

## Nano physics photon radiation simulated by nuclear vibration

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**Abstract:** Nano-physics allows us to understand the vast complexities of the universe that surrounds us; thanks to this branch of science, we are able to conduct experiments in a lab that simulates powerful forces that mold galaxies and form stars. The invention of devices such as a particle accelerator and aspiral super-compression jet allowed us to visualize and measure on a controlled scale phenomenon that go from visualizing energy in its pure state to the possible discovery of nano-particles.

Our experiments accompanied by the measurement of the energy characteristics of high-energy photons and their interaction in a supersonic jet, which are realized when the gas jets exit from a dynamic emitter. By research, we observed adiabatic expansion of the gas, which causes it to cool down to 268°K, nuclear vibration. Pressure and vacuum, nuclear vibration leads to super-compression of both supersonic jets and plasma. The supersonic flow interacts with the plasma obtained by burning a hydrocarbon fuel such as methane or propane. Strong spatial super-compression of a continuous medium leads to proton-proton and proton-nucleon collisions, the cause of which is nuclear vibration.

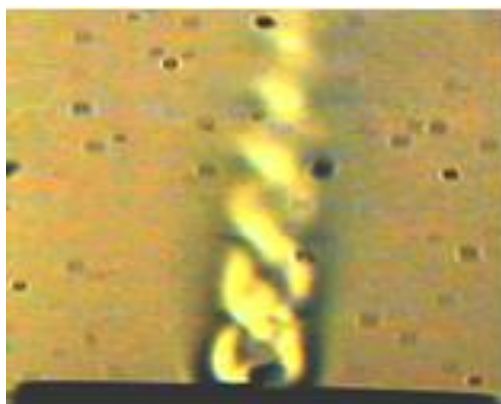


Figure 1. Doubly Spiraled Supersonic Jet. Central conic body outside 3 mm.



Figure 2. Nozzle with large annular slit  $b=5\text{mm}$ , pressure  $6 \times 10^5 \text{ Pa}$ .  
Vertical Position of flow direction.

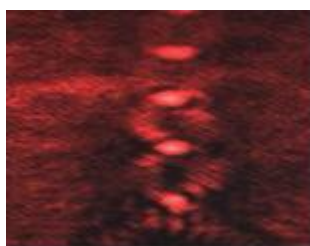


Figure 3. The experimental setup in which is implemented emission of photon radiation stimulated by nuclear vibration.

We have been able to visualize high-energy photon radiation stimulated by nuclear vibration, the formation of photon epicenters, interactions and release of electrons after controlled collisions resulting from the super-compression phenomenon using Kholmurad Khasanov's "double spiral supersonic jet", which have a great influence on the study and understanding of nano-physics. The discovered phenomena in the field of nano-physics is that due to nuclear vibration and the emission of high energy photons under dynamic conditions, it is possible to synthesize and obtain various nano-materials in large volumes. The advantage of this reactions at low energy-cost, this phenomenon receives nano-materials with new physical and chemical properties that can be widely used for the nano-industry.

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