

## Modern problems of ultrahigh-brightness electron beam photoinjectors (Scientific session of the Physical Sciences Division of the Russian Academy of Sciences, 1 March 2017)

DOI: <https://doi.org/10.3367/UFNe.2017.03.038122>

A scientific session of the Physical Sciences Division of the Russian Academy of Sciences (RAS) under the title of “Modern problems of ultrahigh-brightness electron beam photoinjectors” was held on 1 March 2017 in the conference hall of the Lebedev Physical Institute, RAS.

The following reports were heard at the session:

(1) **Vinokurov N A, Barnyakov A M, Volkov V N, Kolobanov E I, Kuznetsov G I, Kurkin G Ya, Levichev A E, Logachev P V, Nikiforov D A, Petrov V M, Starostenko D A, Tribendis A G** (Budker Institute of Nuclear Physics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk) “Electron guns at the Budker Institute of Nuclear Physics SB RAS: prospects for the use of photocathodes with nanosecond and subpicosecond laser drivers”;

(2) **Mironov S Yu, Andrianov A V, Gacheva E I, Zelenogorskii V V, Potemkin A K, Khazanov E A** (Institute of Applied Physics, Russian Academy of Sciences, Nizhny Novgorod) “Spatio-temporal shaping of photocathode laser pulses for linear electron accelerators”;

(3) **Terekhov A S** (Rzhanov Institute of Semiconductor Physics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk) “Photocathodes for generating electron beams with physically ultrahigh brightness”;

(4) **Nozdrin M A, Balalykin N I, Minashkin V F, Shirkov G D** (Joint Institute for Nuclear Research, Dubna, Moscow region), **Gacheva E I, Potemkin A K, Zelenogorskii V V** (Institute of Applied Physics, Russian Academy of Sciences, Nizhny Novgorod), **Huran J** (Institute of Electrical Engineering, Bratislava, Slovak Republic) “Electron gun with a transmission photocathode for the Joint Institute for Nuclear Research photoinjector.”

The present issue contains papers written based on oral reports 1, 2, and 4.