KAZAN SCIENCE WEEK 2025

PROGRAM

KAZAN SCIENCE WEEK

PROGRAM OF THE
INTERNATIONAL CONFERENCES
“ADVANCED LASER TECHNOLOGIES”
AND
“MODERN DEVELOPMENT OF MAGNETIC RESONANCE”

KAZAN, SEPTEMBER 22 – OCTOBER 03, 2025

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MEPhI National Research Nuclear University MEPhI

ЭЛЕМЕНТ

AVESTA
LASERS AND OPTICAL SYSTEMS

special systems
PHOTONICS

"НАУКА"
Центр Технического Сопровождения

SLS
PRIME TECHNOLOGY

Solar Laser Systems

LLS

Solar Laser Systems

SOLAR LS Company has been working in the international photonics market for more than 30 years. We are experts in the design and manufacturing of solid-state laser systems and spectral analysis instruments for science, medicine and industry. Currently, the company comprises scientific research laboratories, a design department, a mechanical and assembly production facility, an optical department, and a group for adjustment and service maintenance. Therefore, we complete the entire cycle of work on creating laser and spectral analysis systems - from research and development to the supply of finished products and their service maintenance. Our instruments and systems successfully operate in more than 25 countries all over the world. Being one of the market leaders, we offer our customers the widest range of the cutting-edge solid-state lasers, laser systems and spectral instruments. Reliability and technical perfection of SOLAR LS products are ensured by more than 30 years of manufacturing experience while design and concept incorporates with the latest achievements of the photonics.

Our laser product line includes:

- Nanosecond lasers with lamp and diode pumping with pulse energy up to 2.5 J, pulse repetition rates up to 100 Hz;
- Lasers with kHz pulse repetition rates with average power up to 10 W, pulse repetition rates from 1 to 100 kHz;
- Picosecond and femtosecond lasers with average power up to 8 W, pulse energy up to 1 mJ, pulse duration from 150 fs to 30 ps;
- Tunable nanosecond laser systems with a tuning range from 200 nm to 20 μm.

All lasers are equipped with harmonic generators and nonlinear converters, providing the capability to operate in UV, visible and IR spectral ranges.

Typical spectral products of our company are:

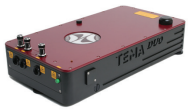
- Monochromators/spectrographs with a focal length from 44 to 522 mm;
- Compact spectrometers in the spectral range from 190 to 2560 nm with high optical sensitivity, low level of stray light and high resolution;
- Tunable light sources based on xenon lamps in the spectral range from 190 to 2500 nm, with high resolution up to 0.1 nm;
- Wavelength meters for lasers and diodes in the spectral range from 190 to 1800 nm with high accuracy and extremely high resolution.

We offer a wide range of detectors and accessories to complete our spectral instrument registration systems, as well as to collect light and input/output it into a fiber or spectral instrument. In addition to standard models of lasers and spectral instruments, our specialists are ready to develop and manufacture absolutely unique systems for your specific requirements and tasks.

Why we are confident in excellent results:

- Extensive experience: over 30 years of designing and producing laser systems and spectral analysis instruments to meet the current User's needs;
- Rapid and high-quality development of custom instruments;
- Established small-scale production process;
- Our team is involved in optimizing optical schemes designs for experiments using our spectral analysis instruments and laser systems;
- We provide stable OEM-supplies of high-quality instruments and systems.

Фемтосекундные твердотельные лазеры


TiF
Ti:S лазер
- λ_{range}: 690-1040 нм
- τ_{pulse}: 6 фс - 30 пс
- P_{av}: до 4 Вт
- PRR: 40...125 МГц

TeMa
иттербиевый лазер
- λ: 1030...1054 / 525 нм
- τ_{pulse}: 15-150 фс
- P_{av}: >20 Вт / >8 Вт
- PRR: 10-80 МГц

CrF
Cr:F лазер
- λ_{range}: 1230-1270 нм
- τ_{pulse}: <70 фс
- P_{av}: до 1 Вт
- PRR: 75...125 МГц

Katyusha
многоканальная система
- λ: 525 / 740-860 / 1050 нм
- τ_{pulse}: <150/<50/<200 фс
- P_{av}: 1.5 Вт на 800 нм
- PRR: 80 МГц

TOPOL
ОПО с накачкой
- λ_{range}: 205-4750 нм
- τ_{pulse}: <150 фс
- P_{av}: >3 Вт
- PRR: 80 МГц

Фемтосекундные волоконные лазеры





YFOA
иттербиевый лазер
- λ: 1030...1064 нм
- τ_{pulse}: <100 фс
- P_{av}: до 50 Вт
- PRR: 40-80 МГц

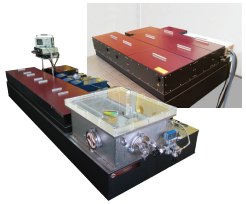
ANTAUS
микроджоульный
- λ: 1030...1053 нм
- τ_{pulse}: <250 фс
- E_{pulse}: до 60 мкДж
- P_{av}: до 50 Вт

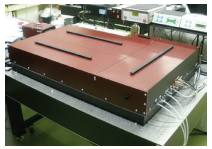
PErL, EFO
эрбиевые лазеры
- λ: 1560 нм
- τ_{pulse}: 50...300 фс; 5 пс
- P_{av}: до 5 Вт
- PRR: 30...100 МГц

EFOA-SH/PErL-PM-SH
эрбиевый лазер
- λ: 1560/780 нм
- τ_{pulse}: <50 фс
- P_{av}: >2 Вт
- PRR: 30...100 МГц

EFO-COMB
комб-генератор
- λ: 200...3390 нм
- F_{rep}: 100-250 МГц
- Стаб.: $1*10^{-17}$ на 1 с

Усилители





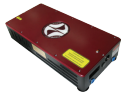

AVET и REUS
титан-сапфировые усилители
- λ: 740...950 нм
- τ_{pulse}: <35 фс (опция <8 фс)
- P_{peak}: до 20 ТВт
- E_{pulse}: >550 мДж@10 Гц

TETA иттербиевый усилитель
- λ: 1030/515/343/257 нм
- τ_{pulse}: <180 фс (опция <30 фс)
- P_{av}: до 30 Вт @ 2 МГц
- E_{pulse}: до 2 мДж

FREGAT хром-форстеритовый усилитель
- λ: 1240 нм
- τ_{pulse}: <100 фс
- E_{pulse}: до 100 мДж
- PRR: 10 Гц...1 кГц

PARUS
параметрический усилитель
- λ_{range}: 190 нм - 15 мкм
- τ_{pulse}: от <30 фс
- Eff. S+I: >10% от накачки

Непрерывные твердотельные лазеры

TiC Ti:S лазер
- λ: 690-1040 нм
- P_{av}: до 6 Вт
- <1 МГц ширина линии

TEMA-CW
- λ: 1010-1070 нм
- P_{av}: до 15 Вт
- USB

LF-100 Cr:F лазер
- λ: 1210-1290 нм
- P_{av}: до 1 Вт
- USB

DLS одночастотный диодный лазерный источник
- λ: 400...1670 нм
- P_{av}: до 10 Вт

ABECTA
ЛАЗЕРЫ И ОПТИЧЕСКИЕ СИСТЕМЫ

ООО «АВЕСТА», ул. Физическая, 11
Троицк, 108840, Москва, Россия
Тел.: +7 (495) 138-99-56

fs@avesta.ru
www.avesta.ru

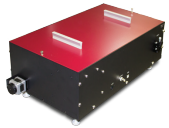
Диагностическое оборудование



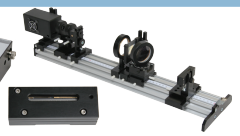
AA-DD и IRA
сканирующие автокорреляторы
- λ_{range}: 420 нм - 11 мкм
- τ_{pulse}: 10 фс - 250 пс
- Чувствительность: от 100 мВт^2
- USB и ПО для Windows

ASF, ASF-FROG
одноимпульсные автокорреляторы и FROG
- Диапазон длин волн: 400-2200 нм
- Диапазон длительности: 5 фс - 20 пс
- USB, ПО для Windows и LabView

SPIDER
измеритель спектральной фазы
- Input λ: 550-2200 нм
- Input $\tau_{pulse\ range}$: 5-320 фс
- USB и ПО для Windows





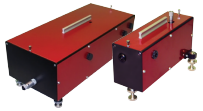



COMET измеритель контраста
- Диапазон длин волн: 700-1500 нм
- Динамический диапазон: 10^{10}
- Временной диапазон: до 10 нс
- USB и ПО для Windows

OD фотоприемники
- Диапазон длин волн: 200-2600 нм
- Полоса до 2500 МГц
- Время нарастания от 0.5 нс
- Со смещением, с усилителем, лавинные, волоконные

Спектрометры и сенсоры
- λ: 190-3450 нм
- Разрешение: от 0.01 нм
- Волоконный/free-space
- USB и ПО для Windows

Компоненты


OG ЭО и АО селекторы импульсов
- Длины волн: 210...2700 нм
- Выходная частота: до 40 МГц
- Пропускание >90%
- Контраст >2 000:1
- Блок генерации задержек
- USB, ПО для Windows и LabView

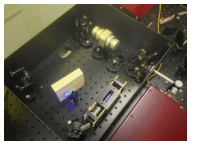
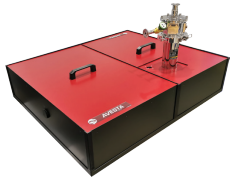
ALock. Блок ФАПЧ
- Входной сигнал до 3 ГГц
- Полоса ПИД до 2 МГц
- PZT до 50 Вт
- Синхронизация лазеров
- Стабилизация CEP
- ASOPS, THz-ASOPS

AG генераторы гармоник
- Выход: 195 нм - 5 мкм
- ЧГ на 800 нм = ТГ+основная
- Преобразование: до >50%

APC призменный компенсатор
GVD на 800 нм:
от +16500 фс^2 до -13800 фс^2

Compulse компрессор
- 6 фс, 500 мкДж на 800 нм
- 30 фс, 200 мкДж на 1030 нм



OA оптические аттенюаторы
- Динамический диапазон: 10^2
- λ: 250...2000 нм
- Модели с низкой дисперсией
- Порог пробоя: до 10 Дж/см^2

AF ротаторы и изоляторы
- λ: 400...1250 нм
- Изоляция: >38 dB; >60 dB
- Широкопол. и перестраив.
- Апертура: до 20 мм
- Порог пробоя: до 5 Дж/см^2

GECON генератор суперконтинуума
- Вх. λ: 800; 1030-1064 нм
- Вых. λ: 200-1200 нм
- Преобразование: >50%

Tera-Ax ТГц генератор
- Центр. частота: 1 ТГц
- Длительность ТГц: <1 пс
- Энергия ТГц: >1 мДж
- ЭО детектор (опция)
- Версия с криостатом

• чопперы • шаттеры • USB контроллеры • оптомеханика • столики • оправы •

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rev 2507

LASERS & LASER SYSTEMS

PULSED Nd:YAG LASERS

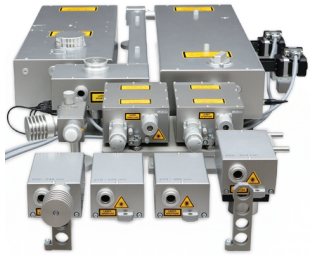
- Pulse energy up to 2.5 J
- Flat top beam profile
- Pulse repetition rate up to 200 Hz
- All harmonics from 1064 to 213 nm
- Adjustable pulsewidth
- Adjustable pulse shape

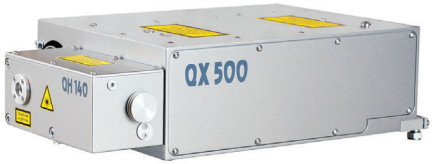
FEMTO-, PICOSECOND LASERS

- Pulsewidth (FWHM) up to 110 fs
- Output power up to 7 W
- Output energy up to 1 mJ
- Harmonic generators
- Diode pumping
- Pulse selectors

TUNABLE LASERS

- Ti:Sapphire lasers, DFG converters
- Optical parametric oscillators
- Tuning range from 0.2 to 20 μm
- Linewidth up to 0.005 nm
- Pulse energy up to 100 mJ





DIODE-PUMPED LASERS

- Compact industrial design
- Built-in or external harmonic generators
- up to 150 mJ per pulse at 20 Hz
- up to 3 W @ 355 nm at 30 kHz

SPECTRAL INSTRUMENTS

MONOCHROMATORS/ SPECTROGRAPHS

- Single and double
- Focal length from 44 to 522 mm
- Wide range of detectors

SPECTROMETERS

- Spectral range from 190 to 2560 nm
- High optical sensitivity
- Fiber input

WAVELENGTH METERS FOR LASERS AND DIODES

- Spectral range from 190 to 1800 nm
- High accuracy ± 3 pm
- FWHM and spectral line monitoring and analysis

TUNABLE LIGHT SOURCES

- Spectral range from 190 to 2500 nm
- Spectral resolution up to 0.1 nm

BUILT WITH ADVANCED TECHNOLOGIES

PULSED Nd:YAG LASERS

- Wavelength 1064, 532, 355, 266 and 213 nm
- Pulse energy up to 4 J
- Repetition rate up to 10 kHz
- Integrated energy meter
- Compact housing
- Manufactured in the Republic of Belarus

Convenient Operation · High Reliability · Guaranteed Service

SLS Prime Technology unites leading experts in lasers and laser systems development and production to bring innovative equipment to domestic markets.

We place special emphasis in engineering diode-pumped lasers, deliberately dissolving the boundaries of their applications between science and industry. We are determined that our products are designed to succeed in both domains.

AZURITE is our first and proven model of diode-pumped lasers generating nanosecond pulses. It delivers **up to 160 mJ** pulse energy at **up to 30 Hz** repetition rates in a completely **"dry" design**.

Its **extended service interval of over 1 billion pulses** makes AZURITE a robust solution not only for a wide range of R&D applications but also for integrating in industrial environments operating 24/7.

We use **exclusively domestically sourced components** for all critical parts, ensuring system maintainability and reliable long-term service support.

Please contact our specialists for more details by e-mail or phone:

SLS Prime Technology | +375 (17) 382-00-55 | sales@sls-prime.com | www.sls-prime.com

SLS PRIME TECHNOLOGY

PULSED Nd:YAG LASERS

SLS PRIME TECHNOLOGY

AZURITE

Compact diode-pumped lasers

- Up to 160 mJ pulse energy at up to 30 Hz repetition rate
- >1 billion shots lifetime
- Completely dry cooling design
-

GRAPHITE

Compact lamp-pumped lasers

- 200 mJ - 750 mJ pulse energy at up to 100 Hz repetition rate
- >30 million shots lifetime
- Water-air cooling

CORUNDUM

Lamp-pumped Joule-class lasers

- Up to 1.5 J pulse energy at up to 20 Hz repetition rate
- >30 million shots lifetime
- Water-air cooling

OBSIDIAN

Picosecond lasers

- Up to 2 mJ pulse energy at up to 1 kHz repetition rate
- 300-500 ps pulse duration
- SLM operation mode

AMETHYST

Tunable laser systems

- Tunable output in the 0.2–20 μm range
- Up to 150 mJ pulse energy
- Customized configurations available

- *All Nd:YAG laser models incorporate replaceable harmonic generators for wavelength selection from IR to UV: 1064 nm, 532 nm, 355 nm, 266 nm, and 213 nm.*
- *Nd:YAG lasers are available with single longitude mode (TEM00) option.*
- *Lasers with pulse energies up to 4 J are available on a custom-order basis.*
- *Tunable wavelength systems are developed to individual specifications based on Nd:YAG lasers enhanced with OPOs and sum- and difference-frequency generators.*

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SLS PRIME TECHNOLOGY

ЭЛЕМЕНТ

Сайт: https://element-msc.ru/

Компания «ЭЛЕМЕНТ» – надежный поставщик аналитического оборудования, запчастей и расходных материалов на российском рынке уже более 20 лет. Мы не только обеспечиваем лаборатории и научные центры передовой техникой, но и предлагаем полный спектр сервисных услуг, включая гарантийное обслуживание и ремонт приборов.

«ЭЛЕМЕНТ» является официальным дистрибьютором SHIMADZU в России, а также представляет ряд других ведущих производителей аналитического оборудования. Среди наших партнеров:

- **ZHONGTAI (CIQTEK)** – разработчик спектрометров ядерного магнитного резонанса (ЯМР) и электронного парамагнитного резонанса (ЭПР) X и W диапазона, а также уникального оборудования для измерения магнитных свойств веществ, включая NV-магнитометры и квантовые NV-микроскопы.
- **Zhenyi Scientific** – китайский производитель инновационных решений в области ЯМР-анализа, включая **бескриогенные низкопольные ЯМР-анализаторы** для пищевой науки, материаловедения и биомедицины.

ЭЛЕМЕНТ

СПЕКТРОМЕТРЫ ЯДЕРНОГО МАГНИТНОГО РЕЗОНАНСА (ЯМР)

ЯМР-спектрометры Zhenyi на постоянном магните серии HT-PNMR12 (60/90МГц)

Предназначены для проведения рутинных экспериментов. В зависимости от конфигурации они способны регистрировать ЯМР-спектры ядер: ^{1}H, ^{19}F, ^{13}C, ^{31}P. Уникальный постоянный магнит не требует охлаждения криогенными жидкостями. Для уменьшения влияния анизотропии магнитного поля используется система вращения. Все блоки прибора находятся в едином корпусе. Заводская гарантия 24 месяца с момента поставки.

- Две модификации: HT-PNMR12-6 на 60 МГц / HT-PNMR12-9 на 90 МГц
- Магнитное поле: 1,4 Тл / 2,1 Тл
- Разрешение: < 0,8 Гц / < 0,5 Гц
- Соотношение S/N (1% этилбензол): 100:1 / 120:1
- Температурная стабильность: 0,001 К/ч через 4 часа после запуска

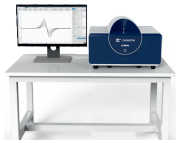
Высокопольные ЯМР-спектрометры ZHONGTAI CAN400 и CAN600 (400/600 МГц)

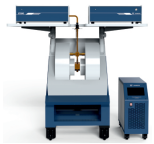
Современные высокочувствительные ЯМР-спектрометры с интеллектуальным управлением и сверхпроводящим магнитом, обеспечивающим исключительную однородность поля. Приборы оснащены автоматизированным зондом и модульной системой, что позволяет проводить точные исследования молекулярной структуры с минимальным вмешательством оператора. ЯМР-спектрометры ZHONGTAI идеально подходят для современных лабораторий, сочетая высокое разрешение, надежность и удобство в эксплуатации.

- Две модели: CAN400 / CAN600
- Рабочая частота на ядрах 1H – 400 МГц / 600 МГц
- Магнитное поле: 9,39 Тл / 14,09 Тл
- Соотношение S/N (0,1% этилбензол): ≥ 500:1 / ≥ 850:1
- Наблюдаемые ядра: ^{1}H, ^{13}C, ^{15}N, ^{31}P, ^{19}F и другие
- Разрешение: < 0,0005 Гц
- Диаметр теплого отверстия: 54 мм
- Опции: температурная приставка (от -150 °C до +150 °C), автосамплер на 72 образца

СПЕКТРОМЕТРЫ ЭЛЕКТРОННОГО ПАРАМАГНИТНОГО РЕЗОНАНСА (ЭПР)

ЭПР -спектрометры X-, Q-, W- диапазона от ZHONGTAI


ZT6500


ZT15C


ZT15P


ZT60W

Линейка ЭПР спектрометоров ZHONGTAI включает :

- компактную настольную модель ZT6500
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- Вершина линейки - высокочастотный ЭПР-спектрометр W-диапазона ZT60W.

Кроме этого, производитель предлагает большой набор опций: резонаторы, азотные и гелиевые температурные приставки, системы облучения, ячейки для разных приложений, в том числе для модернизации ЭПР-спектрометров сторонних производителей.

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ЭЛЕМЕНТ

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Центр Технического Сопровождения

Адрес: 129626, Россия, Москва,
ул. Маломосковская, 22, стр. 1, «Технопарк»
Телефон: +7 (499) 322 06 62
Моб.: +7 915 404 65 97
E-mail: d.naberezhnyi@cts-nauka.ru

ЦЕНТР ТЕХНИЧЕСКОГО СОПРОВОЖДЕНИЯ «НАУКА» ЗАНИМАЕТСЯ ПОСТАВКОЙ И ОБСЛУЖИВАНИЕМ НАУЧНОГО ОБОРУДОВАНИЯ ДЛЯ ЛАБОРАТОРИЙ, РЕШАЯ СЛЕДУЮЩИЕ ЗАДАЧИ:

- разработка комплексного решения под задачи пользователя, в том числе поставка оборудования, разработанного по индивидуальным проектам
- поставка, запуск и обслуживание оборудования
- объединение приборов от разных производителей в единый комплекс
- поставка всех необходимых расходных материалов
- гарантийное и постгарантийное обслуживание

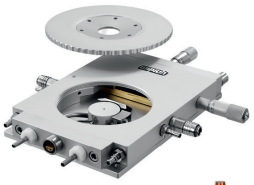
ЛАБОРАТОРНОЕ ОБОРУДОВАНИЕ | РАСХОДНЫЕ МАТЕРИАЛЫ | СЕРВИС

КОМПАНИЯ ОБРАЗОВАНА В 2013 ГОДУ И ЗАРЕКОМЕНДОВАЛА СЕБЯ КАК НАДЕЖНЫХ ПОСТАВЩИК ПРИБОРОВ ДЛЯ ИССЛЕДОВАНИЙ В ОБЛАСТИ ФИЗИКИ И ХИМИИ.

www.scientific-technology.ru | www.nauka-shop.ru | www.lgrinc.ru | www.cryoindustries.ru

ЦТС «НАУКА» ПРЕДЛАГАЕТ ШИРОКИЙ ПЕРЕЧЕНЬ УНИКАЛЬНОГО ОБОРУДОВАНИЯ ДЛЯ НАУЧНЫХ ИЗЫСКАНИЙ:

КРИОГЕННОЕ ОБОРУДОВАНИЕ:



Linkam

+ Столики для микроскопии с задаваемой температурой / давлением от **Linkam Scientific Instruments**.

ARS

+ **Advanced Research Systems:** оптические криостаты замкнутого цикла, проточные, сверхвысоковакуумные, исследовательские станции с зондом и иные аксессуары.

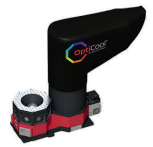
CIA CRYO INDUSTRIES OF AMERICA, INC.

+ **Cryo Industries of America:** оптические безжидкостные криостаты, поточные гели евые криостаты, гелиевые и безжидкостные сверхпроводящие магниты, системы охлаждения газового потока, системы для криомикроскопии, генераторы жидкого азота, криостаты He-3, трансферные линии и сосуды Дьюара.

SHI Cryogenics Group

+ **SHI Cryogenic Group (Sumitomo):** криокулеры (криогенные рефрижераторы), крионасосы, гелиевые компрессоры.

Q



+ **Quantum Design:** безжидкостные оптические криостаты, ожижители гелия, системы квантовой микроскопии, системы наноосаждения PVD/CVD, SQUID магнетометры, безжидкостные станции для исследования материалов и криомикроскопии.

CRYOGENIC

+ **Cryogenic Limited:** безжидкостные измерительные системы 18 Тл и криокулеры, криостаты замкнутого цикла, магниты высокого разрешения для ЯМР, SQUID магнетометры.

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+ пластинчато-роторные насосы, спиральные насосы, турбомолекулярные насосы от **Pfeiffer Vacuum, Edwards Vacuum, Leybold GmbH.**

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+ вакуумные камеры, вакуумная арматура от **Yunmu** и иных производителей.

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+ Чиллеры, сосуды Дьюара, трансферные линии и многое другое.

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+ синхронные усилители от **Zurich instruments**

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+ портативные газовые анализаторы от **ABB**

ThermoFisher SCIENTIFIC

+ спектрометры от **Thermo Fisher Scientific**

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+ спектрометры от **Edinburgh Instruments**

HORIBA

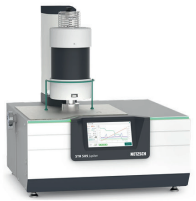
+ спектрометры от **Horiba**

L G R

+ изотопные анализаторы от **Los Gatos Research**

NETZSCH

+ термические анализаторы от **Netzsch.**



ЛАБОРАТОРНОЕ ОБОРУДОВАНИЕ | РАСХОДНЫЕ МАТЕРИАЛЫ | СЕРВИС

"НАУКА"

Центр Технического Сопровождения

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АО «ЛЛС» — ВАШ ПРОВОДНИК В МИРЕ ОПТИКИ И ФОТОНИКИ!

Нам доверяют эксперты отрасли, а мы обеспечиваем интеграцию оборудования под ключ — от поставки до пусконаладки

10 лет мы лидеры рынка оптики и фотоники — отбираем лучших производителей и предлагаем альтернативные решения без компромиссов по качеству.

Представим оборудование, доступное в АО «ЛЛС» (более 300 производителей):

- **Оптический анализ материалов: микроскопия, спектроскопия и терагерцовые технологии:**
  Apex Photon, Optosky, Oceanoptics, CIQTEK, YSL Photonics, B-THz,Toptica, CNI Laser
- **Производство и тестирование ФИС:**
  CUMEC, OMTools, Moji Nano, Santec, Quantifi photonics, Anritsu, Yokogawa, Toptica
- **Комплектующие и системы для микрообработки материалов:**
  NordLase, Grace Laser, Moji Nano, Huaray, ScanLab
- **Оптомеханика от ведущих мировых производителей:**
  LBTEK, OMTools, Thorlabs, Newport, Coremorrow, Luminous
- **Волоконно-оптические компоненты и оборудование для работы с волокном:**
  LightComm, Shinho, CSRazer, XLG, AFR, Optizone
- **Охлаждение атомов и квантовые технологии:**
  Faraday, CasColdAtom, Tuptek, Connet, KeyangPhotonics, Vision Datum, QUBIG, Zurich Instruments
- **Оборудование для измерения характеристик лазерного пучка:**
  Cai Huang Thermoelectricity, Ophir, Lightcomm, Dataray

+ многое другое оборудование на выставке

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специальные системы
ФОТОНИКА

О КОМПАНИИ

ООО «Специальные Системы. Фотоника» является специализированным поставщиком и интегратором лазерно-оптических и волоконно-оптических компонентов, измерительного, спектрального и технологического оборудования, источников излучения и лазерных систем различного назначения.

Специалисты компании обеспечивают высококвалифицированную техническую и информационную поддержку по продукции и оборудованию от ведущих мировых производителей для заказчиков из России и ЕАЭС.

Миссия компании - это внедрение передовых лазерно-оптических технологий и продукции в текущие и перспективные разработки российских научных и производственных центров. Активное участие в развитии фотоники в России, как наиболее перспективного направления науки и технологий.

НАПРАВЛЕНИЯ ДЕЯТЕЛЬНОСТИ И УСЛУГИ

- Дистрибуция лазерно-оптических и волоконно-оптических компонентов и оборудования.
- Комплексное оснащение лабораторий и производств.
- Разработка и производство волоконно-оптических модулей и систем (ВОЛС, радиофотоника).
- Собственная лаборатория с передовым измерительным и технологическим оборудованием.
- Технический консалтинг, инженерный сервис и обучение специалистов заказчика.
- Подготовка документации для закупочных процедур на электронных торговых площадках (ФЗ 223 и ФЗ 44).
- Логистические услуги, таможенное оформление лабораторного оборудования и лазерных компонентов.

ADVANCED LASER TECHNOLOGIES

ALT INTERNATIONAL CONFERENCE
Advanced Laser Technologies

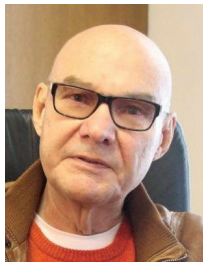
KAZAN, SEPTEMBER 22–26, 2025

32nd International Conference on Advanced Laser Technologies (ALT'25) will be held in Kazan, the capital of the Republic of Tatarstan, Russia, 22–26 September 2025.

The ALT'25 conference aims to bring together presentations on fundamental as well as applicative aspects of innovative laser technologies along with their scientific and hi-tech industrial applications. Fundamental topics include laser-matter interaction, photonics, nonlinear optics, plasmonics, physical optics, etc. Applicative topics include material laser processing and writing of surface and bulk modification and functionalization, high-power and/or high-repetition rate lasers, biomedical laser applications, optical materials, etc.

COMMITEE

Conference Chairman



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Scientific Director
of Prokhorov General
Physics Institute

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Corresponding member of
RAS, Director of FRC Kazan
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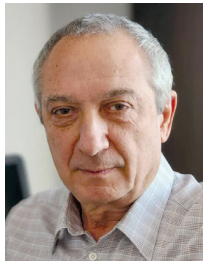

Vladimir PUSTOVOY
Head of the Laser Physics
Department of the
Prokhorov General Physics
Institute

Sergey KHANTIMEROV
Director of Zavoisky
Physical-Technical Institute,
FRC Kazan Scientific Center
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Tatiana GAVRILOVA
Kazan E.K. Zavoisky Physical-Technical Institute (KPhTI),
FRC Kazan Scientific Center,
Russian Academy of Sciences

t.gavrilova@knc.ru
Phone: +7 843 231 90 82
https://sci-kzn2025.knc.ru/

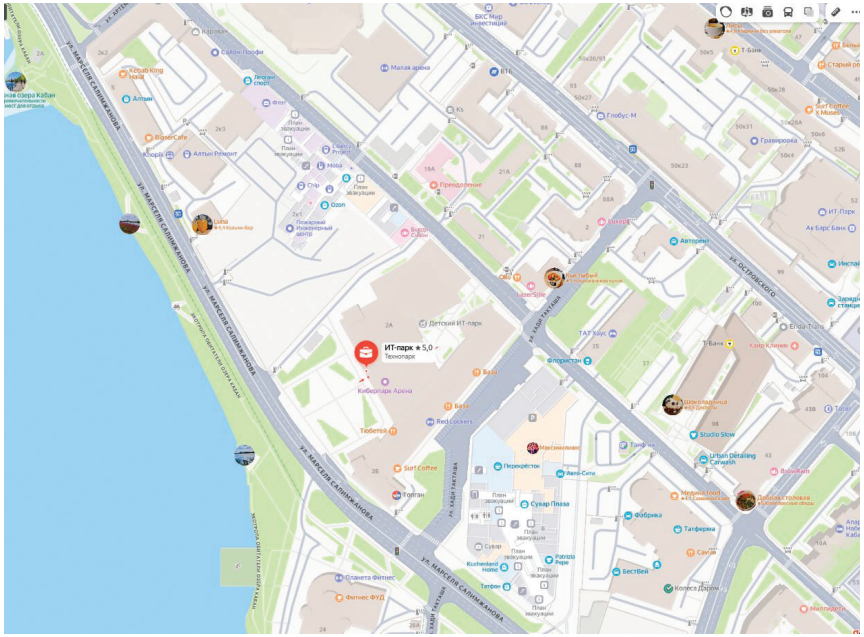
CONFERENCE SECRETARY (IN MOSCOW)

Natalia KHAKAMOVA
Prokhorov General Physics Institute
of the Russian Academy of Sciences

khakamova@nsc.gpi.ru
Phone: +7 499 503-87-77, add 2-96

VENUE

Conference ALT'25 will be held in Tech Park IT Park named after Bashir Rameev, Spartakovskaya st., 2. Web site: https://rameev.itpark.tech/



SECTIONS

- LASER-MATTER INTERACTION
  Co-chairs:
  Sergey KLIMENTOV (MEPHI University, Moscow)
  Ekaterina BARMINA (Prokhorov GPI RAS, Moscow)

- BIOMEDICAL PHOTONICS
  Co-chairs:
  Alexander PRIEZZHEV (Lomonosov MSU, Moscow)
  Andrey LUGOVTSOV (Lomonosov MSU, Moscow)

- LASER SYSTEMS AND MATERIALS
  Co-chairs:
  Boris DENKER (Prokhorov GPI RAS, Moscow)
  Grigorii SOKOLOVSKII (Ioffe Institute, Saint Petersburg)
  Alexey GLADYSHEV (Dianov Fiber Optics Research Center, Moscow)

- LASER DIAGNOSTICS AND SPECTROSCOPY
  Co-chairs:
  Leonid GOLOVAN (Lomonosov MSU, Moscow)
  Alexander MILEKHIN (Rzhanov Institute of Semiconductor Physics, Novosibisk)

- NONLINEAR AND TERAHERTZ PHOTONICS
  Co-chairs:
  Alexander SHKURINOV (Lomonosov MSU, Moscow)
  Vladimir MAKAROV (Lomonosov MSU, Moscow)

- PHOTONICS AND QUANTUM TECHNOLOGIES
  Co-chairs:
  Andrei NAUMOV (Lebedev Physical Institute, RAS, Moscow)
  Sergei KULIK (Lomonosov MSU, Moscow)

- NANOPHOTONICS
  Co-chairs:
  Igor VLASOV (Prokhorov GPI RAS, Moscow)
  Aleksander KUCHMIZHAK (FEFU, Vladivostok)

SECTION COLOR SCHEME

LASER-MATTER INTERACTION

BIOMEDICAL PHOTONICS

LASER SYSTEMS AND MATERIALS

LASER DIAGNOSTICS AND SPECTROSCOPY

NONLINEAR AND TERAHERTZ PHOTONICS

PHOTONICS IN QUANTUM TECHNOLOGIES

NANOPHOTONICS

08:30–19:00	Registration			
10:00–11:00	**Kazan Science Week 2025 Opening ceremony**			
11:00–11:15	ALT'25 Opening ceremony			
11:15–12:00	Plenary session 1			
12:00–12:45	Plenary session 2			
12:45–13:05	Sponsors' presentation			
13:05–14:30	Lunch			
	Room 1	Room 2	Room 3	Room 4
14:30–16:20	Photonics in Quantum Technologies Chair: A. Naumov	Biomedical Photonics. Session 1: Emerging Technogogies Chair: A. Priezzhev	Laser Systems and Materials Chair: A. Gladyshev	Nonlinear and Terahertz Photonics Chair: A. Shkurinov
16:20–16:40	Coffee break			
16:40–19:00	Photonics in Quantum Technologies Chair: P. Frantsuzov	Biomedical Photonics. Session 2: Laser Assesment of Blood Chair: A. Lugovtsov	Laser Systems and Materials Chair: A. Dostovalov	Nonlinear and Terahertz Photonics Chair: V. Makarov
19:00–21:00	Wellcome party			
20:00	Program Committee			
21:00	Social Program. Excursion Night Kazan			

09:00–09:45	Plenary session 3			
09:45–10:30	Plenary session 4			
10:30–10:40	Sponsors' presentation			
10:40–11:00	Coffee break			
	Room 1	Room 2	Room 3	Room 4
11:00–13:10	Photonics in Quantum Technologies Chair: Yu. Akimov	Biomedical Photonics. Session 3: Fluorescence Measurements Chair: A. Lanin	Laser Systems and Materials Chair: O. Antipov	Nonlinear and Terahertz Photonics Chair: O. Kosareva
13:10–14:30	Lunch			
14:30–16:00	Laser-Matter Interaction Chairs: V. Loschenov, I. V. Baymler	Biomedical Photonics. Session 4: Optical Clearing, Photoacoustics and Simulation Chair: M. Kirillin	Laser Systems and Materials Chair: I. Bufetov	Nonlinear and Terahertz Photonics Chair: A. Balakin
16:00–16:20	Coffee break			
16:00–19:00	Poster session			

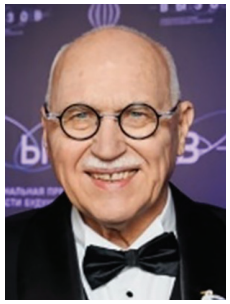
08:00–22:00	Social Program
08:00–17:00	Excursion to the island-city of Sviyazhsk Sviyazhsk is a federal museum-reserve and a popular tourist destination. Sviyazhsk is an outstanding complex historical, urban planning, architectural and artistic and natural landscape monument of the 16th–20th centuries. Time has preserved a significant area of the territory, which has remained unchanged to this day. The scale and image of the historical and architectural environment have been preserved, which is in harmony with the uniquely beautiful natural environment. This creates a unique image, makes a strong emotional impression and forms the basis of the historical and cultural exhibition potential of Sviyazhsk. It is called the prototype of Buyan Island, which Pushkin described in his work "The Tale of Tsar Saltan".  
17:00–18:00	Break
18:00–22:00	Conference Dinner Presentation ALT'26: **Muhsin Ashurov** Location: Extra Lounge Restaurant, Korston Club Hotel Kazan, Kazan, N. Ershova st., 1a, floor 25 

09:00–09:45	Plenary session 5			
09:45–10:30	Plenary session 6			
10:30–10:50	Coffee break			
	Room 1	Room 2	Room 3	Room 4
10:50–13:05	Laser-Matter Interaction Chairs: G. Romanova, A. Smirnov	Biomedical Photonics. Session 5: Laser Effects/ PDT Chair: S. Pershin	Laser Diagnostics and Spectroscopy Chairs: S. Veber, T. Murzina	Nanophotonics Chair: A. Bolshakov
13:00–14:30	Lunch			
14:30–16:00	Laser Systems and Materials Chair: V. Tsvetkov	Nonlinear and Terahertz Photonics Chair: G. Kitaeva	Laser Diagnostics and Spectroscopy Chairs: A. Milekhin, T. Dolenko	Nanophotonics Chair: D. Baranov
16:00–16:20	Coffee break			
16:20–18:00	Laser-Matter Interaction Chairs: F. Potemkin, T. Savelieva	Biomedical Photonics. Session 6: Spectroscopy/ Microscopy Chair: I. Turchin	Laser Diagnostics and Spectroscopy Chairs: V. Timofeev, T. Dolgova	Nanophotonics Chair: I. Vlasov

09:00–09:45	Plenary session 7			
09:45–10:30	Plenary session 8			
10:30–10:50	Coffee break			
	Room 1	Room 2	Room 3	Room 4
10:50–13:00	Laser-Matter Interaction Chairs: A. Povolotsky, D. Dadadzhanov	Biomedical Photonics. Session 7: Artificial Intelligence and Laser Diagnostics Chair: D. Gorin	Laser Diagnostics and Spectroscopy Chairs: M. Stepikhova, D. Zhigunov	Nanophotonics Chair: A. Kuchmizhak
13:00–14:30	Lunch			
14:30–16:20	Laser-Matter Interaction Chairs: N. Inogamov, S. M. Klimentov	Biomedical Photonics. Session 8: Nanophotonics Chair: N. Khlebtsov	Laser Diagnostics and Spectroscopy Chairs: S. Kharintsev, L. Golovan	Nanophotonics Chair: M. Petrov
16:30–17:00	Closing ceremony			

11:15–12:00
22 September

Benefits of optical imaging and phototherapy through tissue optical clearing



Valery TUCHIN
Saratov University,
FRC "Saratov Scientific Centre of the RAS",
Tomsk University

Tissue optical clearing (TOC) is based on temporary and reversible suppression of light scattering in tissues using biocompatible immersion optical clearing agents (OCAs) [1–3]. Delivery of the appropriate OCA to living tissue ensures its temporal transparency over a wide spectral range from deep UV to THz, thereby providing higher image depth and contrast for optical techniques and better precision of phototherapy and laser surgery. The lecture summarizes the advances in the development of the TOC method for solving problems of intravital optical imaging, diagnostics and laser therapy.

1. L. Oliveira and V.V. Tuchin, The Optical Clearing Method: A New Tool for Clinical Practice and Biomedical Engineering, Basel: Springer Nature Switzerland AG, 2019.
2. V.V. Tuchin, D. Zhu, E.A. Genina (Eds.), Handbook of Tissue Optical Clearing: New Prospects in Optical Imaging, CRC Press, Boca Raton, FL, 2022.
3. D. Zhu, V.V. Tuchin, Tissue optical clearing imaging from ex vivo toward in vivo, BME Front. 5, 0058 (2024).

12:00–12:45
22 September

Photoconductivity in HgCdTe-based topological insulators induced by terahertz laser radiation

Dmitry KHOKHLOV
Lomonosov Moscow State University,
Lebedev Physical Institute of the RAS

The paper reports on the observation and study of a new effect – chiral nonlocal terahertz photoconductivity. The effect is observed in thick epitaxial $Hg_{1-x}Cd_xTe$ films, which are topological insulators. The existence of a nonlocal component of terahertz photoconductivity in these structures in a magnetic field is demonstrated. The sign of the nonlocal photoresponse depends on the position of the potential probe and the direction of the magnetic field, which indicates the chirality of the induced nonequilibrium transport. The observed nontrivial features of photoconductivity can be interpreted as a manifestation of the formation of a chiral edge conducting channel in the topological phase of $Hg_{1-x}Cd_xTe$ alloys. It is important to note that the obtained result contradicts the apparent symmetry of the experiment. Possible origin of the symmetry breaking is discussed.

09:00–09:45
23 September

Photon echo quantum memory: traditional and new approaches to implementation

Sergey MOISEEV
Kazan National Research Technical University named after A. N. Tupolev – KAI

Photon echo quantum memory (PEQM) allows storage a large number of photonic qubits, which determines the interest in its development. Currently, a number of PEQM protocols have been proposed, which are based on the use of various variants of inhomogeneous broadening of a resonant atomic transition and controlling the atomic coherence excited by signal light pulses. The physical principles and basic properties of these protocols are discussed. Special attention is paid to the role of the reversibility of the interaction of light with information carriers in achieving high protocol efficiency. Proven and new implementation methods based on the use of optical and microwave resonators are considered and the possibility of implementing nano-dimensional PEQM is analyzed. A fundamentally new approach to the implementation of PEQM protocols is proposed, which is based on the preliminary creation of a long-lived macroscopic spin coherence with specified parameters. It is shown what new possibilities and physical principles of functioning open up when using this coherence in controlling the operation of such a quantum memory.

09:45–10:30
23 September

Infrared metrology based on quantum interferometry

Anna PATEROVA
South Ural State University

The infrared (IR) spectral region is of big importance for material characterization due to its unique molecular fingerprints. However, conventional IR metrology relies on IR detectors, which suffer from limited sensitivity and high background noise unless cryogenic cooling is applied. These drawbacks reduce the efficiency of IR spectroscopy and imaging compared to visible-range techniques. In our work, we propose an alternative approach based on quantum interferometry method, which enables indirect probing of a specimen's IR properties through the detection of visible photons. This method overcomes the limitations of IR detectors while preserving spectral information, providing a cost-effective and sensitive solution. We demonstrate its applicability in broadband IR spectroscopy and mid-IR imaging, highlighting perspectives for practical applications in medicine, chemistry, and semiconductor diagnostics.

09:00–09:45
25 September

Light as a factor in controlling plants growth and development

Yury KULCHIN
Far Eastern Branch of the Russian Academy of Sciences (FEB RAS)

Light is a critical factor for plant development. By selecting the lighting strategy for plants, it is possible to control their development and stimulate the realization of their genetic and productive potential. Light is a multifaceted factor characterized by qualitative (wavelength range) and quantitative (intensity, integral daily radiation, photoperiod) parameters, as well as coherence and polarization of the lighting. This report provides an overview of the research results on the photonic control of plant development. It demonstrates that the spectrum of plant illumination can be used to control plant development. The report presents experimental results that show the light control of plant morphogenesis. It also describes the impact of abiotic stress on plants caused by a binary change in the spectral composition of radiation produced by matrix LED light sources. It has been shown that the presence of natural optical activity in the epidermal layers of plant leaves can serve as an important factor in determining the interaction of polarized laser radiation with biomolecules contained in plant leaf cells.

09:45–10:30
25 September

Physics of extreme light fields

Alexander SERGEEV
National Center for Physics and Mathematics (NCPM)

In this report, development of a scientific field at the intersection of high-energy physics and physics of super-strong light fields is discussed. Currently, several laboratories around the world are building laser complexes with multi-petawatt and subexawatt power, which allow focusing laser pulses with a duration of about 10 femtoseconds to giant intensities exceeding 10^{23} W/cm^2. The states of matter and vacuum that arise in such fields are still the subject of theoretical studies that predict amazing properties and promise unique applications. The report will present the possibilities for obtaining super-dense electron-positron plasma, giant magnetic fields and powerful sources of highly directed gamma radiation in the laboratory, for studying the spatio-temporal structure of the quantum vacuum, and will discuss approaches for further moving along the intensity scale and approaching the level of Schwinger fields.

09:00–09:45
26 September

Colloidal quantum dots as lasing material: optical gain vs nonradiative recombination

Anna RODINA
Ioffe Institute of RAS

Chemically synthesized semiconductor nanocrystals are now widely used in a variety of applications, including medicine and biology, photovoltaics and optoelectronics. The growing importance of nanocrystal technology was acknowledged when the 2023 Nobel Prize in Chemistry was awarded for the 'discovery and synthesis of quantum dots'. While epitaxial quantum dots have been successfully used in lasers, the use of colloidal nanocrystals for lasing has proven more challenging, progressing steadily but slowly. A major obstacle to achieving optical gain in colloidal quantum dots is their rapid nonradiative Auger recombination. This talk provides a concise review of the discovery of colloidal quantum dots and of research into their lasing applications, followed by an analysis of the state of the art. I will discuss also the influence of spatial and dielectric confinement, as well as of nanocrystal surface properties, on electronic structure and radiative recombination efficiency.

09:45–10:30
26 September

Linear carbon chains: properties, synthesis, prospective applications in photonics and optoelectronics

Alexey KUCHERIK
Vladimir State University

There has been a lot of study and advancement in the area of carbon allotropes in the last several decades, driven by the exceptional and diverse physical and chemical characteristics of carbon nanomaterials. For example, nanostructured forms such as carbon nanotubes, graphene, and carbon quantum dots have the potential to revolutionize various industries. The global scientific community continues to research in the field of creating new materials, particularly low-dimensional carbon allotropes such as carbon nanotubes (CNTs) and carbyne. Carbyne is a one-dimensional carbon allotrope with a large area for application in: nanophotonics, molecular electronics, sensing and another applications due to its linear sp-hybridized atomic chain structure.

PROGRAMME PLAN | Monday, 22 September

08:30–19:00	Registration
10:00–11:00	**Kazan Science Week 2025 Opening ceremony**
11:00–11:15	ALT'25 Opening ceremony: **Ivan Shcherbakov**
11:15–12:00	Plenary session 1. **Valery Tuchin:** Benefits of optical imaging and phototherapy through tissue optical clearing
12:00–12:45	Plenary session 2. **Dmitry Khokhlov:** Photoconductivity in HgCdTe-based topological insulators induced by terahertz laser radiation
12:45–13:05	Sponsors' presentation. **Andrey Chuprov:** Laser solutions for modern technologies and science. *Special Systems. Photonics* **Alexey Sokolovsky:** SLS Prime Technology – Belarusian manufacturer of solid-state lasers and tunable laser systems *SLS Prime Technology*
13:05–14:30	Lunch

ALT INTERNATIONAL CONFERENCE Advanced Laser Technologies

	Room 1		Room 2		Room 3		Room 4
14:30–16:20	Photonics in quantum technologies Chair: A. Naumov	14:30–16:20	Biomedical Photonics. Session 1: Emerging Technogogies Chair: A. Priezzhev	14:30–16:20	Laser Systems and Materials Chair: A. Gladyshev	14:30–16:20	Nonlinear and Terahertz Photonics Chair: A. Shkurinov
14:30–14:50	**Aleksei Taichenachev** (invited) Nuclear optical clock *Institute of Laser Physics*	14:30–14:50	**Vladimir Zaitsev** (invited) Analysis of nonlinear elasticity of biotissues in optical coherence elastography using a new stress-strain equation inspired by nonlinearity of rocks *Institute of Applied Physics*	14:30–14:50	**Alexander Dostovalov** (invited) Mode dynamics in multimode LD-pumped Raman fiber laser with fs-inscribed FBG or thin-film output mirror *Institute of Automation and Electrometry*	14:30–14:50	**Olga Kosareva** (invited) Optimum chirped pulse duration for THz yield in dual-color femtosecond filamentation in air *Lomonosov Moscow State University*
14:50–15:10	**Pavel Frantsuzov** (invited) A quantitative model of single quantum dot blinking *Voevodsky Institute of Chemical Kinetics and Combustion*	14:50–15:10	**Elena Potapova** (invited) Laser speckle contrast imaging: an application in experimental medicine *Orel State University*	14:50–15:10	**Ivan Panyaev** (invited) Narrow-band fiber lasers for microwave photonics and sensing *Ulyanovsk State University*	14:50–15:10	**Olga Valkova** (invited) Works in the field of terahertz waves in Russia in the pre-war period *S. Vavilov Institute for the History of Science and Technology*

PROGRAMME PLAN | Monday, 22 September

15:10–15:30	**Yuriy Akimov** (invited) Theories of light scattering: Features and limitations of the classical models *Lebedev Physical Institute*	15:10–15:30	**Evgeny Shirshin** (invited) Optical spectroscopy for surgery guidance: the choice of modalities and clinical translation *Lomonosov Moscow State University*	15:10–15:30	**Maksim Smirnov** (invited) Fiber-based source of bright ultrabroad photon pairs at pulse and cw regimes *Kazan Quantum Center, Kazan National Research Technical University named after A.N. Tupolev*	15:10–15:30	**Galiya Kitaeva** (invited) Statistical features of the photo response of a superconducting hot-electron bolometer to week THz pulses generated by spontaneous parametric down-conversion *Lomonosov Moscow State University*
15:30–15:45	**Tatiana Shubina** Stimulated downconversion of single-photon emission in a quantum dot-microcavity system *Ioffe Institute*	15:30–15:45	**Alexey Semenov** Distribution of white blood cells and rigid red blood cells under flow in a rectangular microfluidic channel: A study by fluorescence confocal laser scanning microscopy *National University of Science and Technology MISiS*	15:30–15:45	**Kirill Sumachev** Enhanced 1.5-μm luminescence of Er^{3+} in ZBLAN glasses by additional doping with Tb^{3+} and Yb^{3+} ions *Lobachevsky State University of Nizhny Novgorod*	15:30–15:45	**Maria Konnikova** THz modulators with dynamic tunable metasurfaces *Lomonosov Moscow State University*
15:45–16:00	**Rustem Shakhmuratov** Conversion of a phase-modulated CW laser field to pulses by phase control of its spectral components *Zavoisky Physical-Technical Institute*	15:45–16:05	**Gleb Budylin** (invited) Optical navigation in endoscopic surgery *Sechenov First Moscow State Medical University*	15:45–16:00	**Ekaterina Kashirina** Erbium-doped fiber laser with vibration-induced sweeping and sweeping rate control *Institute of Automation and Electrometry*	15:45–16:00	**Elena Mishina** Optically controlled THz modulator based on transition metal dichalcogenide/silicon structure *MIREA – Russian Technological University*
16:00–16:20	**Vladimir Eliseev** (invited) A toolkit for teaching and research on quantum key distribution *JSC InfoTeCS*			16:00–16:20	**Alexander Smirnov** (invited) Universal critical indices predicting erbium laser behavior *Kotelnikov Institute of Radioengineering and Electronics*	16:00–16:20	**Irina Nikolaeva** (invited) Frequency resolved THz beam shaped by femtosecond plasma gradients in air *Lomonosov Moscow State University*
16:20–16:40	Coffee break						

16:40–19:00	Photonics in Quantum Technologies Chair: P. Frantsuzov	16:40–19:00	Biomedical Photonics. Session 2: Laser Assesment of Blood Chair: A. Lugovtsov
16:40–17:00	**Igor Ryabtsev** (invited) Three-photon laser excitation and three-body interactions of Rydberg atoms for quantum information *Rzhanov Institute of Semiconductor Physics*	16:40–17:00	**Pengcheng Li** (invited, online) Endoscopic laser speckle contrast imaging of blood flow *Huazhong University of Science and Technology, Hainan University, China*
17:00–17:20	**Valentina Utochnikova** (invited) Lanthanide-based OLEDs for electroluminescent thermometry *Lomonosov Moscow State University*	17:00–17:20	**Olga Cherkasova** (invited) Terahertz spectroscopy of blood serum for traumatic brain injury diagnosis *Institute of Automation and Electrometry*
17:20–17:40	**Ivan Eremchev** (invited) Photon correlation methods for probing single emitter photophysics *Institute of Spectroscopy RAS*	17:20–17:40	**Andrey Dunaev** (invited) Wearable optical analyzers in clinical and space medicine *Orel State University*
17:40–18:00	**Alexander Starukhin,** (invited, online) Spectroscopy of metalloporphyrins *Stepanov Institute of Physics NAS RB, Minsk, Belarus*	17:40–18:00	**Viktor Dremin** (invited) Time-frequency analysis of microcirculation: from single capillary blood flow to tissue perfusion *Orel State University*

16:40–19:00	Laser Systems and Materials Chair: A. Dostovalov	16:40–19:00	Nonlinear and Terahertz Photonics Chair: V. Makarov
16:40–17:00	**Sergei Sverchkov** (invited) Long-wavelength lasers on the basis of rare-earth doped chalcogenide glasses *Prokhorov General Physics Institute*	16:40–17:00	**Alexei Balakin** (invited) THz generation and electron acceleration in gas-cluster jet under sub-TW laser excitation *Lomonosov Moscow State University*
17:00–17:20	**Alexey Andrianov** (invited) Using low-loss chalcogenide and tellurite fibers for quantum and nonlinear optical applications *Institute of Applied Physics*	17:00–17:20	**Andrey Stepanov** (invited) Nonlinearities of graphene in microwave and terahertz ranges *Institute of Applied Physics*
17:20–17:40	**Elena Romanova** (invited) Prospects for all-fiber mid-IR spectroscopy: systems and components *Saratov State University*	17:20–17:40	**Nikolay Panov** (invited) Ultraviolet femtosecond filamentation: effects of nonlinearity delayed on sub-femtosecond timescale *Lomonosov Moscow State University*
17:40–18:00	**Alexey Kokhanovskiy** (invited) Modern trends in the implementation of artificial Intelligence algorithms for distributed fiber sensors *School of Physics and Engineering*	17:40–18:00	**Andrei Savilov** (invited) Powerful THz gyrotrons with improved selection of operating mode *Institute of Applied Physics*

18:00–18:15	**Aidar Galimov** Bright single-photon emission from an InAs/GaAs quantum dot in an elliptical micropillar with built-in Coulomb blockade *Ioffe Institute*	18:00–18:15	**Jiachi Hong** (online) In vivo laser speckle blood apparent viscosity imaging *Hainan University, China*	18:00–18:15	**Alexander Sudin** Modeling of dual-wavelength pump schemes for optically pumped Ar-He laser *National Research Mordovia State University*	18:00–18:15	**Maria Burdanova** Dynamic shielding of terahertz radiation using electrically controllable thin films of mxenes *Moscow Institute of Physics and Technology*
18:15–18:30	**Nikolay Kapridov** Numerical simulation of quantum optical state evolution via tensor networks *Russian Quantum Center*	18:15–18:30	**Alexander Priezzhev** Possibilities and comparison of in vivo microscopy and in vitro laser aggregometry technique for assessment of erythrocyte aggregation in terminal capillaries and in blood samples *Lomonosov Moscow State University*	18:15–18:30	**Vyacheslav Morozov** Nd-doped amplifiers efficiency related to lower level relaxation rate *Lomonosov Moscow State University*	18:15–18:30	**Alexey Gunyaga** Electric and spin currents induced by structured light *Ioffe Institute*
18:30–18:45	**Olga Kushchenko** Photoluminescence Properties Control Using $Ge_2Sb_2Te_5$ *ITMO University*	18:30–18:45	**Andrei Lugovtsov** Laser-optical study of alterations in blood cells under chronic heart failure *Lomonosov Moscow State University*	18:30–18:45	**Alexey Nizamutdinov** Ultraviolet laser systems on Ce^{3+}-based active media and photodynamic processes *Kazan Federal University*	18:30–18:45	**Gleb Katyba** Novel optical materials for THz frequency range based on the artificial nano and microporous media *Institute of Solid State Physics*
18:45–19:00	**Yan Przhiyalkovskiy** Measurement of the magneto-optical sensitivity of the spun optical fibers *Kotelnikov Institute of Radio Engineering and Electronics*	18:45–19:00	**Mariia Lebedeva** Erythrocyte size and deformability in laser diffractometry *Lomonosov Moscow State University*	18:45–19:00	**Ivan Kuznetsov** Specificities of coherent beam combining in a multichannel Yb:YAG laser of high peak and average power *Institute of Applied Physics*	18:45–19:00	**Nadezhda Kostyukova** Mid-infrared optical parametric oscillator based on $BaGa_2GeS_6$ crystal *Institute of Laser Physics*
19:00–21:00	Wellcome party						
20:00	Program Committee						
21:00	Social Program. Excursion Night Kazan						

PROGRAMME PLAN | Monday, 22 September

PROGRAMME PLAN | Tuesday, 23 September

09:00–09:45	Plenary session 3. **Sergey Moiseev:** Photon echo quantum memory: traditional and new approaches to implementation
09:45–10:30	Plenary session 4. **Anna Paterova:** Infrared metrology based on quantum interferometry
10:30–10:40	Sponsors' presentation. **Egor Serdyuk:** Achievements in the Development and Production of Domestic Lasers and Laser Systems *LLS*
10:40–11:00	Coffee break

ALT INTERNATIONAL CONFERENCE Advanced Laser Technologies

	Room 1		Room 2
11:00–13:10	Photonics in Quantum Technologies Chair: Yu. Akimov	11:00–13:10	Biomedical Photonics. Session 3: Fluorescence Measurements Chair: A. Lanin
11:00–11:20	**Anton Vetlugin** (invited) Photon superbunching in J-aggregates coupled to photonic bound-state metasurface *Nanyang Technological University, Singapore*	11:00–11:20	**Elena Zagaynova** (invited) Optical imaging for tissue engineering *Lopukhin Federal Research and Clinical Center of Physical-Chemical Medicine*
11:20–11:40	**Oleg Astafiev** (invited) Lasing with superconducting quantum systems *Skolkovo Institute of Science and Technology*	11:20–11:40	**Alexander Savitsky** (invited) Photophysical properties of in vivo imaging sensors based on colored fluorescent proteins *FRC Biotechnology*
11:40–11:55	**Denis Sannikov** Ultrafast all-optical logic and switching in organic polariton microcavities *Skolkovo Institute of Science and Technology*	11:40–12:00	**Aleksandr Lanin** (invited) Multiphoton tools for quantitative imaging of reactive oxygen species (ROS) in vivo *MSU / LIFT Center*

	Room 3		Room 4
11:00–13:10	Laser Systems and Materials Chair: O. Antipov	11:00–13:10	Nonlinear and Terahertz Photonics Chair: O. Kosareva
11:00–11:20	**Igor Bufetov** (invited) Gas-discharge hollow core fiber lasers: first results and prospects *Prokhorov General Physics Institute*	11:00–11:20	**Sergei Tikhodeev** (invited) Chiral metamembranes for far infrared and THz bands *Lomonosov Moscow State University*
11:20–11:40	**Pavel Rodin** (invited) Bipolar Gunn effect in high-voltage GaAs diodes: towards impact-ionization lasers? *Ioffe Institute*	11:20–11:40	**Kirill Grigoriev** (invited) Formation of spatio-temporal vectorial optical vortices in elliptically polarized light pulse propagating in isotropic phase of a nematic liquid crystal with nonlocal nonlinear response *Lomonosov Moscow State University*
11:40–12:00	**Sergei Smetanin** (invited) MOPA architectures for ultrafast crystalline Raman lasers with various wavelengths *Prokhorov General Physics Institute*	11:40–12:00	**Maksim Koshelev** (invited) Molecular gas spectroscopy with classical, gyrotron and synchrotron THz radiation sources for fundamental and applied goals *Institute of Applied Physics*

11:55–12:10	**Aleksei Sosunov** Structure and properties of proton-exchange layers of lithium niobate-tantalate solid solutions for photonic applications *Perm State University*	12:00–12:20	**Victoria Zherdeva** (invited) Composited implantable materials for biomedical applications: visualization, biointegration, and tissue response *RC of Biotechonology*		12:00–12:20	**Natalia Kryzhanovskaya** (invited) Quantum-dot based microlasers with resonator of broken symmetry for on-chip data processing and transmission *HSE University*	12:00–12:20	**Georgy Rizaev** (invited) Optimal laser pulse parameters for terahertz emission from single-color filament *Lebedev Physical Institute*
12:10–12:25	**Ivan Stepanov** Dyakonov surface waveguide modes in ring resonators with chiral inclusions *Russian Quantum Center*	12:20–12:40	**Liubov Shimolina** (invited) Unraveling biophysics of tumor cells: imaging of membrane microviscosity using FLIM with molecular rotors *Privolzhsky Research Medical University*		12:20–12:40	**Vladimir Tsvetkov** (invited) Polarization properties of laser-diode-pumped 1-μm ceramic lasers *Prokhorov General Physics Institute*	12:20–12:40	**Leonid Surin** (invited) High-precision MMW and SMMW spectroscopy as a probe of intermolecular interactions *Institute of Spectroscopy*
12:25–12:40	**Nadezhda Tatarinova** Dispersion engineering for optical parametric oscillators optimization in microresonators *Russian Quantum Center*	12:40–12:55	**Yuriy Belozerov** Optimization of ICG fluorescence imaging *Institute of Applied Physics*		12:40–12:55	**Yury Adamenkov** Development of optically pumped rare gas laser (OPRGL) *FSUE RFNC-VNIIEF*	12:40–12:55	**Alexander Dormidonov** Spatiotemporal and spectral characteristics of mid-infrared single-cycle light bullets *VNIIA*
12:40–12:55	**Olga Tikhonova** Radiation emission of a two-level atom driven by quantum electromagnetic field *Lomonosov Moscow State University*	12:55–13:10	**Ilya Shchechkin** Developing an algorithm for fast analysis of FLIM data *Privolzhsky Research Medical University*		12:55–13:10	**Aleksei Torbin** Modeling of dual-wavelength pump schemes for optically pumped Ar-He laser *Samara Branch of P.N. Lebedev Physical Institute*	12:55–13:10	**Arsenii Gavdush** Broadband spectroscopy of astrophysical ice analogues: optical properties and scattering as a consequence of structural features *Prokhorov General Physics Institute*
12:55–13:10	**Andrei Ushakov** Domain-engineered PMN-PT crystals for electro-optic deflectors and modulators *Ural Federal University*							
13:10–14:30	Lunch							

PROGRAMME PLAN | Tuesday, 23 September

14:30–16:05	Laser-Matter Interaction Chairs: V. Loschenov, I. V. Baymler	14:30–16:00	Biomedical Photonics. Session 4: Optical Clearing, Photoacoustics and Simulation Chair: M. Kirillin
14:30–14:50	**Irina Zavestovskaya** (invited) Advanced laser and nano technologies for nuclear medicine *National Research Center Kurchatov Institute*	14:30–14:50	**Elina Genina** (invited) Optical clearing as an assisted technology for optical diagnostics and phototherapy of cancer *Saratov State University*
14:50–15:10	**Boris Lukyanchuk** (invited) Optical phenomena with micrometer dielectric spheres *Lomonosov Moscow State University*	14:50–15:10	**Luis Oliveira** (invited, online) Optical clearing improved transmission of low frequency and low power laser pulses in muscle *Polytechnic Institute of Porto–School of Engineering*
15:10–15:30	**Victor Loschenov** (invited) Laser-induced diagnostics and photodynamic therapy in oncology and inflammatory diseases *Prokhorov General Physics Institute*	15:10–15:30	**Daniil Bratashov** (invited) Quantitative measurements of concentration and counting of foreign objects in blood using photoacoustic methods *Saratov State University, MIPT*
15:30–15:45	**Ilya Baimler** Synthesis and modification of selenium nanoparticles during laser ablation and fragmentation in organic liquids *Prokhorov General Physics Institute*	15:30–15:45	**Maria Pinheiro** (online) Evaluating tartrazine diffusion properties in the skeletal muscle *Institute for Systems and Computer Engineering, Technology and Science (INESCTEC), Portugal*

14:30–16:00	Laser Systems and Materials Chair: I. Bufetov	14:30–16:00	Nonlinear and Terahertz Photonics Chair: A. Balakin
14:30–14:50	**Oleg Antipov** (invited) Widely tunable narrow-linewidth Mid-IR solid-sate coherent sources for long-distance environmental monitoring and wireless communication *Institute of Applied Physics*	14:30–14:50	**Mikhail Glyavin** (invited) Gyrotrons: with great power comes great responsibility *Institute of Applied Physics*
14:50–15:10	**Evgeniia Cherotchenko** (invited) Turn-on and heating dynamics of mid-IR quantum-cascade lasers *Ioffe Institute*	14:50–15:10	**Vasily Gerasimov** (invited) Terahertz surface plasmon refractometry of metal, carbon and dielectric materials *Budker Institute of Nuclear Physics*
15:10–15:30	**Maxim Remennyi** (invited) Mid-IR and long wavelength IR InAsSb(P) based photodiodes *Ioffe Institute*	15:10–15:30	**Vladimir Vaks** (invited) Study of ENT organ neoplasms by high-resolution THz spectroscopy *Institute of Physics of Microstructures*
15:30–15:45	**Victor Sokolov** High-speed photonics on the base of composite fluorinated polymer materials *Institute on Photonic Technologies, Germany*	15:30–15:45	**Irina Zotova** Microwave solitons of cyclotron-resonant self-induced transparency: theory and experiments *Institute of Applied Physics*

PROGRAMME PLAN | Tuesday, 23 September

15:45–16:05	**Vladimir Shur** (invited) Nonlinear photonic crystals based on periodically poled ferroelectrics *Ural Federal University*	15:45–16:00	**Valeriya Perekatova** Multi-wavelength laser speckle contrast imaging: from Monte Carlo simulations to phantom experiments *A.V. Gaponov-Grekhov Institute of Applied Physics*		15:45–16:00	**Yulia Zimina** Spectroscopic and mechanical strength characteristics of the Tm,Li:$ZnWO_4$ promising laser crystal *Prokhorov General Physics Institute*	15:45–16:00	**Polina Kovaleva** Enhanced terahertz emission from plasmonic antennas based on piezoelectric {InGaAs/InAlAs} heterostructures *Lomonosov Moscow State University*
16:00–16:20	Coffee break							
16:00–19:00	Poster session							

PROGRAMME PLAN | Wednesday 24 September

08:00–22:00	Social Program
08:00–17:00	Excursion to the island-city of Sviyazhsk
17:00–18:00	Break
18:00–22:00	Conference Dinner Presentation ALT'26: **Muhsin Ashurov** Location: Extra Lounge Restaurant, Korston Club Hotel Kazan, Kazan, N. Ershova st., 1a, floor 25

PROGRAMME PLAN | Thursday, 25 September

09:00–09:45	Plenary session 5. **Yuiry Kulchin:** Light as a factor in controlling plants growth and development
09:45–10:30	Plenary session 6. **Alexander Sergeev:** Physics of extreme light fields
10:30–10:50	Coffee break

ALT INTERNATIONAL CONFERENCE Advanced Laser Technologies

	Room 1		Room 2
10:50–13:00	Laser-Matter Interaction Chairs: G. Romanova, A. Smirnov	10:50–13:00	Biomedical Photonics. Session 5: Laser Effects/PDT Chair: S. Pershin
10:50–11:10	**Vadim Veiko/Galina Romanova** (invited) Laser modification of a metal surfaces to improve their chemical and biological stability *ITMO University*	10:50–11:10	**Oxana Semyachkina-Glushkovskaya** (invited) Lymphatonics for revolutionary neurotechnologies *Saratov State University*
11:10–11:30	**Aleksandr Kuchmizhak** (invited) LIPSS-based nanostructuring for optoelectronic and photonic applications *Far Eastern Federal University*	11:10–11:30	**Mikhail Kirillin** (invited) Optical diagnostics modalities for photoaging studies and photodynamic therapy assistance *Institute of Applied Physics*
11:30–11:50	**Alexander Smirnov** (invited) Nonlinear optical and photoelectric properties of GaSe thin films *Lomonosov Moscow State University*	11:30–11:50	**Vadim Elagin** (invited) Cells' targets and mediators of various PDT regimen *Privolzhsky Research Medical University*

	Room 3		Room 4
10:50–13:05	Laser Diagnostics and Spectroscopy Chairs: S. Veber, T. Murzina	10:50–13:00	Nanophotonics Chair: A. Bolshakov
10:50–11:10	**Alexander Milekhin** (invited) Nanoscopy of semiconductor nanostructures *Rzhanov Institute of Semiconductor Physics*	10:50–11:10	**Denis Baranov** (invited) Novel mirrors, cavities, and analytical results for chiral nanophotonics *MIPT*
11:10–11:30	**Tatiana Dolenko** (invited) Spectroscopy of donor-acceptor properties of carbon nanoparticles in solutions *Lomonosov Moscow State University*	11:10–11:25	**Egor Vyatkin** Giant enhancement of second harmonic generation at metasurface optical resonances *Ioffe Institute*
11:30–11:50	**Andrei Kaveev** (invited) Optical properties and applications of InAs(P,N,Bi)-based nanowires *Alferov University, Ioffe Institute*	11:25–11:40	**Aleksandr Frolov** Flexible diffraction micrograting fabricated from photopolymer with magnetic nanoparticles *Lomonosov Moscow State University*

11:50–12:10	**Stanislav Zabotnov** (invited) PLAL of porous and thin-film targets: fabrication of composite nanoparticles for biophotonics and biosensorics *Lomonosov Moscow State University*	11:50–12:10	**Andrei Belikov** (invited) Laser-induced changes in reflection, absorption and transmission spectra of blood-containing tissues *ITMO University*
12:10–12:30	**Nail Inogamov** (invited) Combined photonics–hypersonic device based on thin structured nickel films *L.D. Landau Institute for Theoretical Physics*	12:10–12:25	**Sergey Pershin** Picosecond laser induced inactivation of tobacco mosaic virus *Prokhorov General Physics Institute*
12:30–12:45	**Anastasiya Dikovskaya** The concentration limit of stability gold nanoparticles colloid synthesized by laser ablation *Prokhorov General Physics Institute*	12:25–12:40	**Matvej Kanevskiy** Development of resistance of Staphylococcus aureus to violet LED (405 nm) radiation during antimicrobial photodynamic therapy *Saratov State University*
12:45–13:00	**Kirill Khorkov** Synthesis of composite nanomaterials based on iron and gold by laser ablation and assisted ultrasound. *Vladimir State University*	12:40–12:55	**Vitaly Plavskii** Fungicidal action of laser and LED radiation sources in visible spectral region *State Scientific Institution B.I. Stepanov Institute of Physics of the National Academy of Sciences of Belarus, Belarus*

11:50–12:10	**Vyacheslav Timofeev** (invited) Structural and optical properties of heterostructures based on group IV materials (Ge, Si, Sn) *Institute of Semiconductor Physics*	11:40–11:55	**Oleg Blokhin** Study of chiral polariton spectra in asymmetric optical resonators *Moscow Institute of Physics and Technology*
12:10–12:30	**Roman Vasiliev** (invited) Precision control of 2D excitons in chiral atomically thin AIIBVI semiconductors: from dielectric screening to self-assembly into superstructures *Lomonosov Moscow State University*	11:55–12:10	**Valeria Maslova** Singular optics for biosensing: From zero reflection to shot noise modeling *Moscow Institute of Physics and Technology*
12:30–12:50	**Yuri Vainer** (invited) Optical diagnostics of nanoparticles in aqueous solutions: real possibilities and applications *Institute of Spectroscopy*	12:10–12:25	**Anastasia Nerovnaia** Magnetic field modulation of optical spatial differentiation in magnetoplasmonic crystals *Lomonosov Moscow State University*
12:50–13:05	**Leonid Golovan** Photoluminescent and nonlinear-optical diagnostics of redistribution of CdSe/ZnS quantum dots in liquid-crystal matrix under UV irradiation *Lomonosov Moscow State University*	12:25–12:40	**Vladimir Novikov** Optical pendellösung effect in anodic alumina 2D photonic crystals *Lomonosov Moscow State University*

PROGRAMME PLAN | Thursday, 25 September

							12:40–13:00	**Mihail Petrov** (invited) Ultrafast all-optical control of semiconductor metastructures: Transient gratings and symmetry breaking *ITMO University*
13:00–14:30	Lunch							
14:30–16:00	Laser Systems and Materials Chair: V. Tsvetkov	14:30–15:50	Nonlinear and Terahertz Photonics Chair: G. Kitaeva		14:30–16:00	Laser Diagnostics and Spectroscopy Chairs: A. Milekhin, T. Dolenko	14:30–16:00	Nanophotonics Chair: D. Baranov
14:30–14:50	**Olga Dymshits** (invited) Transparent glass-ceramics based on Ti^{3+}-doped spinel nanocrystals *Ioffe Institute / S. Vavilov State Optical Institute*	14:30–14:50	**Kirill Zaytsev** (invited) Terahertz biophotonics: Progress and opportunities *Prokhorov General Physics Institute*		14:30–14:50	**Sergey Veber** (invited) Laser diagnostics in terahertz and infrared ranges using free-electron lasers and synchrotron radiation sources *International Tomography Center*	14:30–14:50	**Alexey Bolshakov** (invited) Nanowire heterostructures: nanophotonics and bioimaging *Moscow Institute of Physics and Technology*
14:50–15:10	**Georgii Malashkevich** (invited) Luminescence of the Sb-clusters in yttrium-aluminoborate glasses *B.I. Stepanov Institute of Physics of the National Academy of Sciences of Belarus, Belarus*	14:50–15:05	**Igor Shishkovsky** Simulation of THz field propagation in bioresorbable TPMS scaffolds: phase mapping and resorption monitoring *Lebedev Physical Institute*		14:50–15:10	**Tatiana Dolgova** (invited) Terahertz pulse shaping controlled by photoinduced metallization in GaAs *Lomonosov Moscow State University*	14:50–15:05	**Danil Safiullin** Hybrid Ni-Ag magnetoplasmonic crystals *Lomonosov Moscow State University*
15:10–15:25	**Kirill Subbotin** Growth and investigations of the novel promising laser hosts, $Mg_{1-x}Zn_xWO_4$ mixed single crystals *Prokhorov General Physics Institute*	15:05–15:20	**Margarita Sokolova** Plasmonic metamaterials for the systems of terahertz electronics *Osipyan Institute of Solid State Physics*		15:10–15:30	**Andrei Fedotov** (invited) Time-resolved broadband two-dimensional spectroscopy with ultrashort pulses in the visible and mid-infrared range *Lomonosov Moscow State University*	15:05–15:20	**Anastasiya Pozharkova** Spin-preserving reflection from low-symmetry metasurfaces *Moscow Institute of Physics and Technology*

PROGRAMME PLAN | Thursday, 25 September

15:25–15:40	**Anna Astrakhantseva** Infrared luminescence and light amplification in mixed crystal $BaY_{1.8}Lu_{0.2}F_8:Er^{3+}$ *Kazan Federal University*	15:20–15:35	**Andrii Terentiev** Compact THz resonators based on superconducting MoRe film reflectors *Moscow Institute of Physics and Technology*		15:30–15:50	**Tatiana Murzina** (invited) Nonlinear-optical diagnostics of structures with inhomogeneous magnetization *Lomonosov Moscow State University*	15:20–15:35	**Anna Konovalova** All-optical image classification using Fourier-space Diffractive Neural Network *Lomonosov Moscow State University*
15:40–15:55	**Olga Martynova** Influence of annealing atmosphere during diffusion doping on spectral characteristics of Cr:ZnSe active elements lasing *Lobachevsky State University of Nizhny Novgorod*	15:35–15:50	**Fedor Potemkin** Terahertz-induced nonlinear response of solids: fundamental and practical aspects *Prokhorov General Physics Institute*		15:50–16:05	**Anton Makarov** Optically pumped magnetometers: Physical principles, applications and prospects *Institute of Laser Physics*	15:35–15:50	**Evgeny Ryabkov** Strong coupling between optical dielectric Mie voids and resonant media *Moscow Institute of Physics and Technology*
							15:50–16:05	**Olga Dmitrieva** Nonlinear response of one-dimensional photonic crystal with cavity polaritons *Lomonosov Moscow State University*
16:00–16:20	Coffee break							
16:20–18:00	Laser-Matter Interaction Chairs: F. Potemkin, T. Savelieva	16:20–18:15	Biomedical Photonics. Session 6: Spectroscopy/ Microscopy Chair: I. Turchin		16:20–18:00	Laser Diagnostics and Spectroscopy Chairs: V. Timofeev, T. Dolgova	16:20–18:00	Nanophotonics Chair: I. Vlasov
16:20–16:40	**Fedor Potemkin** (invited) Laser-induced structural dynamics and non-stationary processes in matter studied by X-ray optical methods *Lomonosov Moscow State University*	16:20–16:40	**Herbert Schneckenburger** (invited, online) Laser microscopy with spectral signature for biophotonics *Aalen University, Germany*		16:20–16:40	**Prokhor Alekseev** (invited) Scanning probe lithography for all-dielectric nanophotonics *Ioffe Institute*	16:20–16:40	**Aleksei Toropov** (invited) Photon sources for quantum communications: achievements and challenges *Ioffe Institute*

16:40–17:00	**Amitava Patra** (invited, online) Insights of ultrafast carrier dynamics of light-harvesting nanomaterials *Indian Association for the Cultivation of Science, India*	16:40–17:00	**Ilya Turchin** (invited) Reconstruction accuracy in diffuse optical spectroscopy with multiple source-detector distances *Institute of Applied Physics*
17:00–17:20	**Tatiana Savelieva** (invited) Method of in situ assessment of optical properties of biological tissues for personalized planning of laser-induced therapy *Prokhorov General Physics Institute*	17:00–17:15	**Maksim Moskovskiy** SERS identification of the infection of food crops by fungi of the genus Fusarium, highly pathogenic for human *Federal Scientific Agronomic and Engineering Center VIM*
17:20–17:40	**Nishant Tripathi** (invited) Self-powered NIR polarization photodetector based on TMD–SiNW hybrid heterostructures *Samara National Research University*	17:15–17:30	**Georgy Danielyan** Development of specialized fiber-optic multichannel probes for biomedical applications of the frequency domain near infrared spectroscopy *Prokhorov General Physics Institute*
17:40–18:00	**Alexei Prokhorov** (invited) Active components of flat optics based on high-index and anisotropic dielectric metastructures *Vladimir State University*	17:30–17:45	**Anton Gritchenko** Control over nonspecific binding of single molecules in a zero-mode-waveguide *Institute of Spectroscopy*

16:40–17:00	**Dmitrii Shuleiko** (invited) Anisotropic femtosecond laser-induced structuring of thin chalcogenide films for infrared polarization optics applications *Lomonosov Moscow State University*	16:40–17:00	**Alexander Chernov** (invited) 1D and 2D materials for applications in photonics *MIPT*
17:00–17:15	**Pavel Sdvizhenskii** Laser induced breakdown spectroscopy for molten cast iron elemental analysis *Prokhorov General Physics Institute*	17:00–17:20	**Anatoly Vikharev** (invited) Photo- and electroluminescence of color centers in CVD diamond nanostructures *Institute of Applied Physics*
17:15–17:30	**Vasily Lednev** In-situ chemical sensing by laser induced breakdown spectroscopy *Prokhorov General Physics Institute*	17:20–17:35	**Alexander Zhivopistsev** Bright non-blinking quantum emission of SiV-centers in nitrogen-rich nanodiamonds with dual-color optical excitation *Prokhorov General Physics Institute*
17:30–17:45	**Yury Geints** Comparative Analysis of optical supercontinuum generation in high-pressure He, N_2, Ar, and CO_2 gasesparative analysis of optical supercontinuum generation in high-pressure He, N_2, Ar, and CO_2 gases by ultrashort high-power laser pulses *V.E. Zuev Institute of Atmospheric Optics*	17:35–17:50	**Dmitrii Pasternak** Controlled formation of fluorescent centers in diamond particles smaller than 50 nm *Prokhorov General Physics Institute*

PROGRAMME PLAN | Thursday, 25 September

		17:45–18:00	**Ustina Bagrianskaia** Optical Response of Tetrapyrrolic Compounds in the Taxonomic Analysis of Microorganisms *Lomonosov Moscow State University*		17:45–18:00	**Mikhail Popov** Features of resonant Raman in ultrahard amorphous sp3 carbon synthesized in the pressure range of 20-160 GPa and temperatures of 300-2300 K. *Prokhorov General Physics Institute*	17:50–18:05	**Eugene Bukhanov** Photonic crystal properties of a wax layer: from morphology to biological functions *Federal Research Center Krasnoyarsk Science Center SB*
		18:00–18:15	**Daria Pominova** Study of extracellular matrix stiffness influence on the distribution and photophysical properties of photosensitizers using laser spectroscopy and FLIM microscopy *Prokhorov General Physics Institute*					

PROGRAMME PLAN | Friday, 26 September

09:00–09:45	Plenary session 7. **Anna Rodina:** Colloidal quantum dots as lasing material: optical gain vs nonradiative recombination						
09:45–10:30	Plenary session 8. **Alexey Kucherik:** Linear carbon chains: properties, synthesis, prospective applications in photonics and optoelectronics						
10:30–10:50	Coffee break						
	Room 1		Room 2		Room 3		Room 4
10:50–13:00	Laser-Matter Interaction Chairs: A. Povolotsky, D. Dadadzhanov	10:50–13:00	Biomedical Photonics. Session 7: Artificial Intelligence and Laser Diagnostics Chair: D. Gorin	10:50–13:05	Laser Diagnostics and Spectroscopy Chairs: M. Stepikhova, D. Zhigunov	10:50–13:00	Nanophotonics Chair: A. Kuchmizhak
10:50–11:10	**Alexey Povolotskiy** (invited) Laser-pumped hybrid nanoheaters with precise temperature measurement by luminescent thermometry *Saint-Petersburg State University*	10:50–11:10	**Boris Yakimov** (invited) Deep learning in analysis of optical properties of biotissues *Lomonosov Moscow State University*	10:50–11:10	**Sergey Kharintsev** (invited) Nonlocal photonics of spatially confined media *Kazan Federal University*	10:50–11:10	**Alexei Vitukhnovsky** (invited) Is nanoimprint lithography applicable for creating 2.5D optics elements? *Moscow Institute of Physics and Technology*
11:10–11:30	**Stanislav Shandarov** (invited) Optical method for the study of the pyroelectric phenomena *Tomsk State University of Control Systems and Radioelectronics*	11:10–11:30	**Alexander Machikhin** (invited) Zebrafish as an emerging model for cardiovascular research using biophotonics techniques *STC UI*	11:10–11:30	**Niranjan Kumar** (invited) Anharmonic phonon decay and electron-phonon coupling in topological insulators revealed by Raman spectroscopy *Rzhanov Institute of Semiconductor Physics*	11:10–11:30	**Alexander Dostovalov** (invited) 1D-2D laser-induced periodic surface structures on titanium metal films and phase change materials produced by femtosecond laser pulses *Institute of Automation and Electrometry*
11:30–11:50	**Daler Dadadzhanov** (invited) Plasmon-induced radical polymerization: A route to chiral nanostructures *ITMO University/Tel-Aviv University, Russia/Israel*	11:30–11:50	**Dmitry Gorin** (invited) Multimodal and multifunctional contrast agents: preparation and in vitro and in vivo testing *Skolkovo Institute of Science and Technology*	11:30–11:50	**Kirill Gonchar** (invited) Silver/Gold modified silicon nanowires for optical diagnostics of drugs and explosives *Lomonosov Moscow State University*	11:30–11:50	**Alina Manshina** (invited) Laser fabrication of optical and electrochemical nanosensors *St. Petersburg State University*

11:50–12:10	**Davide Boschetto** (invited, online) Ultrafast electron dynamics in HgTe quantum dots *LOA, ENSTA/Ecole Polytechnique/ CNRS/IP Paris, France*	11:50–12:10	**Ekaterina Lazareva** (invited) Multi-wavelength refractometry in studies of protein glycation *Saratov State University*	11:50–12:05	**Gleb Voskanyan** Ratiometric thermometry via anti-stokes excitation of NV-centers in microdiamonds *Bauman Moscow State Technical University*	11:50–12:10	**Sergey Starinskiy** (invited) Photonic NanoJets and Optical tweezer for laser processing and additive micro-structuring *S.S. Kutateladze Institute of Thermophysics*
12:10–12:30	**Vitaly Gruzdev** (invited) Ultrafast laser-driven tunneling and ballistic free-carrier dynamics in nanostructures: a basis of sub-petahertz and peta-hertz electronics *ITMO University*	12:10–12:30	**Yury Kistenev** (invited) Quantitative and qualitative analysis of IR spectroscopy data for medical and ecological applications *Tomsk State University*	12:05–12:20	**Sergei Dolenko** Use of neural network generated spectra to improve solution of spectroscopy inverse problem *Lomonosov Moscow State University*	12:10–12:30	**Aleksandr Shevlyagin** (invited) Near- and mid-IR optoelectronics with nanostructured silicides *Institute of Automation and Control Processes FEB*
12:30–12:45	**Pavel Abramov** Decoupling the Intrinsic infrared response of melanin/polydopamine from hydration-driven spectral changes *Moscow Institute of Physics and Technology*	12:30–12:45	**Dmitriy Sitnikov** Trophectoderm biopsy of mammalian blastocysts using infrared femtosecond laser pulses *Joint Institute for High Temperatures*	12:20–12:35	**Mikhail Grishin** Raman spectral study of near-surface ice-like layer formation in water at room temperature *Prokhorov General Physics Institute*	12:30–12:45	**Dmitry Yakubovsky** Wafer-scale graphene-inspired ultrathin gold films for flexible and transparent optoelectronics *Moscow Institute of Physics and Technology*
12:45–13:00	**Andrey Akhmatkhanov** Evaluation of the photoresponse of Si:Au laser-assisted hyperdoped photodiode *Ural Federal University*	12:45–13:00	**Anastasia Ryabova** Optical features of tumor extracellular matrix *Prokhorov General Physics Institute*	12:35–12:50	**Elena Sagitova** Combining classical and multivariate analyses of Raman spectra as an efficient tool for the quality evaluation of dietary omega-3 supplements *Prokhorov General Physics Institute*	12:45–13:00	**Aleksandra Nikolaeva** Strain-induced photoluminescence enhancement in WSe_2 monolayers on Au-Nanobumps *Alferov University*

PROGRAMME PLAN | Friday, 26 September

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					12:50–13:05	**Vasiliy Novikov** Raman bands about 850 cm^{-1} as universal marker of gauche-conformers in molecular backbones of ethylene glycol, 1,3-propylene glycol and polyethylene glycols *Prokhorov General Physics Institute*		
13:00–14:30	Lunch							
14:30–16:20	Laser-Matter Interaction Chairs: N. Inogamov, S. M. Klimentov	14:30–16:15	Biomedical Photonics. Session 8: Nanophotonics Chair: N. Khlebtsov		14:30–16:15	Laser Diagnostics and Spectroscopy Chairs: S. Kharintsev, L. Golovan	14:30–16:15	Nanophotonics Chair: M. Petrov
14:30–14:50	**Nikolai Tarasenko** (invited) Fabrication of silicon-based nanoheterostructures by laser scanning processing of thin film multilayers *Institute of Physics, National Academy of Sciences of Belarus, Belarus*	14:30–14:50	**Nikolai Khlebtsov** (invited) Luminescent Au-atomic nanoclusters for detection, imaging, and photodynamic inactivation of planktonic bacteria and biofilms *Institute of Biochemistry and Physiology of Plants and Microorganisms*		14:30–14:50	**Tigran Vartanyan** (invited) Chemiluminescence enhancement inside an open nanocavity for oxidation stress sensing *ITMO University*	14:30–14:45	**Sergey Burikov** Role of cross-relaxation in the formation of the luminescent response of $NaYF_4$:Yb/Tm nanoluminophores at high excitation intensities *Lomonosov Moscow State University*
14:50–15:05	**Vladimir Mazhukin** Comparative analysis of the results of continuum and atomistic modeling of laser fragmentation of metal *Keldysh Institute of Applied Mathematics*	14:50–15:10	**Liubov Osminkina** (invited) Hybrid porous silicon-gold nanoparticles: photonic properties and biomedical applications *Lomonosov Moscow State University*		14:50–15:10	**Margarita Stepikhova** (invited) Bound states in the continuum and other mode interaction phenomena in the luminescence response of two-dimensional photonic crystals *Institute for Physics of Microstructures*	14:45–15:00	**Victor Nikiforov** Using single upconversion $NaYF_4$:Yb,Er nanoparticle as multifunctional luminescent sensor *Zavoisky Physical-Technical Institute*

15:05–15:20	**Anastasiya Fronya** Laser synthesis of bismuth nanoparticles and its compounds for biomedicine *Lebedev Physical Instituten Academy of Sciences*	15:10–15:30	**Irina Yanina** (invited) Advances in the interaction of laser radiation with upconversion nanoparticles in tissues *Saratov State University*
15:20–15:35	**Anna Kudryavtseva** Stimulated Raman scattering amplification under randomly distributed feedback *Lebedev Physical Institute*	15:30–15:45	**Daria Nazarovskaia** Nanostructured platforms for light-triggered thermal effects in biomedical applications *Lomonosov Moscow State University*
15:35–15:50	**Victoria Pryakhina** Laser hyperdoping of silicon with transition metals: Specifics of using fs- and ns- pulses *Ural Federal University*	15:45–16:00	**Vitaly Khanadeev** Plasmonic gold nanorods: from SERS spectroscopy to controlled drug delivery *Institute of Biochemistry and Physiology of Plants and Microorganisms*
15:50–16:05	**Elizaveta Sapozhnikova** Photostability and lasing in mixed-halide perovskite microcrystals *Skolkovo institute of science and technology*	16:00–16:15	**Gulia Bikbaeva** Multifunctional nanostructures with laser-switchable properties and tunable bioactivity window for photopharmacology *Saint Petersburg State University*

15:10–15:30	**Denis Zhigunov** (invited) Linear and nonlinear spectroscopy of Mie-resonant high refractive index nanoparticles *Skoltech*	15:00–15:15	**Artemiy Shmelev** Nanothermometry: nanoparticles or Cu-complexes based composites? *Zavoisky Physical-Technical Institute*
15:30–15:45	**Alexey Vervald** Plurality of luminophores in synthesis of carbon dots from citric acid and ethylenediamine *Lomonosov Moscow State University*	15:15–15:30	**Kirill Khaydukov** Erbium waveguide amplifier based on new nanocomposite materials for telecommunication C-band 1530–1565 nm *National Research Centre Kurchatov Institute*
15:45–16:00	**Nikolay Maslov** Application of multi-excitation ultraviolet fluorescence spectroscopy for brain cells studying *Khristianovich Institute of Theoretical and Applied Mechanics*	15:30–15:45	**Sofya Yurovskaya** Perovskite structures integrated with polymer resonance systems for on-chip light control *Lomonosov Moscow State University*
16:00–16:15	**Vladimir Zavozin** Microjoule eye-safe LiDAR without dead zone for docking *Prokhorov General Physics Institute*	15:45–16:00	**Larisa Tyryshkina** Light absorption in disordered cholesteric doped with plant photosynthetic pigment extract *Kirensky Institute of Physics, Krasnoyarsk Scientific Center*

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16:05–16:20	**Arakelyan Sergey** Laser-induced high-entropy surface nanostructures of specified topology with controlled functional optoelectronic characteristics *Vladimir State University*						16:00–16:15	**Evgeny Mityushkin** Improving the efficiency of solar cells by converting high-energy photons *Zavoisky Physical-Technical Institute*
16:30–17:00	Closing ceremony: **Ivan Shcherbakov**							

1. Laser-Matter Interaction. Poster session	
1-P1	**K.O. Aiyyzhy, E.V. Barmina, N.N. Melnik, D.S. Kostsov, V.V. Tregulov, A.I. Ivanov:** Laser-assisted production of silicon microparticles with fano resonance
1-P2	**D.A. Antipov, E. V. Barmina, D.I. Borovikov, E.D. Shevelkina:** Formation of broadband terahertz absorbers by laser microstructuring
1-P3	**D.V. Apeksimov, P.A. Babushkin, Yu.E. Geints, A.M. Kabanov, E.E. Khoroshaeva, V.K. Oshlakov, A.V. Petrov, A.A. Udalov:** The influence of gas pressure on spatial and spectral parameters of a high-power femtosecond laser pulse during filamentation in argon
1-P4	**A. Chernikov, D. Kochuev, M. Dzus, E. Shingareva, K. Khorkov:** Laser synthesis of nanoparticles of nonstoichiometric molybdenum oxide with the addition of BSA
1-P5	**V. Domakova, A. Ramos-Velazquez, K. Arbuzova, D. Sinev:** Glass marking by combining laser-induced backward transfer (LIBT) and laser-induced periodic surface structures (LIPSS) via nanosecond IR laser
1-P6	**X. Egorova, A. Sidorova, F. Gorensky, D. Sinev:** Laser modification of titanium surfaces using absorbing layers in confined conditions
1-P7	**D.D. Fedotov, I.A. Antoshin, S.I. Yaresko:** Prediction of residual stress distribution based on finite element modeling of laser hardening
1-P8	**M.A. Karpov, A.D. Kudryavtseva, T.V. Mironova, M.A. Shevchenko, N.V. Tcherniega, S.F. Umanskaya:** Phase transformations in liquid water under the influence of a laser in an ultrasonic wave field
1-P9	**V.I. Mazhukin, A.V. Shapranov, O.N. Koroleva, M.M. Demin, A.V. Mazhukin:** Atomistic modeling of ultrafast dynamics of laser melting/crystallization interface of metals considering deeply superheated/supercooled phases in sequential pressure measurements
1-P10	**A. Ostapiv, K. Zotov, N. Tereshchenko, A. Konyashkin:** Phase-matching curves dynamics in $\chi^{(2)}$ grating formation during fiber poling
1-P11	**R.D. Seidgazov, F.Kh. Mirzade:** The electrocapillary acceleration of metal melt in deep penetration by powerful laser radiation
1-P12	**R.D. Seidgazov, F.Kh. Mirzade, G.G. Gladush:** Deep penetration of metals by powerful laser radiation: physical nature, dependence on scan speed and strategy for pore-free process
1-P13	**V. Shikhova, B. Lisjikh, M. Kholodenko, A. Akhmatkhanov, A. Javakrisna, V. Shalunov, L. Ivleva, V. Shur:** Domain structure formation by femtosecond IR laser irradiation in the bulk of strontium barium niobate single crystals

1-P14	**V. Simonova, A. Savvin, V. Mitrokhin, A. Dormidonov:** Femtosecond laser pulses for investigation of photoluminescence spectra and temporal response of γ-rays scintillators
1-P15	**I.A. Stutchebruhov, A.A. Samokhin, P.A. Pivovarov, S.A. Abrosimov:** Delayed effects in pulsed laser-metal ablation
2. Biomedical Photonics. Poster session	
2-P1	**K. Bylinskaya, M. Kirillin, A. Kostyuk, E. Sergeeva, I. Turchin, V. Perekatova:** Multimodal assessment of microcirculatory parameters using optical diagnostics techniques
2-P2	**G.L. Danielyan, N.A. Ivanov, O.V. Vikhrova, O.D. Morozova, G.V. Nazarova, I.N. Molokovich:** Development and application of multichannel fiber-optic sensor for laser spectrometry, biomedicine and automatization's
2-P3	**A.A. Gilfanova, K.A. Prokhorov, Yu.N. Utkin, V.I. Tsetlin:** Classification of low-molecular-weight ligands of nicotinic acetylcholine receptors by raman spectroscopy
2-P4	**D.A. Makarova, A.S. Nizamutdinov, T.A. Telegina, Yu.L. Vechtomova, A.A. Buglak:** Effect of Pt-Pd nanoparticles on auto- and photooxidation of tetrahydrobiopterin
2-P5	**A. Savelyev, M. Kirillin, I. Turchin:** Tumor node tracking using fluorescence monitoring during photodynamic therapy
3. Laser Systems and Materials. Poster session	
3-P1	**R.D. Aglyamov, A.K. Naumov, A.S. Nizamutdinov, A.A. Shavelev, O.A. Morozov, Yu.P. Brodnikovsky, V.V. Semashko:** Multi-wavelength MOPA laser system based on Cr:LiCaAlF$_6$ crystals for medical optoacoustic tomography
3-P2	**A. Bakaeva, D. Butenkov, P. Strekalov, N. Simonenko, P. Loiko, O. Petrova:** Synthesis, structure, and luminescent properties of glass ceramics based on the $PbCl_2$-TeO_2 system doped with Dy^{3+}, Ho^{3+}, and Er^{3+} ions
3-P3	**A.G. Berezovsky, S.M. Dubrovskikh, V.V Karzanov, A.N. Kachemtsev, A.A. Konovalov, I.V. Skripachev, M.F. Churbanov:** Change in EPR of arsenic selenide as a result of irradiation
3-P4	**O. Burdulenko, D. Gets, L. Zelenkov:** Cadmium doping in $CsPbBr_3$ nanocrystals: A route to lower ASE thresholds
3-P5	**D. Butenkov, A. Vasilenkova, A. Bakaeva, K. Runina, P. Strekalov, K. Veselský, P. Loiko, A. Braud, M. Brekhovskikh, O. Petrova:** Optical spectroscopy of oxychloride lead tellurite glasses doped with Tm^{3+}, Er^{3+} and Ho^{3+} ions

3-P6	**A.M. Dautov, T. Shugabaev, K.P. Kotlyar, A. Kuznetsov, G.E. Cirlin, A.D. Bolshakov, V.O. Gridchin:** Van der Waals epitaxial growth of AlN nanowires on h-BN
3-P7	**D.Yu. Demushkin, D.A. Denisov, A.V. Konyashkin:** Measurement of the optical absorption coefficient of lithium-sodium molybdate crystal at a wavelength of 1064 nm
3-P8	**Y.S. Didenko, K.A. Subbotin, A.I. Titov, D.A. Lis, Y.I. Zimina, L.D. Iskhakova:** The growth and study of Yb^{3+} $MgMoO_4$ potential laser crystal
3-P9	**O.S. Dymshits, E.V. Vilejshikova, I. Alekseeva, S. Zapalova, M.Ya. Tsenter, A.A. Volokitina, A.M. Malyarevich, K.V. Yumashev, A.A. Zhilin:** Spectroscopic properties of lithium aluminosilicate glass-ceramics nucleated by (Tm^{3+},Yb^{3+}):$YNbO_4$ nanocrystals
3-P10	**N. Kozlova, E. Zabelina, V. Kasimova, V. Umylin, A. Korchagin:** Functional dielectric crystals and the specifics of their testing
3-P11	**A. Kuznetsov, M. Rakhmanova, A. Jamous, A. Kokh:** Tailoring optical properties of Huntite-like solid solutions
3-P12	**M.S. Kuznetsov, K.S. Zaramenskikh, A.V. Osipov, M.V. Morozov, S.M. Pilyushko, A.R. Korneeva:** KRS-5 optics production by diamond turning and milling
3-P13	**A.K. Naumov, R.D. Aglyamov, S.L. Korableva, V.V. Semashko:** The new view on the laser properties and abilities of the LaF_3:Nd^3 crystals
3-P14	**I.A. Mamedova, I.Q. Qasimoglu, Z.A. Jahangirli, Kh.A. Hidiyev, S.S. Ragimov, T.G. Mammadov, N.A. Abdullayev:** Electronic properties of $CuInS_2$ compounds.Theory and experiment
3-P15	**S.I. Mekhtiyeva , A.I. Isayev, H. I. Mammadova, R.I. Alekberov:** Study of As-Ge-Se and As-Ge-Te chalcogenide systems by the method of X-ray diffraction
3-P16	**O.B. Petrova, A.B. Terekhova, D.A. Butenkov, K.N. Boldyrev:** Lead-gallate glasses doped with Tm^{3+}, Er^{3+} and Ho^{3+} ions for IR applications
3-P17	**S. Pilyushko, M. Kuznetsov, K. Zaramenskikh, A. Korneeva, G. Polyakova, L. Butvina:** Silver halide-based light guides for the IR range: preparation and investigation
3-P18	**E.A. Romanova, M.V. Sukhanov, V.V. Koltashev:** Chalcogenide fiber based luminescence source for mid-IR spectroscopy
3-P19	**A.R. Rymzhina, I.N. Kozlova, F.V. Gneushev, V.A. Reichert, A.D. Razorvin, V.S. Pavelyev, Prachi Sharma, V.I. Platonov, Nishant Tripathi:** Tailoring molybdenum disulfide for optoelectronic applications through functionalization

3-P20	**A. Savvin, E. Zaloznaya, A. Dormidonov:** NV^- diamond laser illumination system for direct registration of fast-moving objects
3-P21	**K. Serkina, O. Knyazkova, A. Eliseeva, A. Korol, I. Stepanova, E. Sektarov:** Tailoring ultrabroadband NIR emission in Bi_2O_3-GeO_2-Tm_2O_3 glasses by Er^{3+}/Ho^{3+}/Yb^{3+} co-doping
3-P22	**K. Serkina, O. Knyazkova, I. Stepanova, E. Sektarov:** Upconversion emission in Er^{3+}/Tm^{3+} co-doped sodium-germanate glasses
3-P23	**E. Simonova, A. Kuznetsov, A. Goreyavcheva, E. Khan, A. Kokh, D. Ezhov, V. Svetlichnyi:** Investigation of the optical properties of bulk β-BaB_2O_4 crystals grown from the $BaO–B_2O_3–Na_2O–MoO_3$ system
3-P24	**S.N. Smetanin, P.D. Kharitonova, A.G. Papashvili, L.I. Isaenko, A.F. Kurus, A.P. Yelisseyev, A.A. Goloshumova, A.A. Bushunov, A.A. Teslenko, V.A. Lazarev, M.K. Tarabrin:** Comparative study of $LiGaSe_2$ and $LiGaS_2$ crystals with antireflection microstructures for mid-IR parametric down-conversion via intracavity-pumped OPO
3-P25	**A. Terekhova, D. Butenkov, E. Sektarov, O. Petrova:** Luminescence properties of rare-earth (Ho^{3+}, Er^{3+}, Tm^{3+}) doped novel lead germanate oxychloride glasses
3-P26	**V. Umylin , N. Kozlova, E. Zabelina, A. Korchagin, A. Temirov:** Features of the near-electrode processes in polar dielectric crystals
3-P27	**N. Varapai, V. Kouhar, A. Ramanenka, G. Malashkevich:** Spectral luminescence and structural properties of silica glasses with CeO_2: Ni and Ce_2O_3: Ni nanoparticles
3-P28	**E. Zabelina, N. Kozlova, V. Kasimova, O. Buzanov:** Effect of post-growth isothermal annealing on the optical properties of langasite family crystals
3-P29	**K.S. Zaramenskikh, M.S. Kuznetsov, S.V. Erohin, S.M. Pilyushko, A.R. Korneeva:** KRS-5 single crystal growth process optimization by calculation of temperature gradient using finite element method
4. Laser Diagnostics and Spectroscopy. Poster session	
4-P1	**L.A. Apresyan, V.I. Krasovsky:** The complex "duality lemma" and scattering of radiation in absorbing media
4-P2	**E. Bogatova, A. Burkov, N. Tereshchenko, E. Tulnikov:** Spectral phase retrieval using a hybrid gerchberg-saxton algorithm
4-P3	**G. Chugreeva, A. Guskov, G. Kupriyanov, K. Laptinskiy, I. Isaev, S. Dolenko, T. Dolenko:** Development of ion nanosensors using various machine learning methods

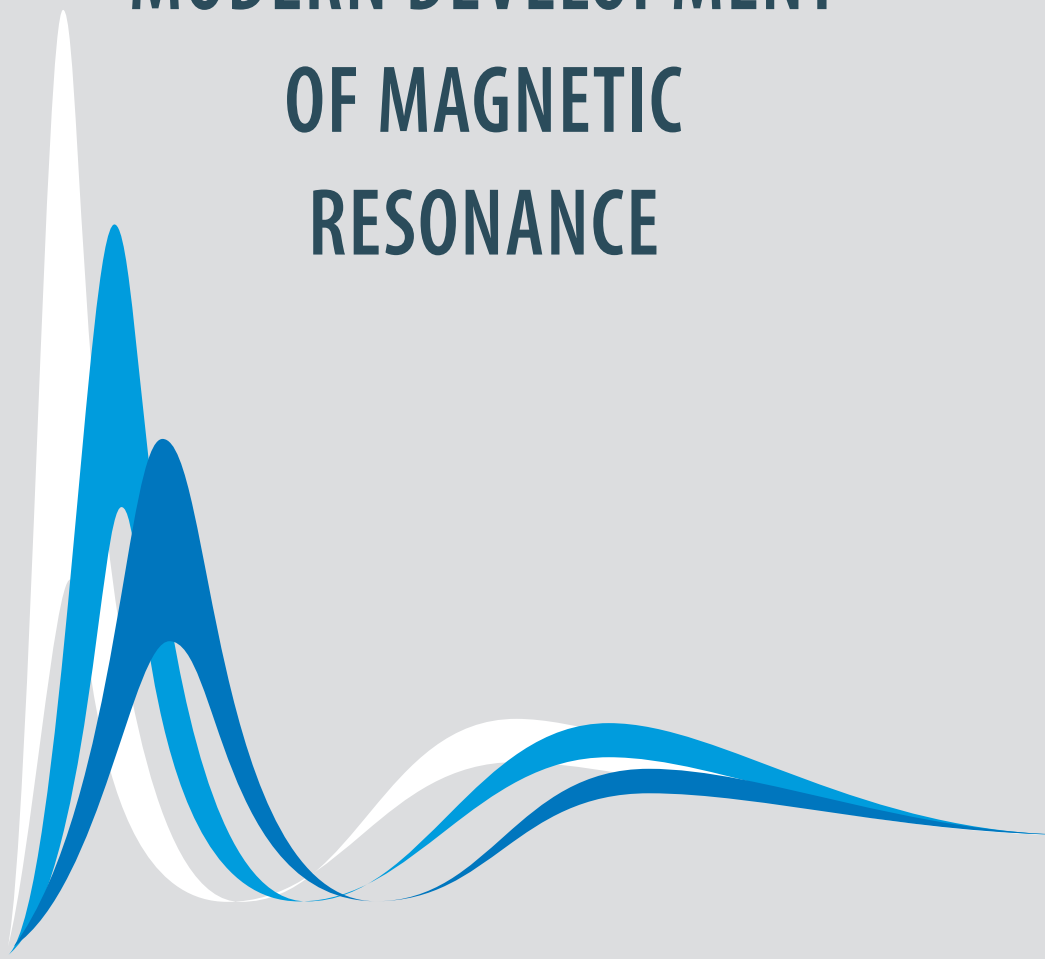
4-P4	**A. Demenshin, E. Kolobova, E. Solovyeva:** Luminescent proline-stabilized copper nanoclusters: synthesis and examination in bioanalysis by fluorometry and capillary electrophoresis
4-P5	**A.Kh. Kadikova, A.V. Petrov, Kh.Sh.A. Taqi, B.F. Gabbasov, A.I. Gumarov, I.V. Yanilkin, L.R. Tagirov, R.V. Yusupov:** Magnetic inhomogeneities in Fe_3Al epitaxial thin films probed by FMR and time-resolved magnetooptics
4-P6	**L.Yu. Kozlova, S.O. Liubimovskii, Yu.S. Fomina, Yu.D. Zagoskin, N.G. Sedush, V.S. Novikov:** Raman analysis of PLLA-PEG-PLLA hydrogels
4-P7	**L.Yu. Kozlova, S.O. Liubimovskii, A.M. Semin, S.M. Kuznetsov, K.T. Kalinin, A.V. Bakirov, N.G. Sedush, V.S. Novikov:** Raman structural analysis of linear oligomers of L-lactide and D,L-lactide
4-P8	**S.M. Kuznetsov, A.A. Ashikhmin, V.S. Novikov, E.A. Sagitova:** Rapid evaluation of carotenoid content in vegetable oils and dietary supplements by Raman spectra
4-P9	**V.N. Lednev, P.A. Sdvizhenskii, A.V. Rogachevskaya, A.A. Khaziev:** Bubble dynamics study for in situ chemical analysis of bulk oils by double pulse laser induced breakdown spectroscopy
4-P10	**D.A. Makarov, A.Kh. Kadikova, A.I. Gumarov, I.V. Yanilkin, B.F. Gabbasov, A.V. Petrov, L.R. Tagirov, R.V. Yusupov:** An impact of inhomogeneous pump on ultrafast photoinduced magnetization precession in permalloy-based thin film structures
4-P11	**K. Makarova, E. Kolobova, E. Solovyeva:** Phenomena of catalyzed oxidation of β-blockers on gold nanoparticle
4-P12	**S.M. Pershin, M.Ya. Grishin, V.A. Zavozin, V.N. Lednev, V.S. Makarov, M.M. Makarov, K.M. Kucher:** Eye-safe laser remote sensing of water flows underneath the ice of Lake Baikal
4-P13	**A.V. Rogachevskaya, V.N. Lednev, P.A. Sdvizhenskii:** Selenium quantification in soil by laser induced breakdown spectrometry
4-P14	**P. Smerchanskiy, M. Grishin, S. Pershin:** Chaos-order phase transition in water at room temperature: competition of hydrogen bonds and Brownian motion

5. Nonlinear and Terahertz Photonics. Poster session	
5-P1	**A.L. Alferyev, P.Yu. Avdeev, M.V. Sapozhnikov, N.S. Gusev, A.M. Buryakov:** Strain-induced magnetic anisotropy in Co/Pt THz spintronic emitter
5-P2	**D.A. Demushkin, D.A. Denisov, A.V. Konyashkin:** Frequency doubling of infrared laser radiation in type I phase matched lithium-sodium molybdate
5-P3	**V. Grigorieva:** Low-thermal-gradient Czochralski growth of nonlinear $(Li,Na)_6Mo_9O_{30}$ crystals
5-P4	**A. Kurus, L. Lobanov,V. Fedyaj, S. Syubaev, A. Eliseev, A. Dostovalov, A. Kuchmizhak, L. Isaenko:** Femtosecond laser printing of anti-reflective nanostructures on nonlinear crystals
5-P5	**A. Lobanov, V. Kamynin, S. Filatova, A. Ismail, N. Arutyunyan, E.A. Obraztsova , Natsumi Komatsu, Junichiro Kono, E.D. Obraztsova, V. Tsvetkov:** Influence of the saturable absorber position on the output parameters and self-starting of a holmium UFL
5-P6	**E. Maslova, P. Puyu:** Second harmonic generation at 535 nm in LBO crystal pumped by an all-fiber passively Q-switched and gain-switched Yb-doped laser
5-P7	**A.O. Nabilkova, M.S.Guselnikov, A.O. Ismagilov, M.V. Melnik, S.A. Kozlov, A.N. Tcypkin:** Origin of the nonlinear vibrational response in complex-structured molecules within the THz frequency range
5-P8	**M.I. Paukov, D.I. Yakubovsky, Sh. San, S. Kolar, K.A. Brekhov, G.A. Komandin, A.I. Chernov, K.I. Zaytsev, A.V. Arsenin, Y. Zhang, M.G. Burdanova:** Optical pump – terahertz probe of ultra-thin smooth gold films revealing their optoelectronic properties
5-P9	**A.V. Radivon, G.M. Katyba, N.I. Raginov, A.A. Mkrtchyan, A.V. Chernykh, I.I. Rakov, M.I. Paukov, M.S. Mironov, M.A. Shashkov, G.A. Komandin, K.I. Zaytsev, Y.G. Gladush, N.V. Petrov, A.G. Nasibulin, A.V. Arsenin, D.V. Krasnikov, M.G. Burdanova:** Dynamic terahertz focusing via electrically gated SWCNT structures
5-P10	**M.V. Talanov, V.I. Kozlov, K.V. Zhivetev:** THz-IR spectroscopy of lead-free ferroelectrics with perovskite structure

5-P11	**E.I. Titova, M.A. Kashchenko, A.V. Miakonkikh, A.D. Morozov, A.V. Shabanov, I.K. Domaratskiy, S.S. Zhukov, D.A. Mylnikov, V.V. Rumyantsev, S.V. Morozov, K.S. Novoselov, D.A. Bandurin, D.A. Svintsov:** Non-saturated performance scaling of graphene bilayer sub-terahertz detectors at large induced bandgap
5-P12	**M.D. Volkova, A.A. Popkova, S.M. Novikov, V.O. Bessonov, A.A. Fedyanin:** Second-harmonic generation anisotropy in molybdenum disulfide nanostructures
6. Photonics in Quantum Technologies. Poster session	
6-P1	**V.V. Chashchin, D.E. Genin, E.I. Lipatov:** Optical resonator based on photonic crystal structures for diamond NV laser
6-P2	**A.P. Gordeev, M.Yu. Goloshchapov, G.I. Struchalin, I.B. Bobrov, S.S. Straupe:** Modeling the creation of entangled states by non-gaussian beams
6-P3	**A. Kozlov, K. Zagorulko, N. Khatyrev:** RIN effect on phase noise spectra of lasers in heterodyne measurements
6-P4	**M. Pavlenko, A. Neliubov, I. Eremchev, A. Naumov, E. Ekimov:** Photophysics of single LX centers in diamond
6-P5	**B. Stepanov, L.Shabarova, I. Evdokimov, A. Stepanov:** Hydrodynamic modeling of 3D-printing for chalcogenide glass IR photonics components design
6-P6	**F. Ushakov, E. Anikin, O. Lakhmanskaya, K. Lakhmanskiy:** Multitone high-fidelity Greenberger–Horne–Zeilinger gate simulation
6-P7	**A.I. Veretennikov, Yu.M. Serov, A.I. Galimov, M.V. Rakhlin, S.V. Sorokin, G.V. Klimko, I.V. Sedova, N.A. Maleev, M.A. Bobrov, M.M. Kulagina, Yu.M. Zadiranov, Yu.A. Saliy, D.S. Berezina, A.A. Toropov:** Effect of phonon-induced decoherence on the indistinguishability of single telecom C-band photons emitted by a coherently pumped InAs/InGaAs quantum dot
6-P8	**S. Zarutskiy, A. Podlesnyy, K. Sedykh, Y. Suleimen, V. Baturo, V. Kovalyuk, G. Goltsman, K. Lakhmanskiy:** Towards 2D ion trap with integrated SSPD and waveguides for quantum computing
6-P9	**R.R. Ziatdinov, M.V. Eremin:** Calculation of interaction parameters of Pu^{3+} ions with spins of fluorine nuclei in CaF_2
6-P10	**L.O. Zhukov, R.S. Ponomarev:** Fabrication and characterization of integrated optical fiber diverging microlenses

7. Nanophotonics. Poster session	
7-P1	**E.R. Bukhanov, A.V. Shabanov, L.E. Tyryshkina, N.V. Rudakova, D.P. Fedchenko, I.V. Timofeev:** Edge mode behavior under partial disordering in helicoidal structure
7-P2	**D.M. Chubarov, Y.A. Altuhov, D.S. Rastrygin, V.O. Dolgirev, S.N. Sharangovich:** Diffraction characteristics of multiplexed multilayer inhomogeneous PDLC diffraction structures
7-P3	**A.Yu. Frolov, M.P. Belov, A.Yu. Gladkikh, V.V. Popov, V.V. Utochnikova, A.A. Fedyanin:** Intensity and angular control of photoluminescence in Eu-based complexes combined with plasmonic crystals
7-P4	**I.O. Goriachuk, V.N. Glebov, A.M. Malutin, V.I. Sokolov:** Analysis of up-converting fluoride nanocrystals using ultra-high resolution luminescent UV microscopy
7-P5	**G. A. Kolosov, E. V. Kabak, A. S. Shorokhov, A. A. Fedyanin**: Integrated metasurface based on antimony selenide for waveguide mode conversion
7-P6	**I.G. Likhachev, V.I. Pustovoy:** Spectrally resolved white light interferometry for magnetostriction measurement
7-P7	**V. Pavlov:** Determination of microresonator thermal parameters for the case of complex time dependence of pump power

MODERN DEVELOPMENT OF MAGNETIC RESONANCE



KAZAN, SEPTEMBER 29 – OCTOBER 3, 2025

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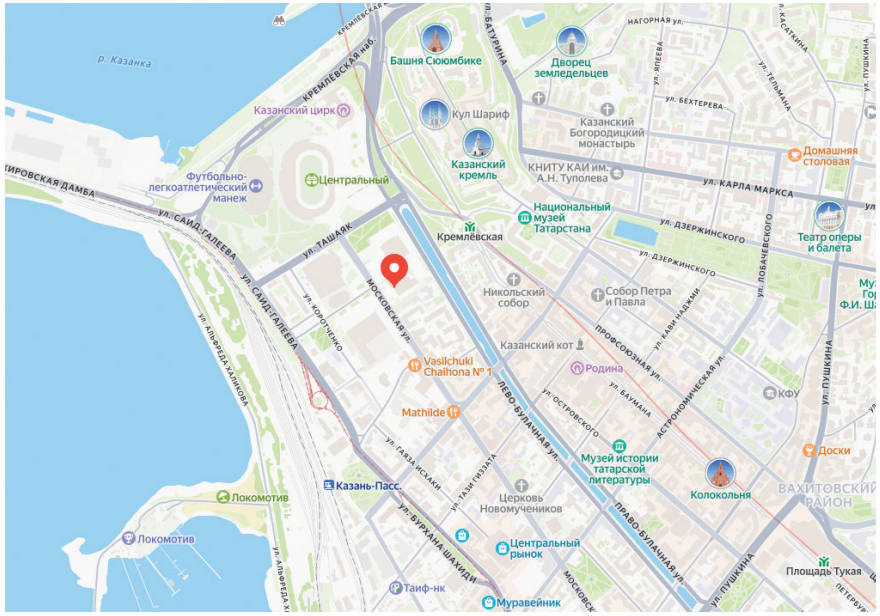
LOCAL COMMITTEE CHAIRMEN

Sergey KHANTIMEROV

VENUE

Conference “Modern Development of
Magnetic Resonance 2025” will be held in Hotel Mirage.
Address: 420202, Russia, Kazan, Moscow street, 5



SECTIONS

- ADVANCES IN MAGNETIC RESONANCE THEORY AND INSTRUMENTATION
  Chair:
  Ruslan ZARIPOV (Zavoisky Physical-Technical Institute, Kazan)

- MODERN METHODS OF MAGNETIC RESONANCE
  Chair:
  Tatyana POLENOVA (Uniersity of Delaware, USA)

- LOW-DIMENSIONAL SYSTEMS, NANO-SYSTEMS AND MOLECULAR MAGNETS
  Chairs:
  Rushana EREMINA, Andrey KAMASHEV, Nail SULEIMANOV (Zavoisky Physical-Technical Institute, Kazan),
  Alexander SMIRNOV (Kapitza Institute for Physical Problems, Moscow)

- SPIN-BASED INFORMATION PROCESSING AND OPTICAL QUANTUM TECHNOLOGIES
  Chair:
  Vasily SHAGINYAN (Petersburg Nuclear Physics Institute of NRC Kurchatov Institute, St. Petersburg)

- STRONGLY CORRELATED ELECTRON SYSTEMS
  Chairs:
  Vasiliy GLAZKOV (Kapitza Institute for Physical Problems, Moscow),
  Evgeniya VAVILOVA (Zavoisky Physical-Technical Institute, Kazan)

- CHEMICAL AND BIOLOGICAL SYSTEMS
  Chairs:
  Alexander KOKORIN (Semenov Federal Research Center for Chemical Physics, Moscow),
  Elizaveta KONSTANTINOVA (Moscow State University and Prokhorov General Physics Institute, Moscow),
  Andrey SUKHANOV (Zavoisky Physical-Technical Institute, Kazan),
  Sergey TRAVIN (Semenov Federal Research Center for Chemical Physics, Moscow),
  Alexandra YURKOVSKAYA (International Tomography Center, Novosibirsk)

- DEFECTS AND SPIN QUBITS
  Chair:
  Yury KANDRASHKIN (Zavoisky Physical-Technical Institute, Kazan)

- MAGNETIC RESONANCE IMAGING AND APPLICATIONS IN MEDICAL PHYSICS
  Chair:
  Roman YUSUPOV (Kazan Federal University, Kazan)

- RELATED PHENOMENA

SECTION COLOR SCHEME

ADVANCES IN MAGNETIC RESONANCE THEORY AND INSTRUMENTATION

MODERN METHODS OF MAGNETIC RESONANCE

LOW-DIMENSIONAL SYSTEMS, NANO-SYSTEMS AND MOLECULAR MAGNETS

SPIN-BASED INFORMATION PROCESSING AND OPTICAL QUANTUM TECHNOLOGIES

STRONGLY CORRELATED ELECTRON SYSTEMS

CHEMICAL AND BIOLOGICAL SYSTEMS

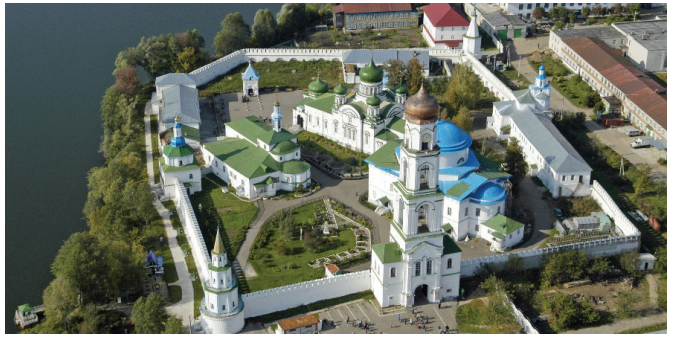
DEFECTS AND SPIN QUBITS

MAGNETIC RESONANCE IMAGING AND APPLICATIONS IN MEDICAL PHYSICS SYSTEMS

RELATED PHENOMENA

08:30–11:00	Registration		
11:00–11:30	Opening ceremony		
11:30–13:00	Plenary session. Chair: S. Khantimerov		
11:30–12:15	Plenary lecture 1		
12:15–13:00	Plenary lecture 2		
13:00–14:30	Break		
	Room 1		Room 2
14:30–16:00	Chemical and Biological Systems Chair: A. Sukhanov	14:30–16:00	Low-Dimensional Systems, Nano-Systems and Molecular Magnets Chair: A. Kamashev
16:00–16:30	Coffee break		
16:30–17:20	Magnetic Resonance Imaging and Applications in Medical Physics Chair: R. Yusupov	16:30–18:00	Low-Dimensional Systems, Nano-Systems and Molecular Magnets Chair: R. Eremina
17:20–18:10	Defects and Spin Qubits Chair: Yu. Kandrashkin		
18:10–19:30	Wellcome party		

09:00–10:30	Plenary session. Chair: L. Tagirov		
09:00–09:45	Plenary lecture 1		
09:45–10:30	Plenary lecture 2		
10:30–10:40	Sponsors' presentation		
10:40–11:00	Coffee break		
	Room 1		Room 2
11:00–12:00	Chemical and Biological Systems Chair: E. Konstantinova	11:00–12:00	Low-Dimensional Systems, Nano-Systems and Molecular Magnets Chair: A. Smirnov
12:00–14:00	Break		
14:00–17:00	Zavoisky Award Ceremony Zavoisky Awardee 2025 Lecture		
17:00–18:00	Buffet in honor of the laureate ***Tatarstan Academy of Sciences, Baumana str., 20***		

09:00–17:00	Social Program. Excursion to the Raifa Bogoroditsky Monastery
	

09:00–10:30	Plenary session. Chair: S. Demishev		
09:00–09:45	Plenary lecture 1		
09:45–10:30	Plenary lecture 2		
10:30–11:00	Coffee break		
	Room 1		Room 2
11:00–13:00	Chemical and Biological Systems Chair: A. Yurkovskaya	11:00–13:00	Strongly Correlated Electron Systems Chair: V. Glazkov
13:00–14:30	Break		
14:30–16:10	Spin-Based Information Processing and Optical Quantum Technologies Chair: V. Shaginyan	14:30–15:10	Strongly Correlated Electron Systems Chair: E. Vavilova
		15:10–16:00	Modern Methods of Magnetic Resonance Chair: T. Polenova
16:10–16:30	Coffee break		
16:30–18:00	Plenary session. Chair: E. Bagryanskaya		
16:30–17:15	Plenary lecture 1		
17:15–18:00	Plenary lecture 2		
18:00–18:30	Coffee break		
18:00–20:00	Poster session		

09:00–09:45	Plenary session. Chair: S. Dzuba		
09:45–10:00	Coffee break		
	Room 1		Room 2
10:00–12:00	Chemical and Biological Systems Chair: S. Travin	10:00–12:00	Low-Dimensional Systems, Nano-Systems and Molecular Magnets Chair: N. Suleimanov
12:00–13:00	Break		
13:00–14:40	Chemical and Biological Systems Chair: A. Kokorin	13:00–14:40	Advances in Magnetic Resonance Theory and Instrumentation Chair: R. Zaripov
14:40–15:10	Coffee break		
15:10	Closing ceremony		

30 September

Electron spin resonance from spin ensemble to single spin

Jiangfeng DU

University of Science and Technology of China, Hefei, China & Zhejiang University, Hangzhou, China

Electron Spin Resonance (ESR) is a powerful scientific technique widely used in cutting-edge research and industry. While traditional ESR primarily relies on spin ensembles, recent advances have extended its reach to the single-spin level. This lecture presents our research progress in both spin ensemble and single-spin ESR technologies.

(I) Spin Ensemble ESR: We have successfully developed a suite of ESR spectrometers covering frequency from X-band to W-band, including both pulsed and continuous-wave operation. These instruments provide researchers with powerful tools for scientific discovery across diverse fields.

(II) Single-Spin ESR: We have developed single-spin ESR techniques utilizing Nitrogen-Vacancy (NV) centers in diamond. This breakthrough has enabled the detection and manipulation of individual electron spins, finding applications in basic physics, information science, and life sciences. Significant research outcomes have been achieved, including probing exotic spin interactions beyond the Standard Model, studying non-Hermitian quantum physics, advancing single-spin quantum computing, and performing single-molecule scale magnetic resonance spectroscopy.

We anticipate that continued technological advancement will ensure ESR remains a vital tool in future scientific research, leading to further innovative discoveries and applications.

New type of Griffiths phase with enhanced ferromagnetic interaction. The breaking of the universal paradigm

11:30–12:15
29 September

It is believed that magnetic disorder universally suppresses the magnetic transition temperature, leading to the formation of a Griffiths phase. In the present work, we report the magnetic properties of the disordered ferromagnet $Mn_{1-x}Rh_xSi$, where the Curie temperature T_C exceeds 350 K, thus demonstrating about 12 times enhancement with respect to the parent compound MnSi, where this parameter is $T_C \sim 29$ K. We argue that a breaking of the universal Griffiths paradigm and the giant T_C increase are a consequence of the formation of a new type of ferromagnetic Griffiths phase, where disorder is caused mainly by strong dispersion of the local magnetic field in spin clusters. NMR data allow us to suggest a mechanism for Curie temperature enhancement based on the change of spin polaron states responsible for the anomalous magnetism of $Mn_{1-x}Rh_xSi$.

Sergey DEMISHEV

Vereshchagin High Pressure Physics Institute of RAS

EPR study of pH in living cells using spin labels based on triarylmethyl radicals

12:15–11:30
29 September

This report overviews the application of spin labels based on stable radicals to study biopolymers and their reaction in living cells. Real-time monitoring of tumor microenvironment parameters like intracellular pH remains challenging yet critical for understanding cancer progression and therapeutic resistance. Stereo-substituted nitroxides and triarylmethyl radicals have shown its suitability for in-vivo EPR experiments. We report a ^{13}C-isotope-enriched triarylmethyl radical (OX063) conjugated to the cell-penetrating peptide, which undergoes sequential redox transformations within live human cancer cells. Upon cellular internalization, reactive oxygen species oxidize OX063 to quinone methide (QM), which is subsequently reduced by endogenous thiols to form the pH-responsive radical OX063-OH. This radical enables precise pH mapping and estimation of redox agent concentrations. This redox-activated probe provides a strategy for non-invasive assessment of tumor acidosis, with implications for personalized diagnostics and therapy evaluation.

Elena BAGRYANSKAYA

N.N. Vorozhtsov Novosibirsk Institute of Organic Chemistry SB RAS

9:00–9:45
30 September

Antiferromagnetic spintronics and magnonics

Sergey NIKITOV
Kotel'nikov Radioengineering and Electronics Institute of RAS, Moscow Institute of Physics and Technology

We present the review of the recent results obtained in the field of antiferromagnetic (AFM) spintronics and magnonics. We begin with theoretical results describing the dynamic of the magnetic excitations in two sub-lattice AFM. Experimentally we suggested temperature controlled generator and detector of terahertz (THz) frequencies based on heterostructure orthoferrite–heavy metal generating frequencies in the range 0.2–0.8 THz. Direct and inverse spin Hall effects in AFM resonator in the hetestructure $FeBO_3$/Pt are studied. Also we studied microwave spin pumping from α-Fe_2O_3, and at the frequency 1.1 THz spin pumping from thin film NiO. We performed experiments on the influence of elastic deformations on the AFM modes in various materials. Both Brillouin light scattering experimental setup and microwave setup are used. All this leads to formation of the THz component base with AFM materials.

9:45–10:30
30 September

EPR of nanoporous materials: new applications

Matvey FEDIN
International Tomography Center SB RAS

Porous materials with nanoscale pores attract great attention in modern chemistry and materials science, whereas EPR spectroscopy is a highly informative method for studying and optimizing magnetic, structural, and functional properties of nanostructures and nanomaterials. In our recent series of studies, we have developed a number of new EPR approaches to study micro/nanoporous media, including metal-organic frameworks (MOFs), porous organosilica materials, and type-III porous liquids based on MOF nano/microparticles dispersed in ionic liquids and their aqueous mixtures. The report will overview the key results of recent years and discuss the prospects for the application of EPR spectroscopy in the study and design of functional nanoporous media.

9:00–9:45
02 October

Magnetic resonance and integrative structural biology, outside and inside Mammalian cells

Next-generation magnetic resonance methods for atomic-level characterization of large biological assemblies and proteins in their natural environments will be discussed, including the integrative approaches for magic angle spinning (MAS) NMR combined with medium-resolution cryo-EM and data-driven MD simulations to gain insights into the structure and dynamics of HIV-1 protein assemblies and their functions. ^{19}F dynamic nuclear polarization (DNP)-enhanced MAS NMR in protein assemblies and proteins in mammalian cells will be introduced. With over 35-to-50-fold signal enhancements, high signal-to-noise ratio MAS NMR spectra can be recorded on nanomole quantities of proteins in only minutes, and two-dimensional dipolar correlation spectra with high resolution are obtained. This work paves the way for ^{19}F DNP-enhanced MAS NMR applications in cellular environments to probe protein structure, dynamics, and ligand interactions. Challenges and opportunities for magnetic resonance in integrative structural biology will also be discussed.

Tatyana POLENOVA
Uniersity of Delaware, USA

9:45–10:30
02 October

Spin excitations in ordered XXZ-chain system CS_2COCL_4

One-dimensional spin chains with antiferromagnetic exchange exhibit specific quantum ground states and excitations. We discuss S = 1/2 antiferromagnetic chains with XXZ-anisotropy of exchange. It is expected, these chains have a spin-liquid (quantum-disordered) ground state in zero field, be a quantum-reduced antiferromagnet in moderate fields and then again spin liquid before saturation. Crystals of Cs_2CoCl_4 give a unique realization of this quantum model due to a practically perfect one-dimensionality of exchange and pseudospin σ = 1/2 presentation of a spin S = 3/2 system with large single-ion anisotropy. We find experimentally by ultra-low-temperature ESR the specific spinon-like and magnon-like excitations and observe multi-mode antiferromagnetic resonance of a complicated ordered spin structure with 90% of spectral weight being described by one-dimensional excitations.

Alexander SMIRNOV
P.L. Kapitza Institute for Physical Problems RAS

16:30–17:15
02 October

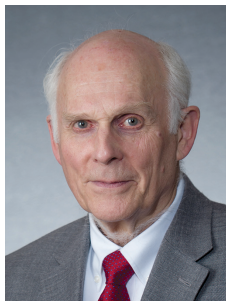
Nuclear hyperpolarization in electron transfer in chiral systems

Kev SALIKHOV
Zavoisky Physical-Technical Institute, FRC Kazan Scientific Center of RAS

The phenomenon of chiral-induced electron spin selectivity (CISS) is currently being intensively studied as it concerns the use of electron spins in quantum technologies. At present, considerable attention is also paid to photoinduced electron transfer (ET) in chiral donor-acceptor dyads recommended as models for studying the mechanism of influence of a chiral medium on the spin dynamics of electrons. We have shown that photoinduced ET in chiral systems exhibits NSS effects nuclear spin selectivity (the so-called NSS effect). The goal of our work is to investigate whether CISS and NSS effects have a common origin.

17:15–18:00
02 October

Comparison of electron spin relaxation and pulse turning angles of lanthanide complexes with differing coordination numbers



Gareth EATON
University of Denver, USA

Field-swept spin-echo detection permits observation of wide lanthanide spectra that extend over thousands of gauss. EPR spin-lattice relaxation times were measured for seven lanthanide(III) ions bound to a phosphine oxide ligand that forms meridional pseudo-octahedral 6-coordinate complexes. EPR spectra and relaxation times are compared with previously reported results for lanthanides. The emphasis in this discussion will be on the *g* value and energy level information provided by the electron spin turning angle in pulsed EPR measurements of lanthanides. The turning angles provide insight into the *J* values for the ground states. The EPR spectra and relaxation times are sensitive to the coordination environment and are emerging tools for characterization of both small-molecule and biomolecule interactions with lanthanide ions. Both Kramers and non-Kramers ions will be discussed.

9:00–9:45
03 October

High-resolution NMR and nuclear spin hyperpolarization with fast field cycling

The talk presents advanced methods in nuclear hyperpolarization and high-resolution NMR spectroscopy using fast magnetic field cycling. A unified theoretical framework based on level crossings (LC) and avoided crossings (LAC) of spin states is introduced, along with a compact, automated field-cycling module developed in Novosibirsk, covering an ultra-wide magnetic field range (10 nT–19.4 T). Applications include PHIP, SABRE, photo-CIDNP, and efficient coherent polarization transfer to nuclei such as ^{13}C, ^{15}N, ^{19}F, ^{31}P, and ^{77}Se. Special focus is given to spin chemistry studies, particularly electron transfer reaction mechanisms in donor-acceptor systems and biradicals investigated via field-dependent and time-resolved photo-CIDNP. The results demonstrate novel strategies for controlling hyperpolarization across various magnetic fields, including zero-to-ultralow fields (ZULF), with implications for chemistry and biophysics.

Alexandra YURKOVSKAYA
International Tomography Center, SB RAS

08:30–11:00	Registration		
11:00–11:30	Opening ceremony		
11:30–13:00	Plenary lectures. Chair: S. Khantimerov		
11:30–12:15	**Sergey Demishev:** New type of griffiths phase with enhanced ferromagnetic interaction. The breaking of the universal paradigm *High Pressure Physics Institute*		
12:15–13:00	**Elena Bagryanskaya:** EPR in living cells using spin labels based on triarylmethyl and nitroxide radicals *Vorzhtsov Novosibirsk Institute of Organic Chemistry*		
13:00–14:30	Break		
	Room 1		Room 2
14:30–16:00	Chemical and Biological Systems Chair: A. Sukhanov	14:30–16:00	Low-Dimensional Systems, Nano-Systems and Molecular Magnets Chair: A. Kamashev
14:30–15:00	**Daniella Goldfarb (invited)** Spin dynamics and orientation selection in Gd(III)-^{19}F electron-nuclear double resonance *Weizmann Institute of Science, Israel*	14:30–15:00	**Anastas Bukharaev (invited)** Full 180° magnetization reversal of planar Ni microparticles without magnetic field *Zavoisky Physical-Technical Institute*
15:00–15:30	**Sergei Dzuba (invited)** Nanoscale structures in model phospholipid biomembranes probed by pulsed dipolar EPR spectroscopy *Voevodsky Institute of Chemical Kinetics and Combustion*	15:00–15:20	**Egor Alakshin** Synthesis, self-assembly and magnetic properties study of rare-earth ions trifluoride *Kazan Federal University*
15:30–16:00	**Yang Haijun (invited)** Changes of serum albumin function in cirrhotic patients studied by EPR *Tsinghua University, China*	15:20–15:40	**Adeliya Garaeva** Magnetic properties of microsized and nanosized PrF_3 powders *Kazan Federal University*

		15:40–16:00	**Vasiliy Glazkov** Magnetic ordering in the decorated square kagomé lattice magnets *Kapitza Institute for Physical Problems*
16:00–16:30	Coffee break		
16:30–17:20	Magnetic Resonance Imaging and Applications in Medical Physics Chair: R. Yusupov	16:30–18:00	Low-Dimensional Systems, Nano-Systems and Molecular Magnets Chair: R. Eremina
16:30–17:00	**Hiroshi Hirata (invited)** Recent technical advances in EPR spectroscopic mapping for mouse tumor models *Hokkaido University, Japan*	16:30–17:00	**Olga Volkova (invited)** WBr_5: a novel layered ferromagnet for future spintronic applications *Lomonosov Moscow State University*
17:00–17:20	**Yahya Fattakhov** Magnetic resonance imaging of laboratory animals lungs using hyperpolarized ^{129}Xe *Zavoisky Physical-Technical Institute*	17:00–17:20	**Dmitrii Astvatsaturov** Ethanol inside graphene oxide membranes – spin probe technique investigation *Semenov Federal Research Center for Chemical Physics*
17:20–18:10	Defects and Spin Qubits Chair: Yu. Kandrashkin	17:20–17:40	**Timofei Soldatov** Crossover spin-3/2–pseudospin-1/2 in spin-chain antiferromagnet Cs_2CoCl_4 *Kapitza Institute for Physical Problems*
17:20–17:50	**Sandra Eaton (invited)** Orientation and host dependence of spin-lattice relaxation times for oxo-vanadium porphyrins *University of Denver, USA*	17:40–18:00	**Evgeniy Altynbaev (invited)** Complementarity of EPR and neutron scattering techniques in the study of long-period chiral magnets *Saint Petersburg State University*

17:50–18:10	**Sergey Vasil'ev** Lindblad dephasing relaxation and quantum entanglement in two-spin systems *Federal Research Center of Problems of Chemical Physics and Medicinal Chemistry*		
18:10–19:30	Wellcome party		

09:00–10:30	Plenary lectures. Chair: L. Tagirov		
09:00–09:45	**Sergey Nikitov:** Antiferromagnetic spintronics and magnonics *Kotel'nikov Institute of Radioengineering and Electronics*		
09:45–10:30	**Matvey Fedin:** EPR of nanoporous materials: new applications *International Tomography Center*		
10:30–10:40	Sponsors' presentation. **Andrey Chazov:** The newest players of magnetic resonance market from Asia: latest developments in EPR, brand new high-field and affordable cryo-free NMR from China *Company «ELEMENT»*		
10:40–11:00	Coffee break		
	Room 1		Room 2
11:00–12:00	Chemical and Biological Systems Chair: E. Konstantionova	11:00–12:00	Low-Dimensional Systems, Nano-Systems and Molecular Magnets Chair: A. Smirnov
11:00–11:20	**Vladimir Koshman** Interaction of thiosemicarbazones with a model lipid membranes: NMR and molecular dynamics simulations *Voevodsky Institute of Chemical Kinetics and Combustion*	11:00–11:30	**Alexander Vasiliev (invited)** Diverse magnetic chains in inorganic compounds *Lomonosov Moscow State University*
11:20–11:40	**Ekaterina Kytina** Effect of spin centers on photoluminescence in porous aluminum oxide synthesizing in organic acids *Lomonosov Moscow State University*	11:30–12:00	**Rushana Eremina** Magnetic properties of Ca_2CoNbO_6 *Zavoisky Physical-Technical Institute*

11:40–12:00	**Margarita Sadovnikova** Effect of rare earth dopants on the structural features of calcium phosphate-based materials by EPR spectroscopy *Kazan Federal University*		
12:00–14:00	Break		
14:00–17:00	Zavoisky Award Ceremony Zavoisky Awardee 2025 Lecture **Jiangfeng Du:** Electron spin resonance from spin ensemble to single spin *University of Science and Technology of China, Hefei, China & Zhejiang University, Hangzhou, China*		
17:00–18:00	Buffet in honor of the laureate ***Tatarstan Academy of Sciences, Baumana str., 20***		

PROGRAMME PLAN | Wednesday, 1 October

09:00–17:00	Social Program. Excursion to the Raifa Bogoroditsky Monastery

09:00–10:30	Plenary lectures. Chair: S. Demishev		
09:00–09:45	**Kev Salikhov:** Nuclear hyperpolarization in electron transfer in chiral systems *Zavoisky Physical-Technical Institute*		
09:45–10:30	**Alexander Smirnov:** Spin excitations in ordered XXZ-chain system Cs_2CoCl_4 *Kapitza Institute for Physical Problems*		
10:30–11:00	Coffee break		
	Room 1		Room 2
11:00–13:00	Chemical and Biological Systems Chair: A. Yurkovskaya	11:00–13:00	Strongly Correlated Electron Systems Chair: V. Glazkov
11:00–11:30	**Jianzhang Zhao (invited)** Study of the triplet state of chromophores containing thionated carbonyl groups with time-resolved electron paramagnetic resonance spectra: large zero field splitting (ZFS) *Dalian University of Technology, China*	11:00–11:30	**Evgeniia Vavilova (invited)** Spin chains with non-magnetic defects: NMR studies *Zavoisky Physical-Technical Institute*
11:30–12:00	**Andrey Sukhanov (invited)** Inversion of electron spin polarization in organic chromophores. Time-resolved EPR study *Zavoisky Physical–Technical Institute*	11:30–12:00	**Vasily Shaginyan (invited)** Scaling behavior of superconductors *Petersburg Nuclear Physics Institute of NRC Kurchatov Institute*

12:00–12:20	**Yulia Motygina** Intramolecular distances and excluded volume: simultaneous analysis of DEER traces in a model biradical *Voevodsky Institute of Chemical Kinetics and Combustion*	12:00–12:20	**Roman Yusupov (invited)** EPR and optical spectra, and double-loop magnetic hysteresis of SrY_2O_4:Dy crystals *Kazan Federal University*
12:20–12:40	**Maiya Ulyanova** Study of weak non-covalent interactions of quinone derivatives with GMP and oligonucleotides by NMR and CIDNP techniques *Voevodsky Institute of Chemical Kinetics and Combustion*	12:20–12:40	**Sofia Gotovko** Low-frequency dynamics of $LiCu_3O_3$ – a strongly depleted antiferromagnet *P. L. Kapitza Institute for Physical Problems RAS*
12:40–13:00	**Ivan Zhukov** Modeling of cidnp field dependence for molecular donor-acceptor compounds *International Tomography Center*	12:40–13:00	**Vadim Tumanov** Critical temperature and order parameter modulation in superconducting heterostructures with domain-structured ferromagnets *Kazan Federal University*
13:00–14:30	Break		
14:30–16:10	Spin-Based Information Processing and Optical Quantum Technologies Chair: V. Shaginyan	14:30–15:10	Strongly Correlated Electron Systems Chair: E. Vavilova
14:30–15:00	**Sergey Travin (invited)** On the new paradigm for describing the shape of EPR spectra lines *Semenov Federal Research Center for Chemical Physics*	14:30–14:50	**Aleksei Shestakov** EPR evidence of high-temperature magnetic transitions in noncentrosymmetric ternary carbide $GdCoC_2$ *Prokhorov General Physics Institute*

15:00–15:30	**Yury Bunkov (invited)** New mechanism of coherent photons emission *Russian Quantum Center*	14:50–15:10	**Georgy Nikolaev** Current-induced g-factor tuning in zinc oxide-based heterostructures *Institute of Solid State Physics RAS*
15:30–15:50	**Yuri Kandrashkin** Influence of nuclear spin on the Rabi frequency of erbium ions doped in a $YLiF_4$ single crystal *Zavoisky Physical-Technical Institute*	15:10–16:00	Modern Methods of Magnetic Resonance Chair: V. Voronkova
15:50–16:10	**Aleksey Akimov** Coherent spectroscopy on NV center on invisible transition *Russian Quantum Center*	15:10–15:40	**Nail Suleimanov (invited)** Echo phenomena in spin spectroscopy *Zavoisky Physical Technical Institute*
		15:40–16:00	**Alexey Kiryutin** ^{77}Se SABRE via tandem scalar coupling: first parahydrogen-induced hyperpolarization of selenium *International Tomography Center*
16:10–16:30	Coffee break		
16:30–18:00	Plenary lectures. Chair: E. Bagryanskaya		
16:30–17:15	**Tatyana Polenova:** Magnetic resonance and integrative structural biology, outside and inside mammalian cells *University of Delaware, USA*		
17:15–18:00	**Gareth Eaton:** Comparison of electron spin relaxation and pulse turning angles of lanthanide complexes with differing coordination numbers *University of Denver*		
18:00–18:30	Coffee break		
18:00–20:00	Poster session		

09:00–09:45	Plenary lectures. Chair: S. Dzuba		
09:00–09:45	**Alexandra Yurkovskaya**: High resolution NMR and nuclear spin hyperpolarization with fast field cycling *International Tomography Center*		
09:45–10:00	Coffee break		
	Room 1		Room 2
10:00–12:00	Chemical and Biological Systems Chair: S. Travin	10:00–12:00	Low-Dimensional Systems, Nano-Systems and Molecular Magnets Chair: N. Suleimanov
10:00–10:30	**Elizaveta Konstantionova (invited)** Features of paramagnetic centers in nanosized porous aluminum oxide *Lomonosov Moscow State University*	10:00–10:30	**Kirill Tsiberkin** Dynamics of classical magnetic moments after a few T_2: manifestation of collective modes *Perm State University*
10:30–11:00	**Alexander Kokorin (invited)** Spatial organization of polymer-metal coils in liquid solutions: Spin exchange titration *Semenov Federal Research Center for Chemical Physics*	10:30–10:50	**Vladimir Zhaketov** Polarized neutron reflectometry with oscillating magnetic field *Joint Institute for Nuclear Research*
11:00–11:20	**Sergei Dementev** EPR spectroscopy for biostability assessment of metallodrug complexes *International Tomography Center*	10:40–11:00	**Ekaterina Kovycheva** Spin dynamics of disordered structures and one-dmensional chains *Perm State University*
11:20–11:40	**Roman Podarov** Water-soluble fullerenes as spin labels for dipolar EPR spectroscopy *International Tomography Center*	11:00–11:20	**Denis Saritsky** Analysis of EPR spectra of NASICON:Fe^{3+} considering the distribution of fine structure parameters *Institute of Chemistry FEB RAS*

11:40–12:00	**Kirill Sannikov** NMR of liquid ^{129}Xe in porous media near triple point *Kazan Federal University*	11:20–11:40	**Amina Faskhutdinova** Ab initio magnetic properties simulation of nanoparticles based on ReF_3 and $LiReF_4$, (Re= Tb, Dy, Ho) *Kazan Federal University*
		11:40–12:00	**Vladimir Ulanov** Very strong concentration dependence of Mn^{2+} and Gd^{3+} EPR spectra parameters in $Pb_{0.995}Cu_{0.003}Gd_xMn_yS$ semiconductors *Zavoisky Physical-Technical Institute*
12:00–13:00	Break		
13:00–14:40	Chemical and Biological Systems Chair: A. Kokorin	13:00–15:00	Advances in Magnetic Resonance Theory and Instrumentation Chair: R. Zaripov
13:00–13:30	**Vitaly Volkov (invited)** NMR of polymeric electrolytes for lithium batteries *Federal Research Center of Problems of Chemical Physics and Medicinal Chemistry*	13:00–13:20	**Ilnaz Fairushin** Self-consistent relaxation theory of collective dynamics in Yukawa and Coulomb liquids *Kazan Federal University*
13:30–14:00	**Anatoly Vanin (invited)** Why, when there is oxygen in the tissues as a possible oxidizer of nitric oxide, the latter is preserved in the body of animals and humans, exercise a various physiological effect on it? *Semenov Federal Research Center for Chemical Physics*	13:20–13:40	**Ivan Frolov** Recombination operator model construction *Novosibirsk State University*

14:00–14:20	**Khalil Gainutdinov** EPR study of the content of nitric oxide and copper in the liver of rats after modeling combined brain and spinal cord injuries *Zavoisky Physical-Technical Institute*	13:40–14:00	**Artem Tsygankov** Quasi-stable structures in liquid antimony: DFT analysis *Kazan Federal University*
14:20–14:40	**Margarita Arbuzova** Lipid-mediated effect of saponin β-escin on the localization of the transmembrane domain of e protein of SARS-COV-2 *Voevodsky Institute of Chemical Kinetics and Combustion*	14:00–14:20	**Daniil Popov** Spin-crossover in Cu_2MnBO_5:Cr ludwigite *Zavoisky Physical-Technical Institute*
		14:20–14:40	**Razil Ziatdinov** Calculation of interaction parameters of Pu^{3+} ions with spins of fluorine nuclei in CaF_2 *Kazan Federal University*
14:40–15:10	Coffee break		
15:10	Closing ceremony		

1. Advances in magnetic resonance theory and instrumentation. Poster session	
1-Po1	**A.A. Gol'dberg, S.A. Klimova, R.V. Davydov, D.S. Provodin, V.V. Davydov:** A new approach to finding an analytical solution to the Bloch equations for magnetization components under modulation conditions of a constant magnetic field
2. Modern methods of magnetic resonance. Poster session	
2-Po1	**M.M. Bakirov, A.A. Sukhanov, H. Zhang, J. Zhao, Yu.E. Kandrashkin:** Time resolved EPR study of CNI Tempo
2-Po2	**R.R. Fatykhov:** Antisite defects in cathode materials of lithium (sodium)-ion batteries. EPR study
2-Po3	**I.T. Khairutdinov, R.B. Zaripov:** Inversion of ensemble of frequency-distributed spins using a chirp pulse sequences
2-Po4	**Zh.Kh. Pulotov, A.Kh. Kadikova, B.F. Gabbasov, I.V. Yanilkin, A.I. Gumarov, A.G. Kiiamov, L.R. Tagirov, R.V. Yusupov:** Spin-Hall effects in epitaxial $Pd_{1-x}Fe_x$/Pt and $Pd_{1-x}Fe_x$/W thin film structures
2-Po5	**A.D. Shishkin, G.S. Shakurov, I.V. Romanova, V.V. Semashko, O.A.Morozov, S.L. Korableva:** EPR experiments in $LiDyF_4$ at subterahertz frequencies
2-Po6	**D.E. Zhelezniakova, I.I. Gimazov, Y.I. Talanov:** Influence of magnetic correlations on scattering of current carriers in iron arsenides
3. Low-dimensional systems, nano-systems and molecular magnets. Poster session	
3-Po1	**V.A. Achintseva, R.G. Batulin, M.A. Cherosov, A.L. Zinnatullin, I.V. Romanova:** Features of solid-phase synthesis of $Gd_{2-x}Dy_xTi_2O_7$ and $Gd_{1-x}Dy_xTiO_3$ titanates
3-Po2	**M.Yu. Dmitrieva, A.B. Drovosekov, A.V. Sitnikov, S.N. Nikolaev, V.V. Rylkov:** Magnetic resonance in nanogranular composites: observation of "double-quantum" excitations in ferromagnetic nanoparticles
3-Po3	**M.L. Falin, V.A. Latypov, S.L. Korableva**: EPR of cubic center of Gd^{3+} in Rb_2NaF_6 single crystal before phase transition at T = 300 K
3-Po4	**B.F. Farrakhov, Ya.V. Fattakhov:** Morphology of the surface of the implanted silicon to increase the efficiency of light absorption formed by pulsed light heating

3-Po5	**A.K. Ginkel, O.A. Morozov, S.L. Korableva, M.S. Pudovkin, R.M. Rakhmatullin, V.V. Semashko, A.A. Rodionov:** Effect of Bi^{3+} co-doping on Yb^{3+} local structure in CeO_2 nanoparticles
3-Po6	**A.S. Gurin, D.D. Kramushchenko, A.M. Skomorokhov, P.G. Baranov, S.Ya.Kilin, R.A. Babunts:** Cross-relaxation of nitrogen-related centers in diamond
3-Po7	**A.Kh. Kadikova, I.V. Yanilkin, A.I. Gumarov, B.F. Gabbasov, D.G. Zverev, L.R. Tagirov, R.V. Yusupov:** Inverse spin-hall effect and structural phase transitions in $Ni_{80}Fe_{20}/Mn_xPt_{1-x}$ bilayers
3-Po8	**R.I. Khaibullin, E.M. Begishev, D.A. Bizyaev, V.V. Bazarov, I.R. Vakhitov, A.A. Sukhanov:** VSM, MFM and FMR studies of rutile TiO_2 implanted with doubly positively charged cobalt ions
3-Po9	**I. Mershiev, G. Kupriyanova:** ^{35}Cl NQR relaxation study of fine powders
3-Po10	**B.M. Mukhamadullin, E.I. Boltenkova, A.M. Garaeva, A.V. Bogaychuk, E.M. Alakshin:** Monitoring of nanoparticles nucleation in capillary system using ^1H NMR
3-Po11	**N.I. Nurgazizov, A.P. Chuklanov, Ye.O. Mityushkin, V.G. Nikiforov:** Using atomic force microscopy to fabricate test structures from upconversion luminescent particles for confocal microscopy
3-Po12	**N.S. Saenko, N.I. Steblevskaya, M.V. Belobeletskaya, A.M. Ziatdinov:** ESR of nanoparticles powder of europium metaphosphate $Eu(PO_3)_3$ doped by Eu^{2+} ions
3-Po13	**D.A. Saritsky, V.V. Zheleznov, A.M. Ziatdinov:** Analysis and modeling of EPR spectra of $Na_2Ti_6O_{13}:Fe^{3+}$ considering the distribution of fine structure parameters
3-Po14	**T.S. Shaposhnikova, R.F. Mamin:** Magnetoelectric properties of skyrmions
3-Po15	**A.R. Sharipova, E.N. Frolova, O.A. Turanova, L.V. Bazan, A.N. Turanov:** Effect of counterions in Fe(III) complexes with β-enaminones on their magnetic properties
3-Po16	**N.Kh. Useinov:** Study of spin-orbit torques induced by current in magnetic tunnel junctions
3-Po17	**R.B. Zaripov, R.T. Galeev:** Observation of transient nutation on a two-quantum transition

4. Spin-based information processing and optical quantum technologies. Poster session	
4-Po1	**M.R. Arifullin, V.L. Berdinskiy:** Implemenetation of quantum computing on high-spin ions of paramagnetic complexes using phase-modulated microwave pulses
4-Po2	**E.M. Begishev, N.M. Lyadov, V.V. Bazarov, A.A. Sukhanov, R.I. Khaibullin:** Magnetic memristor based on cobalt-implanted rutile (TiO_{2-x}): VSM, MOKE and FMR studies
5. Strongly correlated electron systems. Poster session	
5-Po1	**D.A. Arbuzov, A.A. Validov, N.N. Garyf'yanov, A.A. Kamashev, I.A. Garifullin:** Investigation of the oxidation processes of cobalt thin films by the FMR method
5-Po2	**S.V. Demishev, R.R. Tagirov, A.V. Semeno, A.V. Shestakov, I.I. Fazlizhanov, R.M. Eremina, A.V. Bokov, D.A. Salamatin, A.V. Semeno, A.V. Tsvyashchenko:** Magnetic properties of $GdCoC_2$: ESR, static magnetization and magnetocaloric study
5-Po3	**T.N. Enderova, V.O. Sakhin, I.I. Gimazov, E.F. Kukovitsky, Yu.I. Talanov:** Non-resonant microwave absorption study of anisotropic transport properties in $Bi_{1.06}Sn_{0.04}Sb_{0.9}Te_2S$
5-Po4	**T.P. Gavrilova, I.V. Yatsyk, A.I. Zaitsev, A.V. Cherepakhin, E.M. Moshkina:** $CeMnB_5O_{10}$ – new member of a pentaborate family: ESR measurements
5-Po5	**Yu. Goryunov, A. Nateprov:** Nuclear magnetic moments in the 3D Dirac semimetal Cd_3As_2: Suhl-Nakamura interaction approach.
5-Po6	**M.I. Nasyrova, B.F. Gabbasov, M.A. Cherosov, R.G. Batulin, R.V. Yusupov:** Influence of cooling conditions on magnetic resonance spectra of $FeCr_2O_4$ multiferroic spinel
5-Po7	**A.E. Os'kin, A.V. Popov, I.V. Yatsyk, R.M. Eremina, S.V. Demishev:** Quantitative EPR line shape analysis in a metal based on the semiclassical magnetization dynamics
5-Po8	**I.V. Yatsyk, R.F. Likerov, R.M. Eremina, R.G. Batulin:** Magnetic properties $Ca_{0.3}Sr_{0.3}La_{0.3}Mn_{0.5}Ti_{0.5}O_3$
5-Po9	**S.V. Yurtaeva, I.V. Yatsyk, V.N. Efimov, A.A. Rodionov:** Analysis of temperature behavior of orientation dependent EMR signals in biological tissues

6. Chemical and biological systems. Poster session	
6-Po1	**M.M. Akhmetov, G.G. Gumarov, R.B. Zaripov, G.N. Konygin, D.S. Rybin:** Pulse EPR of radicals in mechanoactivated calcium gluconate
6-Po2	**V.V. Andrianov, I.B. Deryabina, A.I. Arslanov, L.V. Bazan, Kh.L. Gainutdinov:** Effect of different anesthesia methods on NO detection in rat brain tissue by the spin trap method
6-Po3	**E.E. Batueva, A.R. Sharipova, E.N. Frolova, A.A. Sukhanov, L.I. Savostina, O.A. Turanova, A.N. Turanov:** Multifunctional heptanuclear iron complexes
6-Po4	**M.I. Ibragimova, A.I. Chushnikov, I.V. Yatsyk, D.Kh. Khaibullina, G.G. Gumarov:** EPR method: methemoglobinemia in patients with connective tissue dysplasia
6-Po5	**I.S. Ivanova, D.R. Bajtimirov, S.V. Konev, D.V. Ivanov, A.P. Podshivalov:** Investigation of the origin of the radiation-induced paramagnetic centers in melanin by EPR spectroscopy
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6-Po7	**A.F. Shaidullina, L.I. Savostina, A.R. Sharipova, M.Yu. Volkov, O.A. Turanova, A.N. Turanov:** Influence of solvents on β-enaminon spectral characteristics and dynamics by NMR, UV-visible spectroscopy and DFT data
6-Po8	**A.A. Sukhanov, V.K. Voronkova, Zh. Li, Xi Chen, J. Zhao:** Exchange and spin dipolar interactions in perylenebisimide-tempo dyads
6-Po9	**E.K. Shamsutdinova, A.N. Turanov:** Proton Exchange in water-ethanol mixture. NMR
6-Po10	**A.R. Sharipova, E.N. Frolova, O.A. Turanova, L.V. Bazan, A.N. Turanov:** Potential control of magnetic properties of a new Fe(III) complex by means of synthesis methods
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7. Defects and spin qubits. Poster session	
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7-Po2	**Y.E. Ermakova, I.N. Gracheva, F.F. Murzakhanov, A.N. Smirnov, I.A. Eliseyev, O.P. Kazarova, G.V. Mamin, M.R. Gafurov:** Temperature stability of spin defects in ^{6}H-SiC studied by EPR and luminescence spectroscopy

7-Po3	**L.V. Nikiforov, D.V. Dmitrieva, D.S. Dmitrieva, V.V. Davydov:** Research a relaxation processes of E′ centers in pure quartz fibers by electron paramagnetic resonance method
7-Po4	**A.Yu. Oshchepkov:** Modeling the dynamics of spin qubits in the presence of stochastic impact of lattice in the semiclassical approximation
7-Po5	**A.A. Sukhanov, V.F. Tarasov, Ya.S. Didenko, K.A. Subbotin, E.V. Zharikov:** Hyperfine structure of epr spectra of Cr-53 impurity ions in synthetic forsterite
7-Po6	**R.B. Zaripov, V.A. Ulanov, R.R. Zainullin:** EPR study of [Mn^{2+}- Ag^{2+}] exchange coupled pairs synthesized in BaF_2 single crystal
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9-Po2	**D. Arbuzov, A. Kamashev, N. Garif'yanov:** The realisation of solitary superconductivity in a superconducting spin valve
9-Po3	**A.A. Kamashev, N.N. Garifyanov, A.A. Validov, D.A. Arbuzov, I.A. Garifullin:** Investigation of features of magnetic properties of oxidized layers in superconducting spin valve structures CO/PB/CO
9-Po4	**R.F. Likerov, I.V. Yatsyk, R.M. Eremina:** High-entropy perovskite-like oxide $(BaCaSrLaNa)_{0.2}FeO_3$: synthesis and epr measurements
9-Po5	**M.E. Menshikov, A.V. Dooglav, R.G. Batulin, S.L. Korableva, O.A. Morozov, I.V. Romanova:** Measuring magnetostriction using capacitive dilatometer
9-Po6	**V.O. Sakhin, B.F. Gabbasov, D.G. Zverev, E.F. Kukovitsky, N.N. Garifyanov, A.A. Kamashev:** Investigation of spin-current conversion in $Py/Bi_{1.08}Sn_{0.02}Sb_{0.9}Te_2S$ heterostructure

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