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# The definition and identification of parameters of condensed medium by research method in the microwave range

©R.Yu. Gerasimov<sup>1</sup>, V.N. Bovenko<sup>1</sup>, M.Yu. Gerasimov<sup>2</sup>

<sup>1</sup>Bauman Moscow State Technical University, Moscow, 105005, Russia

<sup>2</sup>Institute of Machines Science named after A.A. Blagonravov of the Russian Academy of Sciences, Moscow, 101090, Russia

*The article describes experimental and theoretical researches of interaction of the microwaves (from 2.0 to 4.2 GHz) with silicon carbide powders characterized by fractal structure and water solutions NaCl and LiCl. The changes of the form of registered signals and the spectrum displacements in the Stocks area of frequencies were experimentally observed. The peak-frequency characteristics of signal spectra were analyzed. The high precision in the definition of frequency ( $10^{-9}$ - $10^{-10}$ ) allowed to reach the sensitivity of spectrum displacement in the Stocks area of frequencies  $(5-6) \cdot 10^9$  Hz/m = 5-6 Hz/nm.*

**Keywords:** radio-wave, spectrum, condensed medium, polymodal distribution, fractal, scaling.

**Gerasimov R.Yu.** (b. 1983) graduated from Bauman Moscow State Technical University in 2006. Works at the Chemistry and Physics Departments of Bauman Moscow State Technical University. Author of 10 scientific works in the field of detection and identification of the parameters of the material. e-mail: r\_guerassimov@mail.ru

**Bovenko V.N.** (b. 1936) graduated from the Moscow Institute of Physics and Technology in 1960. Dr. Sci. (Phys. & Math.), Professor of the of Physics Department of Bauman Moscow State Technical University. Author of 90 scientific and methodical works in the field of physics of strength and fracture. e-mail: willian-2304@mail.ru

**Gerasimov M.Yu.** (b. 1976) graduated from Bauman Moscow State Technical University in 2000. Ph.D., Senior Researcher of the Institute of Machines Science named after A.A. Blagonravov of the Russian Academy of Sciences. Author of 40 scientific works in the field of strength and fracture. e-mail: guerassimov\_m@mail.ru

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