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Accelerator Applications

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Of the 50,000+ particle accelerators in the world, the vast majority are not used for particle physics, but instead for real-world applications. From radiotherapy for cancer treatment to ion implantation for silicon devices, through to the hardening of tarmac roads with electron beams: the uses of particle beams are constantly growing in number. This lecture aims to give a broad overview of the many uses of particle accelerators, covering technologies ranging in size from around ten-centimetre long industrial electron linacs through to synchrotron light sources built as national scale facilities. The lecture also includes challenges and future perspectives that are unique to the use of accelerators for wider societal applications.

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