

---

# The Effective Thermal Conductivity of a Nano-Composite in the Presence of the Intermediate Layer between Fullerenes and a Matrix

© G.N. Kuvyrkin

Bauman Moscow State Technical University, Moscow, 105005, Russia

*The paper presents a mathematical model of heat transfer in a composite modified by fullerenes. The effective thermal conductivity of the composite at an intermediate layer between fullerenes and a matrix, including the use of a dual variation mathematical model for stationary heat conductivity in non-uniform firm solids is estimated. The range restriction for the fullerenes volume concentration, within which the outlined estimates are worth-while, is obtained.*

**Keywords:** *composite, effective thermal conductivity, fullerene, matrix, intermediate layer.*

**Kuvyrkin G.N.**, Dr. Sci. (Eng.), Professor, Head of “Applied Mathematics” Department of Bauman Moscow State Technical University. e-mail: gnk1914@mail.ru