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Quantitative geometry of biological cells as the joint result of liquid crystals and physical vacuum structures

The existence of life is the result of carbon role in physical vacuum processes. Electromagnetic resonances arise when the photon energy matches the energy difference between two levels of electron. Resonances in vacuum arise at interaction with mass (energy) equal to the mass difference between charged and neutral vector bosons-particles carrying weak nuclear forces. Isotope mass ^{12}C with accuracy of approximately 2% coincides with just such mass difference. More than 99% of ordinary matter mass is created by atomic nucleus virtual shells, consisting of Higgs bosons and having geometric structure similar to fullerenes. Carbon is the single element creating such chemical analogues of the most fundamental vacuum structures. Biology cells create much more complex models of vacuum structures. Biological evolution is a process directed toward a slow and gradual adaptation to the physical vacuum as a real component of environment. In result, biology cells are transformed to chemical analog models of vacuum structures and acquire the ability to live according quantum laws without solving any equations. Direct geometric similarity of biology and vacuum structures is the key to many biological problems, including the most difficult and intriguing. The structures of the cellular flagella, mitotic spindle, etc. are conjugated with vacuum by wide using of so-called confocal textures of liquid crystals. Electron microscopy confirms it for quantitative geometry of biological structures inside the organisms from prokaryotes up to humans.

Biography

Golubev Sergey N has completed his PhD from Moscow University and Post-doctoral studies from Moscow University. He is the Senior Researcher of Quantum Standard Laboratory of All-Russian Research Institute of Metrological Service. In Russian, he has published 4 books and more than 50 papers in reputed journals and has been serving as an Editorial Board Member of repute, was awarded a Diploma of Presidium from the USSR Academy of Sciences. His last English publication (2016) was in *Journal of Modern Physics*.

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