

## 55th anniversary of the Institute of Spectroscopy of the Russian Academy of Sciences (ISAN)

(Scientific session of the Physical Sciences Division of the Russian Academy of Sciences and anniversary seminar of ISAN, November 16, 2023)

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A scientific session of the Physical Sciences Division of the Russian Academy of Sciences (PSD RAS) and an anniversary seminar of the Institute of Spectroscopy of the Russian Academy of Sciences (ISAN) dedicated to the 55th anniversary of ISAN's founding were held in the assembly hall of ISAN (5 Fizicheskaya St., Troitsk, Moscow) on November 16, 2023. The agenda of the meeting included the following reports (the speaker is underlined):

1. Melentiev P N (ISAN, Troitsk, Moscow) “Optical single-molecule sequencing of DNA molecules: physical principles, fundamental and technical limitations, experimental implementation”;
2. Afanasiev A E (ISAN, Troitsk, Moscow) “Atomic chip as a source of atoms for quantum sensors”;
3. Kartashov Ya V (ISAN, Troitsk, Moscow) “Solitons in topological waveguide structures”;
4. Popova M N, Boldyrev K N (ISAN, Troitsk, Moscow) “High-resolution spectroscopy of functional materials”;
5. Eremchev I Yu, Naumov A V (ISAN, Troitsk, Moscow) “Fluorescence spectromicroscopy of single quantum emitters”;
6. Medvedev V V (ISAN, Troitsk, Moscow) “Short-wavelength radiation sources based on laser plasma”;
7. Kolachevsky N N (P N Lebedev Physical Institute of the RAS (LPI), Moscow) “Quantum computing with optical qubits”;
8. Rozanov N N (A F Ioffe Physicotechnical Institute of the RAS (PTI), St. Petersburg) “Towards extremely short unipolar and electromagnetic pulses”;
9. Kulik S P (M V Lomonosov Moscow State University, Moscow) “Quantum technologies at Moscow University”;
10. Nikitov S A, Koshelets V P (Institute of Radio Electronics of the RAS (IRE), Moscow) “Superconducting electronics for receiving and processing information”;
11. Kalachev A A (E K Zavoisky Kazan Institute of Physics and Technology, Kazan Scientific Center of the RAS, Kazan) “Light sources for quantum repeaters”;
12. Drachev V P (Skolkovo Institute of Science and Technology (Skoltech), Moscow) “Plasmonic structures in silicon integrated photonics.”

Reviews and papers written on the basis of reports 1–4, 7, 8, and 12 are published below in this special issue of the journal *Physics–Uspekhi* dedicated to the 55th anniversary of ISAN.



### At the anniversary meeting at ISAN.

Speakers in the order of presentation of reports on the program (P N Melentiev, A E Afanasiev, Ya V Kartashov, M N Popova, A V Naumov, V V Medvedev, N N Kolachevsky, N N Rozanov, S P Kulik, V P Koshelets, A A Kalachev, V P Drachev) and interested grateful listeners (guests, leading scientists, and young scientists from ISAN).