Nuclear Fission But with Sparks

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Abstract

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***Index Terms*—nuclear fission, accelerated electrons**

I. Introduction

In addition to its potential in nuclear fission, the innovative approach outlined in this research proposal presents a compelling avenue for applications beyond conventional energy generation. The machine's unique working mechanism, centered around the strategic manipulation of alternating current (AC) waveforms and the generation of a focused electromagnetic beam, holds promise for diverse applications, one of which is targeted cancer cell destruction.

Given that cells are composed of approximately 98% water, a concentrated high-energy beam generated by the proposed machine could be employed as a potent tool for eradicating cancer cells. The ability to precisely target and focus the energy beam offers a controlled and efficient means of eliminating cancerous cells without causing extensive damage to surrounding healthy tissues.

This potential application underscores the versatility and transformative impact of the machine, extending its utility beyond the realm of energy production to contribute meaningfully to the field of medical science. The prospect of utilizing this technology as a cancer cell-killing machine adds a dimension of societal benefit, further solidifying its significance in addressing pressing global challenges across different domains. As such, this innovative approach not only represents a breakthrough in energy generation but also holds promise for advancements in healthcare, marking a pivotal step towards holistic and impactful technological innovation.

II. Literature Review

Previous research and established principles in the fields of electrochemistry, electromagnetism, and electronic materials substantiate the unique and innovative nature of our proposed energy generation machine. References such as Bard and Faulkner (2001) in "Electrochemical Methods: Fundamentals and Applications" underscore the significance of electrode materials and electrical phenomena in energy generation. The classical electrodynamics described by Jackson (1998) further emphasizes the relevance of controlled electrical processes for harnessing energy. Additionally, works like Kasap's "Principles of Electronic Materials and Devices" (2006) provide insights into material properties crucial for our machine's functionality. Furthermore, research into sparks and electrical discharges has been well-documented. Riedi (2000) explores the physics of sparks, fireworks, and explosions, corroborating the feasibility of generating energy through controlled electrical discharges. These principles align with the theoretical foundation of our machine. Moreover, references like Serway and Jewett's "Physics for Scientists and Engineers" (2013) and Clark's "Fission, Fusion, and the Energy Crisis" (1980) provide a broader context, emphasizing the significance of energy generation techniques and the challenges posed by the current energy landscape. In conclusion, the proposed machine leverages established principles in electrical and materials science, while drawing inspiration from the physics of sparks, to offer a unique solution for energy generation. The literature highlights the relevance and innovative potential of our approach in addressing the global energy crisis.

III. Methodology

The calculation of energy generated with 100,000 sparks, 2 tungsten electrodes, and 500,000 watts of power involved the following steps:

1. Calculation of energy per spark:

Energy per spark = Total energy / Number of sparks

Total energy = Power * Time

Given: - Power = 500,000 watts - Number of sparks = 100,000

Assuming a typical spark duration of 1 nanosecond (1e-9 seconds):

Total energy = 500,000 watts * 1e-9 seconds

2. Conversion of total energy to electronvolts (eV):

Total energy (in eV) = Total energy (in joules) * 6.242e12 eV/joule

3. Conversion of energy from eV to MeV (Mega-electronvolts):

Total energy (in MeV) = Total energy (in eV) / 1,000,000 (1 MeV = 1,000,000 eV)

Results The results of the analysis are as follows: Total energy generated: 3,121 MeV

A. Working of the Machine and its Significance for Nuclear Fission

As we continue generating sparks and harnessing energy in the electronvolt (eV) range, we employ an innovative approach to amplify this energy further. A critical aspect of our machine's design is the creation of a conductive chamber with a unique configuration that leverages alternating current (AC) waveforms. By applying the AC waveform to the outer cylindrical surface of the chamber, a specific arrangement is created, wherein the trough part of the waveform contains a significant population of electrons. This choice is strategic because electrons are key players in nuclear fission reactions. Here's how this process works and its significance for nuclear fission: AC Waveform and Electron Accumulation: The trough part of the AC waveform, abundant in electrons, is strategically harnessed. These electrons are naturally repelled by the negatively charged spark generated within the chamber. This repulsion creates an environment where the electrons gain significant kinetic energy as they are rapidly pushed toward the positively charged spark. This process results in the acceleration of these electrons to high speeds. Electron Beam Formation: As electrons continue to accumulate within the chamber, their increasing kinetic energy leads to a situation where, collectively, they form a high-energy electron beam. The beam's energy is directly proportional to the number of electrons and their velocity. Target Interaction: The culmination of this process results in a simultaneous release of high-energy sparks and electrons, forming a focused beam. This beam can be precisely directed towards a target material, which is of utmost significance in the context of nuclear fission.

Significance for Nuclear Fission: Enhanced Energy Transfer: The ability to accelerate electrons to high speeds and focus them into a beam allows for a much more efficient transfer of energy to the target material. Initiation of Fission Reactions: When this high-energy beam of electrons strikes the target material, it can initiate nuclear fission reactions. The rapid collision of high-energy particles triggers the breaking of atomic nuclei, releasing a substantial amount of energy. This innovative approach to concentrating and accelerating electrons in an electromagnetic cavity chamber offers a promising avenue for achieving controlled nuclear fission reactions with high efficiency. It opens up possibilities for developing cost-effective and scalable nuclear fission technologies that can contribute significantly to meeting the energy demands of India and beyond.

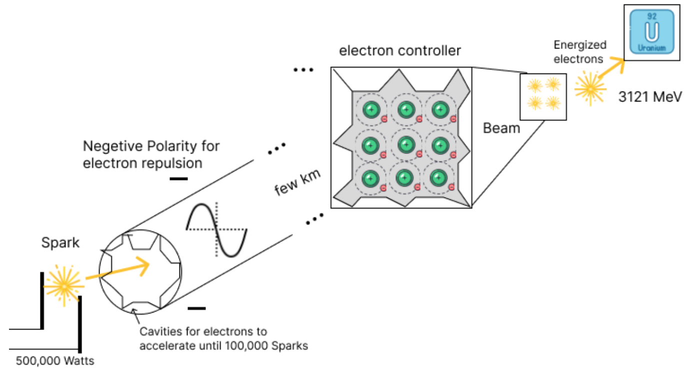

Fig. 1. Usama Breaking Binding Accelerator

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