

Abstract Submitted
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HP-Ge Crystal Growth at USD for Developing Ge detectors in Searching for Rare-Event Physics¹ HAO MEI, SANJAY BHATTARAI, MATHBAR RAUT, PRAMOD ACHARYA, DONGMING MEI, University of South Dakota, PIRE-GEMADARC COLLABORATION — Detector grade High-Purity Germanium(HP-Ge) crystals are largely needed for rare event physics. At the University of South Dakota (USD), we have successfully built a production chain that can purify the commercially available Ge raw materials, grow detector-grade HP-Ge crystals, and fabricated them into Ge detectors. Zone refining and crystal growth are the two important steps to obtain HP-Ge crystals. A well-controlled segregation method is used to control the distribution of impurities during crystal growth. A summary of our current progress and inventory of detector grade crystals, including all the USD detectors made by USD crystals will be reported.

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