



PHYSICS

Electrically and Mechanically Modular Electrostatic Accelerator with Optical Power Supply

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What we are looking for

We are looking for a suitable partner to enter into license deal/co-development partnership

What is it needed for?

Low energy accelerators are used in industry and research to generate ion beams suitable for various purposes. This foreseen accelerator overcomes some of the limitations present in state-of-the-art accelerators. In fact, it allows the construction of an accelerator using a series of lower voltage modules, instead than by resistive division of the voltage generated on one single high voltage terminal. The all-electronic high voltage generation system allows the use of a liquid dielectric, as an alternative to standard high pressure gases, improving the accelerator safety. Maintainability and duty cycle improvement occurs too, being the only needed intervention the replacement of a broken module, while the accelerator can operate at lower energy just bypassing it while waiting for repair. The development plan aims to reach a TRL7 within mid 2022.

Advantages

- Modularity
- Scalability
- Greater stability
- Better resolution
- Cost-effective product

Applications

- Industrial ion implantation
- Radiotherapy (by X-ray production)
- Cargo inspection
- Radiation hardness tests for aerospace industry
- Analysis of artistic manufactures

