

# Theory of condensed matter (in memory of Yurii Vasil'evich Kopaev)

(Scientific session of the Physical Sciences Division  
of the Russian Academy of Sciences, 13 December 2017)

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A scientific session of the Physical Sciences Division of the Russian Academy of Sciences (RAS), dedicated to the memory of Academician Yurii Vasil'evich Kopaev and entitled “Theory of condensed matter”, was held at the Conference Hall of the Lebedev Physical Institute, RAS on 13 December 2017.

The following oral reports were presented at the session:

(1) **Andreev A F** (Kapitza Institute for Physical Problems, RAS, Moscow) “Thermodynamics of a solid helium surface”;

(2) **Zvezdin A K** (Prokhorov General Physics Institute, RAS, Moscow) “Ultrafast spin dynamics and inverse spin Hall effect in nanostructures with giant spin-orbit coupling”;

(3) **Lozovik Yu E** (Institute for Spectroscopy, RAS, Troitsk, Moscow) “New effects in and control of exciton systems in quasi-two-dimensional structures”;

(4) **Pankratov O A** (University of Erlangen-Nürnberg, Germany) “Surface states of topological insulators”;

(5) **Tikhodeev S G** (Prokhorov General Physics Institute, RAS, Moscow, and Lomonosov Moscow State University, Moscow) “Nonequilibrium exciton–polariton phase transitions in strong electromagnetic fields”;



Yurii Vasil'evich Kopaev  
(21.10.1937 – 24.12.2012)

(6) **Gorbatsevich A A** (Lebedev Physical Institute, RAS, Moscow) “Quantum analogs of complementary metal-oxide semiconductor schemes”.

The paper versions of reports 1–4 and 6 are presented further on in this issue.