

## Energy Colloquium

# New Experimental Data on Thermal Regime of Our Planet: Effect for Basic and Applied Science

**Dr. Yury Popov**

**Principal scientist, Skoltech**

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**Skolkovo Innovation Center**

**Technopark, Building 3, Room 407**



### **ABSTRACT:**

International experimental investigations within the scientific continental deep drilling program (1985-2011) allowed us to obtain the surprising data on the Earth's thermal regime. The data were obtained due to qualitatively new methodological approaches and instrumentation, and a happy chance to arrange the long-term measurements in many boreholes with a depth up to more than 12 km when the thermal equilibrium was reached after the borehole drilling. As a result, it was established from the measurements that a temperature predicted differs from the temperature measured more than twice often, terrestrial heat flow values inferred from the new measurements exceed the previous data by 45-130%, rock thermal properties measured differ from the previous information essentially. These data changed very much in the basic and applied science as the crustal thermal regime influences on processes in the Earth's crust as well as on mineral resources and energy fields forming. During last two decades these results and new experimental technologies happened to be increasingly important for oil-gas and geothermal energy science and industry.

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