

Electron dynamics in the presence of an active medium incorporated in a Penning trap

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Based on an idealized 1D model we demonstrate that electrons oscillating in a Penning trap may get bunched, at the resonant frequency of the active medium. During multiple round trips in the trap, the bunched electrons gain energy and, therefore, they may escape the trap forming a low energy optical injector. © 2011 American Institute of Physics. [doi:[10.1063/1.3559761](https://doi.org/10.1063/1.3559761)]