

LICENSING OPPORTUNITY: SPHERICAL ION TRAP AND TRAPPING IONS

DESCRIPTION

Problem

Previous spherical radio frequency (RF) Paul ion traps either use (a) conventionally machined three-dimensional electrode structures to generate the electric fields for trapping, or (b) planar electrode structures with low trapping efficiency.

Invention

This invention is a new type of spherical RF Paul ion trap with thermal and electrical properties that are favorable for high-accuracy atomic clocks.

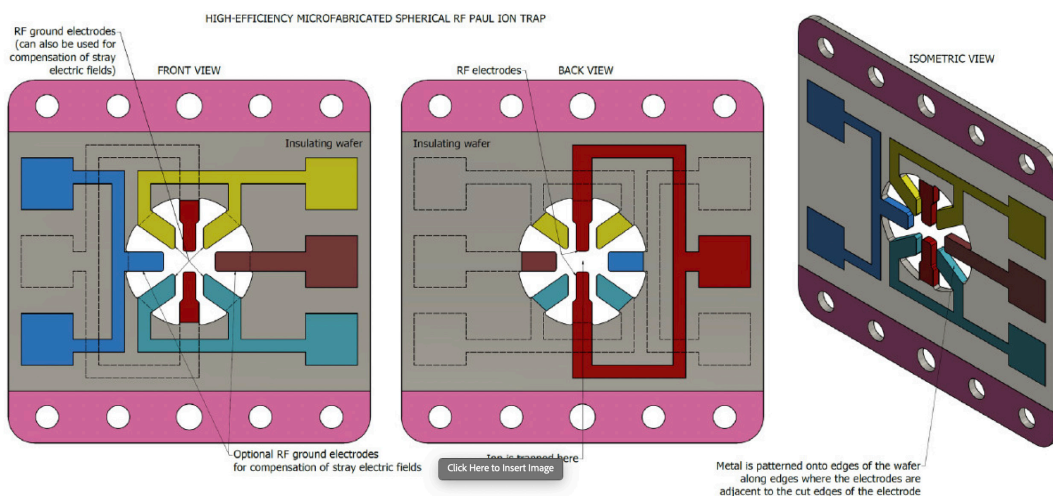
BENEFITS

Potential Commercial Applications

This trap can be mass-produced at a low unit cost and with very small geometrical imperfections. It can also be used in compact and field-deployable atomic clocks, among other applications.

Competitive Advantage

Relative to previous spherical RF Paul ion trap designs, this trap offers a unique combination of high trapping efficiency and compatibility with microfabrication techniques.



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