15:00	15:30	121	Dr. Adriana WAWRZYNIAK, Operational Status
			of SOLARIS Storage Ring.
15:30	15:50		Coffee

		ID	Radiation sources and Centers: Part IV
			Chairman Prof. Nikolay A. MESENTSEV
15:50	16:10	-	Dr. Vitaliy SHKARUBA, Development of
			superconducting insertion devices at BINP.
16:10	16:30	185	Dr. Pierre SCHNIZER, BESSY VSR Project:
			design status and project challenges.
16:30	16:50	30	Prof. Sergey MIGINSKIY, Headway on a
			Compact THz FEL at KAERI.
16:50	17:10	14	Prof. Nikolai PESKOV, Inter-cavity scattering
			schemes of planar THz-band FELs based on
			parallel intense moderately-relativistic sheet
			electron beams.
17:10	17:30	16	Prof. Andrei SAVILOV, THz undulator radiation
			of stabilized dense electron bunches.
17:30	17:50	134	Mr. Konstantin TORGASIN, Methods for
			counteracting of back-bombarding effect for
			thermionic RF guns.
18:00	20:00		Welcome party (BINP canteen)

Tuesday, June 26

		ID	Instruments and techniques for experiments with
			application the Synchrotron and FEL radiation.
			Part I.
			Chairman Dr. Konstantin KUPER
9:00	9:40	184	Prof. Anatoly SNIGIREV, Development of X-ray
			coherent optics for fourth generation
			synchrotrons and XFELs.
9:40	10:20	62	Prof. Vladimir PAVELYEV, Terahertz optical
			components for control of high-power FEL
			beams.
10:20	11:00	25	Prof. Victor ASADCHIKOV, X-ray reflectometry,
			microtomography and small-angle scattering in
			the study of not completely ordered systems.
11:00	11:20		Coffee
			Instruments Part II
			Chairman Dr. Vladimir NAZMOV
11:20	11:40	20	Dr. Alexey BUZMAKOV, Development of
			laboratory X-ray microtomography setups and
			tomography reconstruction algorithms.
11:40	12:00	21	Dr. Denis ZOLOTOV, X-ray diffraction imaging
			of 3D location of linear crystalline defects.
12:00	12:20	55	Mr. Evgeny KOZYREV, Thin scintillator CsI(Tl)
			films for precise tomography. Development and
			applications.
12:20	12:40	69	Mr. Artem KHEGAY, Diagnostics of modern
			synchrotron radiation sources based on refractive
			X-ray optics.
12:40	13:00	105	Mr. Anton TARGONSKIY, Development of
			hardware-methodological approaches for time-
			resolved control of synchrotron beam parameters
			by x-ray acoustooptics based on longwave
			ultrasound.
13:00	14:00		Lunch

		ID	Part III Chairman Prof. Boris KNYAZEV
14:00	14:40	98	Dr. Andrei ROGALEV, Polarization dependent
			X-ray spectroscopy: recent advances.
14:40	15:20	108	Dr. Nikolai CHKHALO, Multilayer X-ray
			imaging optics in IPM RAS.
15:20	15:40	115	Dr. Sergey VEBER, X-band (9 GHz) Electron
			Paramagnetic Resonance station at the NovoFEL
			facility: sensing the spin dynamics induced by
			high-power THz pulses.
15:40	16:00		Coffee
			Part VI Chairman Dr. Konstantin ZOLOTAREV
16:00	16:30	-	Dr. Sergey PELTEK, Nonthermal impact
			terahertz radiation on the living systems.
16:30	16:50	160	Dr. Konstantin KUPER, Radioprotective effects of
			manganese oxide nanoparticles in the mice
			exposed to high X-rays doses.
16:50	17:10	22	Mr. Yuri KRIVONOSOV, Application of X-ray
			microtomography to the investigation of
			gallbladder stones.
17:10	17:30	165	Mr. Aleksandr LEGKODYMOV, The application
			of synchrotron radiation of the VEPP-4M storage
			ring for determine the concentrations of rare-
			earth elements in geological samples by the
			XRFA-SR method.
17:30	17:50	124	Mr. Mikhail ALEXANDRIN, Bottom sediments of
			the lake Karakyol reveal a 2000-year climate
			variability in the western Caucasus.
17:50	18:10	117	Mr. Alexei GRACHEV, Employing a highly-
			sensitive synchrotron XRF technique for
			obtaining multielement geochemical records: the
			first continuous ~10-kyr record from a remote
			Caucasus mountains lake.
18:10	18:30	97	Dr. Anton NIKOLENKO, Synchrotron radiation
			metrological station "Cosmos" at the VEPP-4
			storage ring: current status and prospects.

Wednesday, June 27

		ID	Time resolved X-ray diffraction : Part I
			Chairman Dr. Vladimir AULCHENKO
9:00	9:20	86	Dr. SHEKHTMAN Lev, Further development and
			status of the detector for imaging of explosions.
9:20	9:50	152	Dr. TOLOCHKO Boris, Time-resolved X-ray
			diffraction experiment investigations of ultrafast
			processes in BINP. Status and perspectives.
9:50	10:20	-	Dr. Eduard PRUUEL, The using of SR for
			detonation and shock waves phenomena.
10:20	10:40	173	Dr. Konstantin TEN, The emission of
			microparticles from metal joints under shock
			wave influence.
10:40	11:00	107	Dr. SMIRNOV Evgenii, Polymethylmethacrylate
			double compression registration using SR.
11:00	11:20		Coffee
			Time resolved X-ray diffraction : Part II
			Chairman Evgeniy SMIRNOV
11:20	11:50	35	Dr. ARAKCHEEV Aleksey, Dynamical
			observation of X-ray Laue diffraction on single-
			crystal tungsten during pulsed heat load.
11:50	12:20	169	Dr. SHMAKOV Aleksandr, SR XRD Functional
			Materials Diagnostics.
12:20	12:40	-	Dr. ANCHAROV Alexey, High temperature X-
			ray diffraction experiment investigations with
			high temperature materials.
12:40	13:00	-	Dr. Marat SHARAFUTDINOV, In situ diffraction
			for structural investigation.
13:00	14:00		Lunch
			Radiation sources and Centers: Part V
			Chairman Dr. Alexander SHMAKOV
14:00	14:40	41	Prof. Yen-Chieh HUANG, Opportunities of
			dielectric laser accelerator on high-brightness
			radiation and industry application.

		ID	X-ray structural analysis
			Chairman Dr. Alexander SHMAKOV
14:40	15:00	118	Zakhar VINOKUROV, In situ X-ray diffraction
			study of Pr(2-x)CaxNiO4 at low oxygen pressure.
15:00	15:20	67	VOLKOV Yuriy, Analysis of suspended layer of
			alkali ions on a surface of silica sol by
			synchrotron X-ray reflectivity and scattering.
15:20	15:40	112	KUDIIAROV Viktor, Application of short-wave
			diffraction of synchrotron radiation for X-ray
			diffraction study of the structural features and
			phase transitions during hydrogenation of
			titanium Ti-6Al-4V alloy additively produced by
			the method of electron beam melting.
15:40	16:00		Coffee
15:40	17:00		Poster session (see page 12)

Thursday, June 28

		ID	Spectroscopy. Part I
			Chairman Pof. Boris TOLOCHKO
9:00	9:30	58	Dr. Harald SCHNEIDER, Nonlinear THz
			spectroscopy of graphene and GaAs quantum
			wells using a free-electron laser.
9:30	10:00	143	Dr. Vladimir KRIVENTSOV, Current status of
			EXAFS station of SSTRC. Possibilities of XAFS
			method to investigate challenging functional
			nanomaterials. Reality and perspectives in future.
10:00	10:30	49	Prof. Yuri MIKHLIN, XAFS, XPS, and Mossbauer
			spectroscopy studies of valleriite, nanocomposite
			mineral and a prototype for new low-dimensional
			chalcogenide materials.
10:30	11:00	38	Dr. Oleg TERESHCHENKO, Spin-Resolved
			Photoemission for the investigation of Rashba
			spin-splitting and topological surface states.
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			Spectroscopy. Part II Chairman Dr. Vladimir KRIVENTSOV
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11:20 11:50 12:20 12:40	11:50 12:20 12:40 13:00	23 32 11 104	 Spectroscopy. Part II Chairman Dr. Vladimir KRIVENTSOV Dr. Evgeniy CHESNOKOV, The first observation of the free induction signals of OH radicals in the terahertz region. Dr. Vitaly KUBAREV, Two types of coherency, fine mode structure, and obtaining of the ultramonochromatic tunable terahertz radiation on the NovoFEL. Prof. Vladimir GREBENNIKOV, Resonant interatomic Auger transitions. Dr. Simon ERENBURG, Microstructure of multilayer heterosystems containing Ge quantum dots with Mn in Si matrix by XAFS-
11:20 11:50 12:20 12:40	11:50 12:20 12:40 13:00	23 32 11 104	 Spectroscopy. Part II Chairman Dr. Vladimir KRIVENTSOV Dr. Evgeniy CHESNOKOV, The first observation of the free induction signals of OH radicals in the terahertz region. Dr. Vitaly KUBAREV, Two types of coherency, fine mode structure, and obtaining of the ultramonochromatic tunable terahertz radiation on the NovoFEL. Prof. Vladimir GREBENNIKOV, Resonant interatomic Auger transitions. Dr. Simon ERENBURG, Microstructure of multilayer heterosystems containing Ge quantum dots with Mn in Si matrix by XAFS- spectroscopy.

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			Chairman Dr. Konstantin KUPER
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			investigations of ZnS:Cu(Mn);Cl nanocoatings on
			porous alumina.
14:20	14:40	39	Dr. Igor ASANOV, Application of XANES and
			XPS in using synchrotron radiation in soft X-ray
			region for the study of the electronic structure of
			graphite and few-layered graphene fluorides.
14:40	15:00	42	Dr. Andrey SARAEV, In situ approach to
			investigations of CuFeAl-composite catalysts in
			catalytic oxidation of CO: X-ray adsorbstion
			spectroscopy.
15:00	15:20	48	Dr. Tatyana ASANOVA, Quick-XAFS as a tool for
			study of chemical processes.
15:20	15:40	59	Dr. Maxim LIKHATSKIY, A study of pre-
			nucleation intermediary structures arising in the
			reaction of H2PtCl6 with sodium sulfide.
15:40	16:00		Coffee
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			Chairman Dr. Alexander SHMAKOV
16:00	16:20	26	Dr. Petr KORUSENKO, Influence of structural
			defects, functional groups and dopant impurities
			on the electronic structure of multiwalled carbon
			nanotubes.
16:20	16:40	34	Dr. Tatyana KUZNETSOVA, Resonant
			photoemission spectroscopy of materials for
			photovoltaics.
16:40	17:00	31	Dr. Sergey NESOV, Structure of composites based
			on multi-walled carbon nanotubes and metal
			oxides formed by magnetron sputtering.
17:00	17:20		Conference closing
18:00	21:00		Conference Dinner

Poster session

Wednesday, June 27, 15:40 – 17:00

*Please, put your poster on the cork board according to the "Board number" in the first column. *ID – paper ID in Book of Abstracts.*

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