

New particle detector with the CIGS semiconductor

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A Cu(In,Ga)Se₂ (CIGS) semiconductor is expected to have high radiation tolerance with the recovery feature by the compensation of defects by ions. The CIGS has been developed for solar cells, and its radiation tolerance was initially investigated for space applications.

We developed new CIGS semiconductor detector and evaluated by Xe ion (400 MeV/u, 132 Xe⁵⁴⁺) at the Heavy Ion Medical Accelerator in Chiba (HIMAC). Single Xe ion is successfully detected, and we confirmed the recovery with the heat annealing.

In this talk, results of Xe ion irradiation to the CIGS detector, and also temperature and time dependence with heat annealing will be presented.

Type of presentation (in-person/online)

online presentation (zoom)

Type of presentation (scientific results or project proposal)

Presentation on scientific results

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